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10 CFR Parts 429, 430 and 431
Energy Conservation Program: Certification, Compliance, and Enforcement for Consumer Products and Commercial and Industrial Equipment; Final Rule

DEPARTMENT OF ENERGY

10 CFR Parts 429, 430 and 431

[Docket No. EERE–2010–BT–CE–0014]

RIN 1904–AC23

Energy Conservation Program: Certification, Compliance, and Enforcement for Consumer Products and Commercial and Industrial Equipment

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

ACTION: Final rule.

SUMMARY: The U.S. Department of Energy (DOE or the "Department") is adopting revisions to its existing certification, compliance, and enforcement regulations for certain consumer products and commercial and industrial equipment covered under the Energy Policy and Conservation Act of 1975, as amended (EPCA or the "Act"). These regulations provide for sampling plans used in determining compliance with existing standards, manufacturer submission of compliance statements and certification reports to DOE, maintenance of compliance records by manufacturers, and the availability of enforcement actions for improper certification or noncompliance with an applicable standard. Ultimately, the provisions being adopted in this final rule will allow DOE to enforce systematically the applicable energy and water conservation standards for covered products and covered equipment and provide for more accurate, comprehensive information about the energy and water use characteristics of products sold in the United States.

DATES: *Effective Dates:* The amendments to Parts 429 (except §§ 429.12 through 429.54), 430 (except Appendix A to Subpart B of Part 430 and Appendix B to Subpart B of Part 430), and 431 are effective April 6, 2011.

The amendments to §§ 429.12 through 429.54 are effective July 5, 2011.

The amendments to Appendix A to Subpart B of Part 430 and Appendix B to Subpart B of Part 430 are effective November 28, 2011.

The incorporation by reference of the standards listed in this rule is approved by the Director of the Federal Register as of April 6, 2011.

ADDRESSES: This rulemaking can be identified by docket number EERE–2010–BT–CE–0014 and/or Regulatory Identification Number (RIN) 1904–AC23.

Docket: For access to the docket to read background documents, or comments received, go to the *Federal eRulemaking Portal* at *http://www.regulations.gov.*

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SUPPLEMENTARY INFORMATION: This final rule incorporates by reference into Part 429 the following industry standards:

- ANSI/AHAM DW–1–1992, American National Standard, Household Electric Dishwashers, approved February 6, 1992, IBR approved for § 429.19.

Copies of ANSI/AHAM DW–1–1992 is available from the Association of Home Appliance Manufacturers, 1111 19th Street, NW., Suite 402, Washington, DC 20036, 202–872–5955, or go to *http://www.aham.org.*

- International Organization for Standardization (ISO)/International Electrotechnical Commission, ("ISO/IEC 17025:2005(E)"), "General requirements for the competence of testing and calibration laboratories", Second edition, May 15, 2005, IBR approved for § 429.104.

Copies of ISO/IEC 17025:2005(E) are available from the International Standards Organziation1, ch. de la Voie-Creuse CP 56 CH–1211 Geneva 20 Switzerland, telephone +41 22 749 01 11, or go to *http://www.iso.org/iso.*

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I. Authority and Background

Title III of the Energy Policy and Conservation Act of 1975, as amended ("EPCA" or, in context, "the Act") sets forth a variety of provisions designed to improve energy efficiency. Part A of Title III (42 U.S.C. 6291–6309) provides for the Energy Conservation Program for Consumer Products Other Than Automobiles. The National Energy Conservation Policy Act (NECPA), Public Law 95–619, amended EPCA to add Part A–1 of Title III, which established an energy conservation program for certain industrial equipment. (42 U.S.C. 6311–6317) [1]

Sections 6299–6305, and 6316 of EPCA authorize DOE to enforce compliance with the energy and water conservation standards (all non-product specific references herein referring to energy use and consumption include water use and consumption; all references to energy efficiency include water efficiency) established for certain consumer products and commercial equipment. (42 U.S.C. 6299–6305 (consumer products), 6316 (commercial equipment)) DOE has promulgated enforcement regulations that include specific certification and compliance requirements. *See* 10 CFR part 430, subpart F; 10 CFR 430.23–25; 10 CFR part 431, subparts B, J, K, S, T, U, and V.

On September 16, 2010, the Department published in the **Federal Register** a Notice of Proposed Rulemaking regarding Certification, Compliance, and Enforcement for Consumer Products and Commercial and Industrial Equipment (September 2010 NOPR). 75 FR 56796. DOE subsequently published two correction notices, which addressed the public meeting date and an omission in the regulatory text. 75 FR 57410 (September 21, 2010) and 75 FR 61361 (October 5, 2010), respectively. A public meeting was held in Washington, DC, on September 30, 2010. The comment period for written submissions was scheduled to close on October 18. In response to multiple requests, DOE extended the comment period to close on October 29, 2010.

The September 2010 NOPR proposed to revise, consolidate and streamline the Department's existing certification, compliance, and enforcement regulations for certain consumer products and commercial and industrial equipment covered under EPCA.

II. Summary of the Final Rule

A. Certification

Today's rule revises the Department's current certification regulations to ensure that the Department has the information it needs to ensure that regulated products sold in the United States comply with the law. Currently, manufacturers of covered consumer products and commercial and industrial equipment must certify, by means of a compliance statement and a certification report, that each basic model meets the applicable energy conservation, water conservation, and/or design standard before distributing it in commerce within the United States. *See* 10 CFR 430.62 (consumer products); 431.327 (metal halide lamp ballast) and 430.371 (certain commercial equipment). As proposed in the September 2010 NOPR, DOE is adopting an annual certification reporting requirement for all covered products and covered equipment. Additional details are discussed below. Such annual filings will provide DOE with comprehensive, up-to-date efficiency information about the regulated products sold in the United States at any given time—a necessary predicate to an effective enforcement program.

DOE believes it is also appropriate to provide more transparency in the certification report itself. In the September 2010 NOPR, DOE proposed to expand the information submitted by manufacturers, including general requirements applicable to all products and product-specific requirements. DOE also proposed to make clear that all non-proprietary certification information will be considered public information. As a result of stakeholder comments, DOE made some modifications to the product-specific information it is collecting and the public disclosure of such information in the final rule. These changes are discussed in more detail below. By requiring additional relevant data that affects the energy or water efficiency of a product to be supplied in the certification report, DOE will be able to more effectively enforce compliance with the conservation standards.

To provide manufacturers with sufficient time to transition to these new certification provisions, the effective date of the certification requirements is 120 days from the publication of the final rule in the **Federal Register**. Each basic model of covered product or covered equipment that has not previously been certified with the Department must be certified on or before July 5, 2011 using DOE's on-line certification tool (*i.e.,* the Compliance Certification Management System or CCMS) and the pre-formatted EXCEL templates. *See https://www.regulations.doe.gov/ccms/* for additional information. For those basic models of covered products or covered equipment that have previously been certified with the Department, manufacturers are required to submit revised certification data pursuant to regulations being adopted as part of today's final rule in accordance with the annual report table in 10 CFR 429.12.

B. Enforcement Testing

The Department is modifying its regulations for enforcement testing to allow the Department to enforce the Federal efficiency standards proactively and fairly based on the circumstances of each case. In particular, today's rule makes three revisions to DOE's approach to enforcement testing that, although relatively minor, will significantly improve the effectiveness of DOE's enforcement program. First, the Department is removing the current regulatory provision that requires DOE to receive a written complaint alleging a violation of the standard before it can perform enforcement testing to determine a model's compliance. EPCA affords DOE with broad enforcement discretion, and DOE must be able to exercise that discretion proactively to ensure compliance and deter violations effectively. Second, today's rule allows the Department to select units for enforcement testing from retail, distribution, or manufacturer sources, depending on the circumstances, to ensure enforcement test results that are as unbiased, accurate, and representative as possible. Finally, the Department recognizes that the current regulatory approach to enforcement testing—involving DOE selected units and third party testing—may be impracticable for low-volume, custom-built products or where adequate laboratory facilities are unavailable. Thus, today's rule adopts an alternative approach to enforcement testing in such exceptional cases—allowing DOE-witnessed testing at the manufacturer's lab and/or reduced sample sizes—to permit effective enforcement testing without imposing unreasonable burdens on manufacturers.

[1] For editorial reasons, Parts B (consumer products) and C (commercial equipment) of Title III of EPCA were re-designated as parts A and A–1, respectively, in the United States Code.

C. Reorganization

With the exception of electric motors, in the September 2010 NOPR, DOE proposed to move all of the existing certification, compliance, and enforcement regulations currently scattered throughout parts 430 and 431 to a new Part 429. DOE additionally proposed to consolidate similar provisions for both consumer products and commercial and industrial equipment.

In response to DOE's proposed new structure, DOE received several comments from interested parties on its September 2010 NOPR, some of which were organizational in nature. For example, a comment submitted by the National Electrical Manufacturers Association (NEMA) suggested grouping all the regulations that were relevant to a single product in a discrete portion of Part 429. (NEMA, No. 85.1 at p. 2) In response to these comments, and to provide additional clarity to Part 429 requirements, DOE has made the following changes to Part 429 in today's final rule:

- Consolidated general requirements into Subpart A.
- Consolidated all certification requirements into Subpart B, with the creation of product-specific sections for sampling plans and certification requirements. This is intended to simplify the presentation for manufacturers and others who need information on a single product. Also, each of the product-specific sections now specifies the relevant sampling equations to ensure certification requirements are clear;
- Added Appendix D to Subpart B which includes Student's t-distribution values for one-tailed confidence level calculations for product certification;
- Reorganized Subpart C to distinguish between enforcement measures and verification measures; and
- Incorporated a variety of editorial changes addressing certification, sampling plans, and enforcement.

DOE is adopting Part 429 in its entirety today and expects to integrate electric motors into this Part in a subsequent rulemaking.

III. Discussion of Comments

A. Annual Certification Requirement

Existing certification requirements direct most manufacturers of covered consumer products and commercial and industrial equipment to certify, by means of a compliance statement and a certification report, that each basic model meets the applicable energy conservation, water conservation, and/or design standard before distributing it in commerce within the United States. *See* 10 CFR 430.62 (consumer products); 10 CFR 431.36, 430.371 (commercial equipment). In the September 2010 NOPR, DOE proposed moving to an annual certification reporting requirement for each basic model of covered product and covered equipment. Additionally, DOE proposed an annual filing schedule based generally upon the Federal Trade Commission (FTC) schedule for similar product types subject to annual reporting under the FTC's Appliance Labeling Rule. For commercial and industrial equipment, DOE proposed to align similar equipment types with the FTC schedule for consumer products.

Today's rule adopts a mandatory annual certification filing requirement (as opposed to an annual testing requirement) and sets out a reporting schedule aligned as closely as possible with the current FTC schedule for consumer products. Under DOE's self-certification enforcement framework, only products that have been certified to DOE by manufacturers as compliant with the applicable standards can be distributed in commerce in the United States. Annual filings will provide the Department with up-to-date and comprehensive efficiency information about regulated products sold in the United States—a necessary predicate to an effective enforcement program. Recognizing this, many commenters, including the Alliance for Water Efficiency (AWE), Underwriters Laboratories, Inc. (UL), Alliance Laundry Systems LLC (ALS), Northwest Energy Efficiency Alliance (NEEA), Earthjustice, and the Association of Home Appliance Manufacturers (AHAM), supported an annual filing requirement. (AWE, No. 38.1 at p. 3; UL, No. 60.1 at p. 1; ALS, No. 66.1 at p. 1; NEEA, No. 67.1 at p. 2; Earthjustice, Public Meeting Transcript, No. 103 at pp. 42–43; AHAM, No. 98.1 at p. 4) As one commenter put it: "Knowledge of what products are being distributed in commerce at any given time is the foundation of an effective certification and enforcement program. A one-time initial certification of compliance does not provide the needed level of knowledge." (NEEA, No. 67.1 at p. 2)

A few commenters objected to the proposal, arguing that annual filing was not needed and would increase reporting burdens. The International Association of Plumbing and Mechanical Officials (IAPMO) and IAPMO R&T, for example, commented that the Department's existing certification requirements already provide sufficient assurance of compliance. (IAPMO, No. 36.1 at p. 1) Similarly, AO Smith opposed an annual certification requirement, commenting that such a requirement would unduly increase the level of reporting required by manufacturers. (AO Smith, No. 81.1 at p. 2) Although DOE recognizes that annual filing will increase the frequency with which manufactures must file reports, the record reflects that the increase in cost burden will be minimal. As NAMA explained, "annual certification does not cause an extreme economic burden and harm." (NAMA, No. 72.1 at p. 2; *See also* Traulsen, No. 52.1, at p. 4 ("Annual certification should not be a major burden")) DOE also believes that electronic reporting will reduce the burden of preparing certification reports. Accordingly, the Department believes that this minimal increase in cost burden is outweighed by the need to ensure that the Department and the public have accurate and comprehensive efficiency information. In addition, an annual filing establishes a set date for manufacturers to fulfill this reporting obligation, which should allow manufacturers to regularize their annual reporting practices, thereby lowering costs and enhancing compliance.

Several commenters suggested that DOE should impose annual testing requirements in addition to the proposed annual filing requirement. In particular, UL, ALS, the Natural Resources Defense Council (NRDC) and Earthjustice commented that while they are in support of establishing an annual certification requirement, such a requirement should include mandatory re-testing to validate the annual certification submissions, rather than merely re-submission of the original test data. (UL, No. 60.1 at p. 1; ALS, No. 66.1 at p. 2; NRDC, Public Meeting Transcript, No. 103 at p. 39; Earthjustice, Public Meeting Transcript, No. 103 at pp. 43–44) NRDC proposed regular recertification of basic models that would require new laboratory testing of currently produced models and not simply resubmission of old test data from the initial certification. NRDC stated that the frequency of such recertification should depend on product-specific factors as well as a production cycle, and whether there is any change in energy usage above a de minimus threshold. (NRDC, No. 39.1 at p. 2) Earthjustice further contended that since determining when a model has been modified can be very difficult, a re-testing, as opposed to a re-submission, requirement would help to alleviate this problem. (Earthjustice, Public Meeting Transcript, No. 103 at pp. 43–44)

While DOE recognizes these commenters' call for additional testing

after the initial certification to ensure continued compliance, the Department declines to adopt an annual testing requirement whereby manufacturers must annually re-test all certified products and equipment. As several commenters point out, such a requirement would impose considerable burdens on manufacturers. (*See, e.g.,* AHAM, No. 98.1 at p. 4; ALS, No. 66.1 at p. 2; Traulsen, No. 52.1 at p. 4) As AHAM further explains, requiring "costly and time consuming" annual re-certification testing "would likely be detrimental to innovation," and "might threaten the viability to small manufacturers." (AHAM, No. 98.1 at p. 4.) AHAM also pointed out that in light of DOE's additional testing and industry verification programs, the benefit to consumers from manufacturers' retesting certified products would be minimal. DOE agrees that the burdens of such a requirement would likely outweigh the benefits and is not requiring any new or additional testing to be performed as part of the annual filing requirement. It is instead a yearly submission of the ratings for all models a manufacturer has in distribution in that year. As discussed below, DOE continues to consider approaches to verification testing that would require subsequent testing of previously certified products, without an across the board annual re-testing requirement.

With regard to DOE's proposal in the September 2010 NOPR to align the annual certification reporting deadlines with the FTC's schedule, ALS, NEEA, IAMPO, the American Lighting Association (ALA), and AHAM submitted comments supporting harmonization with the FTC's reporting requirements. (ALS, No. 66.1 at p. 1; NEEA, No. 67.1 at p. 2; IAMPO, Public Meeting Transcript, No. 103 at p. 42; ALA, No. 97.1 at p. 1; AHAM, No. 98.1 at p. 4) Specifically, ALA commented that such consolidation of reporting requirements would improve the efficiency and reduce the cost of compliance. (ALA, No. 97.1 at p. 1) Delta Faucet submitted comments requesting that efforts be made to reduce the reporting burden and cost on manufacturers by combining the DOE and FTC reports into one template. (Delta Faucet, No. 94.1 at p. 2) Today's final rule consolidates the Department's certification reporting requirements with FTC's schedule only. DOE will continue to consider consolidating filings with the FTC or other government agencies in a future certification, compliance, and enforcement rulemaking.

B. Revisions to Reporting Requirements

In the September 2010 NOPR, DOE proposed to revise what information must be submitted as a part of a certification filing for DOE to better enforce its conservation standards. Specifically, DOE proposed to standardize to the extent possible the basic information required for certification of all covered products and covered equipment, setting out the basic requirements for every certification filing, followed by product-specific information requirements. DOE also proposed to require manufacturers to submit information related to waivers, exemptions, and approved alternative rating methodologies along with their certification submissions as appropriate. Lastly, DOE proposed to expand the product-specific information it was collecting with respect to each of the covered products and covered equipment to help DOE better understand the underlying attributes of the basic model's efficiency that impact the testing and certification data.

DOE generally received comments on the following issues related to its proposed revisions to the certification reporting requirements: (1) Reporting sample size and total number of tests performed; (2) reporting of testing data; (3) reporting use of an Alternate Rating Method (ARM)/Alternative Efficiency Determination Method (AEDM) or other alternative method of rating; (4) defining "distribute in commerce"; (5) product-specific revisions to reporting requirements. With the exception of the requirement for reporting the total number of tests performed, DOE is adopting all of the revisions to its reporting requirements proposed in the September 2010 NOPR. A discussion of specific stakeholder comments on these issues is presented below.

1. Reporting Sample Size and Total Number of Tests Performed

Under the rule adopted today, manufacturers must report the size of the sample tested, but need not report the number of tests performed. With regard to DOE's proposal to require annual reporting of sample size, DOE received comments in opposition from AHAM and NEEA. (AHAM, No. 98.1 at p. 4; NEEA, No. 67.1 at p. 6) NEEA argued that there are no compelling reasons to require submission of sampling plan information or data as part of certification. (NEEA, No. 67.1 at p. 6) The Department disagrees.

For purposes of certification testing, the determination that a basic model complies with the applicable conservation standard must be based on the sampling procedures, which are now found, by product, in 10 CFR Part 429. The sampling procedures provide that "a sample of sufficient size shall be tested to insure [compliance]." Unless the product-specific regulations specify otherwise, a minimum of two units must be tested to certify a basic model as compliant. This minimum is implicit in the requirement to calculate a mean—an average—which requires at least two values. Under no circumstances is a sample size of one (1) authorized. Manufacturers may need to test more than two samples depending on the variability of their sample. Therefore, the sample size can be an important element when evaluating the compliance of a basic model.

Consequently, the Department believes it is still important to request information regarding the sample size used in calculating the certification values submitted to DOE. As DOE has previously found, *see http://www.gc.energy.gov/documents/certification_samplingplan.pdf,* there is a significant amount of confusion in this area and DOE has attempted to clarify the sampling provisions, while maintaining the same level of tolerances, in the final rule. Sample size information that is submitted with the certification report will allow the Department to better understand how manufacturers are calculating their certified values. In the event the Department requests the test data underlying certification, manufacturers must provide the test data for each sample. DOE strongly encourages manufacturers to maintain records that clearly distinguished between each sample using unique identifiers like serial numbers and that provide a clear summary of how the appropriate statistics were applied to generate the certified ratings.

The September 2010 NOPR also proposed to require that manufacturers report the total number of tests per sample. AHAM, the Air-Conditioning, Heating and Refrigeration Institute (AHRI) and ALS objected to reporting the total number of tests performed in the annual certification report. (AHAM, No. 98.1 at p. 4; AHRI, No. 91.1 at pp. 9–10; ALS, No. 66.1 at p. 2) Specifically, AHAM commented that it failed to see how this information is necessary or useful to DOE. As the commenters suggest, this information may not be as helpful to understanding the certified values since the number of tests performed by unit can vary widely based upon a number of factors, including manufacturing practices and production lots. Therefore, DOE will not require the manufacturer to report the

total number of tests performed per sample. Manufacturers may not use multiple tests of a single unit as separate samples when applying the sampling procedures.

2. Reporting of Testing Data

A number of commenters urged DOE to require that manufacturers report all test data for all covered products and equipment in support of the certified value reported to DOE. (*See, e.g.,* NRDC, No. 80.1 at 4) NEEA stated that it supports the submission of non-regulatory metrics data from which the metric is derived. (NEEA, No. 67.1 at p. 2) Several manufacturers, however, strongly opposed reporting test results as part of the annual certification requirement. (Traulsen, No. 52.1 at p. 4; ALS, No. 66.1 at p. 2; BSH, No. 89.1 at p. 4) Specifically, Traulsen noted that providing such detailed data would compromise its product designs and competitive advantage. (Traulsen, No. 52.1 at p. 4) ALS stated that such a requirement would necessitate a huge undertaking by DOE to manage the submission and recordkeeping of all data for all the covered products under DOE's charge. (ALS, No. 66.1 at p. 2)

The Department did not propose in the September 2010 NOPR to require submission of test data in the certification report, and such a requirement is not part of this final rule. While the Department believes that test data is a key factor in helping the Department understand the certified rating, DOE does not believe it is necessary to collect test data from all manufacturers at this time. Instead, DOE is hoping that by expanding the certification data that the Department is collecting and providing additional clarity in the regulations as to the processes manufacturers must follow to determine the certified ratings DOE will be in a better position to understand the data underlying compliance. Although DOE is not mandating that manufacturers submit test data along with each certification report at this time, the Department's regulations continue to require manufacturers to retain test data records in an easily accessible format and provide them to the Department upon request.

3. Reporting Use of an ARM/AEDM or Other Alternative Method of Rating

From the comments, it appears there is general support for requiring manufacturers to submit information related to waivers, exemptions, and approved alternative rating methodologies along with their certification submissions. (*See, e.g.,* NEEA No. 67.1 at 3) NEEA, for example, strongly supported the requirement that manufacturers report this information as part of the certification process. GE Prolec Distribution Transformers (GE Prolec) commented that, due to high volume designs and volume variations, manufacturers that use an AEDM for certification should have to update the AEDM substantiation each year and include this in the annual recertification process. (GE Prolec, No. 95.1 at p. 4) ABB Inc (ABB) noted that there is no approval process for an AEDM and, as such, the requirement to include the approval date should be removed from the certification report. (ABB, No. 53.1 at pp. 11–12) Currently, the regulations provide for use of an alternative rating method only for residential central air conditioners and heat pumps, commercial heating, ventilation, air-conditioning, and water heating equipment (HVAC and WH), electric motors, and distribution transformers. While ABB is correct that certain products, such as commercial HVAC and WH equipment do not require approval of the AEDM before it is used, other products, like residential central air conditioners and heat pumps, do. Thus, these approvals are product-specific. DOE has clarified this in the final rule, which states that the information should be submitted, if applicable. The product-specific templates, which will be available for use with the new online submission system, will also be product-specific and consistent with DOE's regulations.

DOE also believes that manufacturers need the ability to specify that they have not performed actual testing but have modeled or simulated testing through the use of an ARM or AEDM or have used an alternative testing method authorized through a test procedure waiver, as the certification report itself requires the manufacturer to certify that it has tested the model. Providing alternative rating or alternative testing information in the certification report allows the manufacturer to make a more accurate certification statement to the Department. Similarly, in order to make an accurate certification statement to the Department, a manufacturer needs to identify any basic model that is being certified in accordance with an exception to the applicable standard. Accordingly, DOE adopts this requirement in today's final rule to provide an accurate reflection of the test procedures or exceptions used as a basis for the certification.

4. Defining "distribute in commerce"

EPCA's standards and DOE's certification and compliance requirements apply to covered products and equipment that are "distribute[d] in commerce." A number of commenters requested that the Department adopt a definition of "distribution in commerce" in its regulations. Mitsubishi Electric & Electronics USA, Inc. (MEUS) stated its concern that the definition of "introduction into commerce" is so broad it requires manufacturers to certify before providing information to the distribution base. As a solution, MEUS recommended that DOE de-link certification with "introduce into commerce." (MEUS, No. 86.1 at p. 5) Additionally, NEEA expressed its concern that the definition of "distribute in commerce" would require certification prior to a decision to actually market the product. (NEEA, Public Meeting Transcript No. 67.1 at p. 336) Traulsen commented that DOE should define "distribution in commerce" as a published price. (Traulsen, No. 52.1 at p. 4)

EPCA defines "distribute in commerce" as "to sell in commerce, to import, to introduce or deliver for introduction into commerce, or to hold for sale or distribution after introduction into commerce." (*See* 42 U.S.C. 6291 (16).) The Department recognizes that products may be imported for prototyping, research, field testing, or trade shows while the product is still being developed or before it may be available to the general public for a price. But the Department's interpretation of this term and the application of the statute's definition will necessarily depend on a particular manufacturer's production practices, business decisions, and the facts and circumstances of a particular case. Therefore, DOE is reluctant to dictate a single point in time for all manufacturers when the product development process stops and when distribution in commerce begins. As such, the Department declines to add a precise definition of "distribution in commerce" into its regulations. Instead, in each case, DOE will look to a number of factors to determine whether a model of a regulated product has been "distributed in commerce." Such factors will include the following:

- Whether units of the model have been sold or offered for sale in exchange for monetary compensation;
- Whether units have been included in marketing material made available to the public (*e.g.,* on Web sites or in catalogs);
- Whether the manufacturer has distributed marketing material that includes a claim or statements regarding the product's efficiency;
- Whether a unit has been shown at trade show; and

• The number of units produced, distributed, imported, and/or sold.

A model must be certified to DOE as compliant with the applicable standard prior to distribution in commerce, but the exact point at which any particular model has, in fact, been distributed in commerce may vary considerably across product types and manufacturers.

5. Product-Specific Revisions to Reporting Requirements

In the September 2010 NOPR, the Department proposed including reporting requirements for products that did not previously have to submit information, including those added to DOE's programs by the Energy Independence and Security Act of 2007. In addition, the Department sought comment on expanding its sampling plans for certification to "features" other than the regulatory metrics. As an example, DOE suggested that the actual storage volume of a residential water heater may be a metric that should be subject to sampling requirements.

Today's rule extends the reporting requirements to all products regulated under EPCA, but does not impose sampling plans for features other than the regulatory metric. The Department's certification requirements are the foundation of DOE's compliance and enforcement framework and will be mandatory for all products regulated by EPCA.

Commenters generally disagreed, however, with the approach of extending the sampling plans beyond the regulatory metrics. For example, AO Smith commented that DOE should only test products for values that are covered in the current regulations, such as energy efficiency. (AO Smith, No. 81.1 at p. 3) Similarly, Bradford White Corporation commented that adding sampling plans and tolerances for other features of products is redundant and burdensome. (BWC, No. 45.1 at p. 2) While DOE is not adopting sampling plans for features other than the regulatory metrics at this time, DOE is expanding its product-specific certification requirements to require this type of information in the certification report.

DOE believes information about features that affect the energy-efficiency of the product is essential for DOE to audit compliance and for consumers to make informed decisions about product purchases. In addition, DOE notes that manufacturers have this information on hand and typically provide it in their marketing materials, on their Web site, or to product retailers. DOE's current regulations already request this type of information for certain products and equipment and requiring this information in the certification report is consistent with DOE's adoption of a more uniform approach to certification. In some instances, product or equipment feature information is necessary to determine how to apply DOE's test procedures. Thus, DOE believes this type of information is essential to any verification testing and enforcement testing that may be conducted by the Department. To help interested parties identify the new product-specific information to be submitted in certification reports, DOE has included this on a product-by-product basis throughout Part 429.

C. Certifying Entities and Third-Party Representation

Current certification regulations allow either the manufacturer or private labeler to submit certification reports and compliance statements for each basic model. DOE proposed, in the September 2010 NOPR, to require that manufacturers be solely responsible for submitting the certification reports to DOE. Under this proposal, the certification burden would be placed on the manufacturer, and not the private labeler, although the manufacturer would still have the option of electing to have its private labeler act as a third-party filer and submit the certification report on the manufacturer's behalf. With regard to third-party filers, DOE proposed in the September 2010 NOPR to make clear in its regulations that it may refuse to accept certification reports from a third party with a history of poor performance. A discussion of comments on this issue is below.

In today's rule, DOE is adopting its proposed requirement that manufacturers be solely responsible for submitting certification reports, which would include manufacturer information, as well as private labeler information and/or brand information, where appropriate. AWE and BWC submitted comments supporting DOE's proposal to hold the manufacturer solely responsible for submitting certification reports to DOE. (AWE, No. 38.1 at p. 2; BWC, No. 45.1 at p. 2) The Department considered NEEA's suggestion that the party responsible for introducing the product into commerce in the U.S. should be responsible for certification, whether that is a manufacturer, third-party private labeler, or an importer. (NEEA, No. 67.1 at p. 3) The Department notes that, pursuant to EPCA, an importer is a manufacturer and is included in DOE's proposal. While NEEA's suggestion has some conceptual appeal, the Department believes that such an approach would create confusion and be difficult to administer as it may be unclear who is the party responsible for introducing the product into commerce in a particular case. (*See, e.g.,* above discussion regarding the definition of distribution in commerce.) Another commenter, the NEMA Motor & Generator Section, argued that DOE should continue to permit the private labeler to submit certification reports on electric motors as the information required is well known by the private labelers. (NEMA, No. 85.1 at p. 23) DOE believes that, in most cases, the manufacturer, rather than the private labeler, is one that tests a model and therefore is in the best position to provide certification information to the Department and to retain the underlying test data as required by the rules. DOE reiterates, however, that under today's rule, a manufacturer may elect to have its private labeler act as a third-party filer and submit the certification report on the manufacturer's behalf.

Commenters generally supported DOE's proposal to continue to allow third parties to submit certification reports to DOE on behalf of the manufacturer, as long as the third party does not have a history of poor performance. (*See, e.g.,* AHAM, No. 98.1 at p. 6; BWC, No. 45.1 at p. 3) The Department notes that although a manufacturer is ultimately responsible for submission of the certification reports to DOE, it is a criminal violation for third parties to make knowingly false statements to the government. AHAM and BSH suggest that DOE notify the manufacturer or private labeler when the third-party it has selected has not met DOE's requirements given that the manufacturer or private labeler is the party that bears the ultimate liability for the report. (AHAM, No. 98.1 at p. 6; BSH, No. 89.1 at p. 4) DOE agrees that manufacturers should be notified in such cases by the third-party certified barred from submitting on behalf of manufacturers. DOE may also publish on its Web site a list of third-party certifiers barred from submitting certification reports. Intertek, UL and Earthjustice requested that DOE provide more specificity regarding when DOE will deem a third-party submitter to have a history of poor performance. (Intertek, No. 88.1 at p. 2; UL, No. 60.1 at p. 2; Earthjustice, No. 83.1 at p. 3) DOE clarifies that there is not a set of specific circumstances that must be met for a third-party certifier to have a history of poor performance. However, in each case, DOE will look at circumstances, such as the number of certification violations involving the

third party, including number of reoccurrences, the scope and type of the violations (*e.g.,* was certain data missing or was there a failure to file altogether), the willingness of a third-party certifier to cooperate with DOE, and any corrective actions taken to prevent recurring problems.

D. Submission of Certification Reports

In the September 2010 NOPR, DOE proposed to remove the certified mail and e-mail options for filing certification data that are currently allowed in DOE's regulations and make electronic submission of certification reports through the Compliance and Certification Management System (CCMS) found at *http://www.regulations.doe.gov/ccms* the sole method of submission. CCMS will have sample templates for all covered products and covered equipment available for manufacturers to use when submitting certification data to DOE.

The Department received few comments on this issue, with the majority of commenters supporting the move to exclusive use of the CCMS for certification. Specifically, NEEA commented that the proposed move to electronic filing for certification will reduce manufacturer compliance burdens and should allow for consistency of filed data from one Federal agency to another (NEEA, No. 67.1 at p. 3). Similarly, GE Prolec supported the CCMS approach, but also noted that there is currently no CCMS template for distribution transformers. (GE Prolec, No. 95.1 at p. 11; Public Meeting Transcript, No. 103 at p. 143) GE Prolec requested that it be able to review and comment on a proposed template for distribution transformers before it is finalized. DOE received one comment from First Co. opposing the use of CCMS as the sole method of certification because it would take time and a significant amount of work for manufacturers. First Co. suggested that the new CCMS only filing requirement should not become effective prior to July 1, 2011, to allow a reasonable period of time before converting to an electronic-only filing system. (First Co., No. 76.1 at p. 2)

DOE believes the availability of electronic filing through the CCMS system should reduce compliance burdens, streamline the process, and provide the Department with needed information in a standardized, more accessible form. This electronic filing system will also ensure that records are recorded in a permanent, systematic way and enable the Department to move towards a public, searchable database. Thus, in this final rule DOE removes the certified mail and e-mail options for filing certification data that are currently allowed in DOE's regulations. DOE notes that the CCMS requires users to apply to use the system by filling out a registration form, signing a compliance statement, and receiving a personal password. Due to the number of user requests the Department expects to receive by the compliance date of the certification requirements being adopted in today's final rule, DOE strongly encourages users to set-up their accounts well in advance of the deadline. In addition, the CCMS templates with the new requirements for all covered products and covered equipment should be online shortly after the publication of today's final rule. The Department also encourages manufacturers, to the extent possible, to fill out these templates in advance of the compliance date in case questions arise.

E. New Basic Model Filing, Basic Model Concept, and Notice of Discontinuance

1. New Model Filing and Basic Model Concept

In addition to the new annual certification requirement discussed above, DOE's September 2010 NOPR retained the existing regulatory requirement that any new basic model be certified before distribution in commerce. The Department explained that this requirement would apply to newly manufactured and produced basic models, as well as models that have been modified in a way that decreases a model's efficiency or increases its consumption and thus constitutes a new basic model. In connection with this requirement, the Department solicited comments on whether, and if so how, the Department should clarify the basic model concept to better identify whether and how energy or water use characteristics of a product may vary across different models in a basic model group. The Department's current regulations provide product-specific basic model definitions, which typically state that models within the same basic model group have "essentially identical" energy or water use characteristics. 10 CFR 430.2; 431.62, 431.172, 431.192, 431.202, 431.222, and 431.292. In the September 2010 NOPR, DOE asked how manufacturers determine that a particular model constitutes a new basic model, the difference in the energy use characteristics a typical change may have on a per product basis, and whether DOE should adopt a regulation requiring that a model be recertified as a new basic model if modifications impact the energy or water characteristics by a given *de minimus* percentage.

In response to DOE's questions, several manufacturers provided detailed product and manufacturer-specific information as to how they determine and make changes to basic model groupings. (*See, e.g.,* Rheem, No. 79.1 at pp. 1–3; First Co., No. 76.1 at p. 1) Others, like NRDC, urged DOE to adopt specific and stringent product-specific thresholds for increases in energy consumption or decreases in energy efficiency that must be deemed a new basic model. (*See, e.g.,* NRDC, No. 80.1 at p. 2)

More generally, commenters recognized the importance of the basic model concept and sought additional clarification on the matter. (*See, e.g.,* AHAM, No. 98.1 at pp. 2–3 (seeking "clear and uniform rules" for "determining that a particular model constitutes a new basic model"); NRDC, No. 80.1 at pp. 2–3) Some commenters offered ideas for adopting a general definition of the basic model concept. Consumers Union, for example, urged DOE to establish that any differences in electrical and mechanical parts and any significant changes in functional volumes, capacity or water usage should be categorized as different basic models. (Consumers Union, No. 74.1 at p. 2) Along similar lines, NRDC suggested that DOE look to California's definition of 'basic model" as a model along with an additional requirement that products within a basic model have similar efficiency and energy performance. (NRDC No. 80.1 at p. 2) NEEA cited California's approach, but also recommended that DOE allow for conservative ratings and simply require that all models in a basic model grouping have the same certified efficiency rating, on the ground that manufacturers certify compliance with a minimum standard rather than a performance level. (NEEA, No. 67.1 at pp. 4–5)

A number of manufacturers and trade associations urged DOE to allow manufacturers to rate their products conservatively, so long as the ratings are supported by the test results and comply with the applicable standard. As Rheem explained, conservative ratings ensure performance for consumers that is the same or better than the rating, while giving manufacturers "the flexibility to address fluctuations in component pricing or availability without the added burden of re-rating an appliance for every change." (Rheem, No. 79.1 at p. 3) Whirlpool similarly noted that manufacturers may rate products conservatively "to allow for natural fluctuation in component

tolerances and similar unit-to-unit variances." (Whirlpool, No. 78.1 at p. 1) Reflecting manufacturers' desire for flexibility, AHAM proposed that, rather than establishing de minimus percentages, DOE should require manufacturers to certify changes to a basic model as a new basic model "when the test results no longer support the rated value," explaining that results support a rated value when they demonstrate higher energy efficiency or lower energy consumption than the rating. (AHAM, No. 98.1 at p. 3) AO Smith advocated for a requirement that basic models have the same critical components and control logic along with a de minimus percentage that reasonably compares to enforcement sampling provisions. (AO Smith, No. 81.1 at pp. 1–2)

Although all of these commenters expressed varying approaches to the basic model concept, there was general agreement that a modification to a model that would increase energy or water consumption—such that testing would no longer support the rated value—should constitute a new basic model that must be certified to DOE. (*See, e.g.,* AHAM, No. 98.1 at pp. 2–3; NRDC, No. 80.1 at pp. 2–3) The existing regulations already require certification of a new basic model if a modification results in an increase in energy or water consumption beyond the rated amount, and DOE is retaining that requirement.

DOE agrees with the comments that the 'basic model' concept is fundamental to the conservation standards regulatory framework. It allows manufacturers to group like models for purposes of fulfilling the Department's certification requirements, thereby reducing the burden placed on manufacturers by streamlining the amount of testing they must do to rate the efficiencies of their products. At the same time, the basic model provides the relevant basis for Departmental enforcement actions, including determinations of non-compliance.

Accordingly, to clarify the basic model concept, today's rule centralizes and aligns the existing product-specific basic model definitions in a general definition, which provides (with some exceptions noted in the regulatory text) that a basic model means "all units of a given type of product (or class thereof) manufactured by one manufacturer, having the same primary energy source, and which have essentially identical electrical, physical, and functional (or hydraulic) characteristics that affect energy consumption, energy efficiency, water consumption, or water efficiency." Although in some cases, the language of this general definition differs slightly from the precise language of the product-specific definitions, DOE emphasizes that this clarification reflects DOE's intent to maintain the status quo until a future rulemaking. This change is intended to provide a single, uniform definition of the basic model using language that permits what the Department understands to be the current practice—the grouping together of individual models with essentially (but not necessarily exactly) identical energy or water efficiency characteristics.

The Department is not, at this time, adopting threshold de minimus changes that would trigger the creation of a new basic model or otherwise establishing set criteria for what is meant by "essentially identical" characteristics. The record suggests that identifying specific percentages is a complicated matter, particularly given that there may be significant variations among manufacturers and products with respect to basic model groupings. Thus, the Department continues to review the bases for more precise, product-specific limitations on which models can be grouped together as a basic model. DOE hopes to address this in the next phase of the certification, compliance, and enforcement rulemaking and will take all of the comments in the record into account at that time. DOE understands that, in the meantime, today's rule will permit flexibility in determining how manufacturers choose to group individual models with essentially, but not exactly, identical energy or water efficiency characteristics. DOE encourages manufacturers to adopt a reasonable approach to basic model groupings and to certify as a single basic model individual models with only superficial differences, such as product finishes. Furthermore, the Department provides the following guidance on DOE's basic model certification and compliance obligations.

First, all models identified in a certification report as being the same basic model must have the same certified efficiency rating. With this rulemaking, manufacturers may elect to group individual models into basic models at their discretion to the extent the models have essentially identical electrical, physical, and functional (or hydraulic) characteristics that affect energy efficiency, energy consumption, water consumption, or water efficiency. However, the rated efficiency certification and representations of all of the individual models represented by a given basic model must be the same. Additionally, if a manufacturer wishes to change the certified rating of a particular model, this change constitutes the creation of a new basic model that must be certified to the Department.

Second, any individual model that is modified resulting in performance that is less efficient than the rated level when tested in accordance with the DOE test procedures in Parts 430 and 431 and the applicable sampling plans in Part 429 must be re-rated as a new basic model and certified to DOE. Certified ratings must be supported by tested values that are at least as efficient as the rating when the applicable sampling plans in Part 429 are applied.

Third, manufacturers may rate models conservatively, meaning the tested performance of the model(s) must be at least as good as the certified rating, after applying the appropriate sampling plan. The sampling plans are designed to create conservative ratings, which ensures that consumers get—at a minimum—the efficiency indicated by the certified rating. In this final rule, DOE allows manufacturers to use conservative ratings beyond those provided by the sampling plans. If DOE determines that any individual model within a basic model does not meet an applicable conservation standard, however, all models within the basic model group will be deemed non-compliant. Thus, as NEEA explained "the larger the basic model group, the larger the risk associated with a compliance failure." (NEEA, No. 67.1 at p. 5)

Finally, under the certification requirements adopted today, unless otherwise specified, manufacturers must identify in their certification reports the individual models that are included in each basic model. The Department's approach to certification, compliance, and enforcement depends on DOE having information about which individual models are covered by a given basic model.

2. Basic Model Numbering

In the September 2010 NOPR, DOE proposed that manufacturers must designate a new basic model number when an existing model is modified such that a new basic model is created to permit transparency and improve consumer awareness. Several commenters, including AHAM, NEEA, Whirlpool, and ALS, expressed support for DOE's proposal to require a new number for a new basic model so long as a new basic model is created only when test results no longer support the rated value. (*See, e.g.,* ALS, No. 66.1 at p. 1; Whirlpool, No. 78.1 at pp. 1–2; AHAM, No. 98.1 at p. 3; NEEA, No. 67.1 at p. 5) A number of manufacturers, however, objected to the new basic

model number requirement as costly, administratively burdensome, and disruptive to the marketplace. (*See, e.g.,* Traulsen, No. 52.1 at p. 1 (estimating a 25% increase in marketing costs); Delta, No. 94.1 at p. 1 (describing increased burden from updating literature, advertising materials, and installation instructions); and AO Smith, No. 81.1 at p. 1 (emphasizing the stress to their customers from model number changes))

In light of these comments, the Department will not require a new basic model number when a manufacturer creates a new basic model unless DOE has determined that the basic model is non-compliant with the standard. If manufacturers—on their own—seek to certify a new basic model, DOE will not require that they designate new model numbers to avoid unnecessary advertising, marketing, and consumer related costs. But, should DOE determine that a basic model does not comply with the applicable standard, manufacturers cannot certify any of the model numbers included in that basic model using the same model numbers certified in the basic model determined noncompliant. If, for example, a manufacturer wishes to make changes to a noncompliant basic model to bring it into compliance, that modified model(s) must be recertified as a new basic model, with a new model number(s). *See* 10 CFR 429.114(d). We reiterate that, in such cases, the Department is not requiring any particular numbering system or convention, only that it has a new basic model number to distinguish it from the noncompliant basic model. The Department believes that new model numbers are warranted in such cases to prevent consumer confusion and permit the Department to monitor compliance effectively.

We note that designating new model numbers for a new basic model may be prudent in some circumstances even when it is not required by today's rule. DOE enforcement efforts will be based on the basic model number. A manufacturer that increases the efficiency of a model may elect not to recertify it using a new basic model number. If, however, DOE tests an earlier-manufactured unit and determines the basic model to be non-compliant with the standard, the manufacturer will be required to cease distribution of all units of all models listed under that basic model number, even if modifications to the model may have made it compliant over time. Furthermore, we note, as Whirlpool's comment points out, that the FTC has issued a staff opinion stating that the failure to change model numbers when changing the efficiency rating of a product may be considered an unfair and deceptive practice in violation of Federal law. (Whirlpool, No. 78.1, at p. 2 (attaching FTC staff opinion letter))

3. Notice of Discontinuance

In the September 2010 NOPR, the Department proposed to require that manufacturers report a model as discontinued as a part of their annual filing following the date on which production of a model has ceased and it is no longer being sold or offered for sale by the manufacturer or private labeler. Several commenters sought additional clarity with respect to when a model has been discontinued. AHRI members, such as Daikin AC, urged DOE to adopt AHRI's approach, whereby models are discontinued when production has stopped, yet stock remains, and such models remain listed in AHRI's directory for 6 months. (*See, e.g.,* Daikin AC, No. 73.1 at p. 1) Other commenters argued that discontinuance should be defined with respect to when production has ceased and should not refer to commerce. (*See, e.g.,* BSH Home Appliance, No. 89.1 at p. 2; AHAM, No. 98.1 at p. 7) And one commenter suggested that DOE should simply remove all requirements for reporting discontinued models to DOE. (*See* ABB, No 53.1 at p. 8)

Today's rule retains the requirement that manufacturers or certifying parties (*i.e.,* third-party filers acting on behalf of a manufacturer) notify DOE in their annual certification filing when a model is no longer being produced and the manufacturer or private labeler is no longer offering it for sale. EPCA obligates DOE to ensure that all covered products distributed by manufacturers and private labelers in U.S. commerce comply with applicable Federal conservation standards. The reporting requirements for discontinued models—like the certification reporting requirements themselves—provide the Department with necessary information about the products that are being distributed in U.S. commerce and thus, which products are subject to DOE's regulatory regime. As one commenter put it, "knowledge of what covered products are being distributed in commerce at any given time is the foundation of an effective certification and enforcement program." (NEEA, No. 67.1 at p. 2)

The Department's view of when a model is discontinued stems from EPCA's statutory framework. Although DOE understands that it may be easier for manufacturers to track production dates, the relevant information for DOE's compliance and enforcement efforts, and manufacturer or private labeler liability, does not stem from production, but from the distribution of a model in commerce by the regulated entity. Thus, the Department will consider a model to be discontinued when production has ceased and when the manufacturer (including importer) or private labeler is no longer offering the product for sale. To reduce the burden on manufacturers, today's rule no longer requires notification at the time of discontinuance, but rather requires that a model's discontinuance be reported to DOE as a part of the annual filing.

The Department emphasizes, moreover, that whether a model is discontinued depends on whether the manufacturer, importer, or private labeler has ceased production and stopped offering the model for sale. It does not depend upon distributor or retail sales and offerings. EPCA's standards and the Department's reporting obligations regulate manufacturers, importers, and private labelers. The certifying entity will know when it stops offering a model for sale, but would have no way of knowing when distributor or retail stock has been depleted. Thus, in the annual filing, the manufacturer or certifying entity should report basic models which are no longer being produced and that the manufacturer or private labeler is no longer offering for sale.

F. Certification Testing, Generally

Under existing regulations, the sampling procedures for certain consumer products and certain commercial and industrial equipment to be used for certification testing are set forth in sections 430.24, 431.65, 431.135, 431.174, 431.175, 431.197, 431.205, 431.225, 431.265, 431.295, and 431.328. In the September 2010 NOPR, DOE proposed to consolidate existing sampling provisions in Part 429 and establish sampling provisions for the types of consumer products and commercial equipment that do not currently have them. Further, DOE proposed the use of a statistically meaningful sampling procedure for selecting test specimens of consumer products and commercial and industrial equipment, which would require the manufacturer to select a sample at random from a production line and, after each unit or group of units is tested, either accept the sample or continue sampling and testing additional units until a rating determination can be made. DOE did not propose a specific sample size for each product because the sample size is determined by the validity of the sample

and how the mean compares to the standard, factors which cannot be determined in advance.

While DOE has moved the sampling plans for all covered products and covered equipment, except electric motors, to Part 429, DOE is not adopting any changes to the existing tolerances at this time. In this final rule, DOE restructured the presentation of the sampling plan and statistical information and included the Student's t-distribution values to help manufacturers in understanding the process behind calculating the certification values for each product. DOE hopes these changes, which are editorial in nature, provide the additional clarity that interested parties have been seeking regarding DOE's sampling procedures. Table III.1 demonstrates a mapping between the existing location in parts 430 and 431 and the future location in part 429 of the sampling plans that manufacturers apply to the test data in order to generate their certified ratings.

TABLE III.1—CURRENT AND FUTURE LOCATIONS OF THE PROVISIONS FOR STATISTICAL SAMPLING PLANS FOR CERTIFICATION TESTING

Product type	New regulation citation in final rule	Existing regulation citation
Residential refrigerators, refrigerator-freezers and freezers	10 CFR 429.14	10 CFR 430.24(a)–(b).
Room air conditioners	10 CFR 429.15	10 CFR 430.24(f).
Central air conditioners and heat pumps	10 CFR 429.16	10 CFR 430.24(m).
Residential water heaters	10 CFR 429.17	10 CFR 430.24(e).
Residential furnaces	10 CFR 429.18	10 CFR 430.24(n).
Dishwashers	10 CFR 429.19	10 CFR 430.24(c).
Residential clothes washers	10 CFR 429.20	10 CFR 430.24(j).
Residential clothes dryers	10 CFR 429.21	10 CFR 430.24(d).
Direct heating equipment	10 CFR 429.22	10 CFR 430.24(g) and 10 CFR 430.24(o).
Conventional cooking tops, conventional ovens, microwave ovens	10 CFR 429.23	10 CFR 430.24(i).
Pool heaters	10 CFR 429.24	10 CFR 430.24(p).
Fluorescent lamp ballasts	10 CFR 429.26	10 CFR 430.24(q).
General service fluorescent lamps, general service incandescent lamps, and incandescent reflector lamps.	10 CFR 429.27	10 CFR 430.24(r).
Faucets	10 CFR 429.28	10 CFR 430.24(s).
Showerheads	10 CFR 429.29	10 CFR 430.24(t).
Water closets	10 CFR 429.30	10 CFR 430.24(u).
Urinals	10 CFR 429.31	10 CFR 430.24(v).
Ceiling fans	Design standard. Not applicable.	
Ceiling fan light kits	10 CFR 429.33	10 CFR 430.24(w) and 10 CFR 430.24(x).
Torchieres	Design standard. Not applicable.	
Bare or covered medium base compact fluorescent lamps	10 CFR 429.35	10 CFR 430.24(y).
Dehumidifiers	10 CFR 429.36	10 CFR 430.24(z).
Class A external power supplies	10 CFR 429.37	10 CFR 430.24(bb).
Battery Chargers	10 CFR 429.39	10 CFR 430.24(aa).
Candelabra base incandescent lamps and intermediate base incandescent lamps.	10 CFR 429.40	New per EISA 2007.
Electric motors	No change. (10 CFR 431.17)	
Commercial refrigerators, freezers, and refrigerator-freezers	10 CFR 429.42	10 CFR 431.65.
Commercial heating, ventilating, air-conditioning (HVAC) equipment	10 CFR 429.43	10 CFR 431.173 through 10 CFR 431.175.
Commercial water heating (WH) equipment	10 CFR 429.44	10 CFR 431.173 through 10 CFR 431.175.
Automatic commercial ice makers	10 CFR 429.45	10 CFR § 431.135.
Commercial clothes washers	10 CFR 429.46	New per EISA 2007.
Distribution transformers	10 CFR 429.47	10 CFR 431.197.
Illuminated exit signs	10 CFR 429.48	10 CFR 431.205.
Traffic signal modules and pedestrian modules	10 CFR 429.49	10 CFR 431.225.
Commercial unit heaters	Design standard. Not applicable.	
Commercial pre-rinse spray valves	10 CFR 429.51	10 CFR 431.265.
Refrigerated bottled or canned beverage vending machines	10 CFR 429.52	10 CFR 431.295.
Walk-in coolers and walk-in freezers	Design standard. Not applicable.	
Metal halide lamp ballasts and fixtures	10 CFR 429.54	10 CFR 431.328

DOE sought comment on a variety of issues relating to sampling plans in the September 2010 NOPR. DOE is continuing to consider further changes to the sampling plans for certification testing of all consumer products, including: (1) Changes to the product-specific coefficients and the rationale for such changes; (2) whether DOE should continue to have different sampling plans for certification testing and enforcement testing; and (3) whether DOE should expand the submission of data requirements in the certification section to include test data and the details of the sampling procedures used for making representations of and certifying compliance with the energy and water use or efficiency. DOE will consider all of the comments submitted as part of this record as it continues any potential revisions in the next certification, compliance, and enforcement rulemaking.

G. Certification Testing Specific to Commercial HVAC and WH Equipment, Including the Use of AEDMs and VICPs

In the September 2010 NOPR, DOE proposed that one set of sampling procedures be used for certification testing of all types of commercial air-conditioning and water heating equipment (HVAC and WH) and for verification of the AEDM, regardless of participation in a voluntary industry certification program (VICP). DOE further proposed to allow all manufacturers of commercial HVAC and WH equipment, irrespective of participation in a VICP, to use both in-house testing facilities and independent laboratories at the manufacturer's discretion for certification testing.

In response to DOE's proposals, AHRI objected to the application of the more stringent non-VICP regulations to VICP participants. Specifically, AHRI stated that the certification testing requirements for VICPs should remain unchanged because changing them would actually be an advantage to those manufacturers that do not participate in a VICP. (AHRI, No. 91.1 at p. 8)

DOE does not agree with AHRI and is adopting its approach as proposed in the September 2010 NOPR. DOE believes that fair and equal treatment of all manufacturers of commercial HVAC and WH equipment is important regardless of participation in certification programs. While DOE recognizes that participation in industry programs can provide invaluable benefits to manufacturers, DOE does not believe the regulations for certification testing should be differentiated based on this factor. Certification sampling plans, which are applied to the certification testing results, have been established to capture the variances in manufacturing processes, testing methods, and materials. DOE does not believe these factors are influenced by participation in a VICP. As such, DOE is adopting identical provisions, which use certain provisions from the existing regulations, for both non-VICP and VICP participants.

H. Records Retention and Confidentiality

1. Records Retention by Manufacturers

In the September 2010 NOPR, DOE proposed to establish a record retention requirement for certification reports that would require the reports to be retained by the manufacturer as long as the model is being distributed in commerce and, for discontinued models, for two years from the date that production of a basic model has ceased and is no longer being distributed by the manufacturer. This requirement would be in addition to the records retention requirement for underlying certification test data, which existing regulations require manufacturers to maintain for two years. Records must be maintained such that they are readily accessible for review by DOE upon request.

In response to this proposal, BSH recommended that DOE strike the language proposed in the September 2010 NOPR requiring manufacturers to retain certification records for as long as the model is being distributed in commerce. Instead, BSH suggested that DOE simply state that records should be retained for two years from the date production ceased. (BSH, No. 89.1 at p. 4)

Although we recognize the date on which production ceases may be readily available to manufacturers, the Department's regulatory regime centers on the distribution of covered products in commerce, rather than manufacturers' production schedules. Thus, the Department is adopting in this final rule the requirement that certification records be retained for two years from the date that the manufacturer or certifying entity notified DOE that the basic model is no longer being distributed in commerce. As discussed above, the Department views a model as discontinued when the entity that certified the basic model (or the party represented by a third-party certifier) is no longer offering the model for sale. Accordingly, under today's rule, records must be retained for two years from the date of that submission. This approach creates a specific date known to both manufacturers and the Department and requires manufacturers to retain records for models in the distribution chain for a reasonable period of time after they are discontinued.

DOE also clarifies that, under its maintenance of records requirement, a manufacturer must retain the certification records, including test reports, which underlie the *each* certification of a model. As an example, if a basic model is certified to DOE on April 1, 2011, the test report underlying that certification report must be retained such that it can be provided to the Department upon request. A test report generated at a later date will not be sufficient. If the basic model is recertified to DOE on April 1, 2012, based on a different test report, the new test report underlying that certification report must be retained, in addition to the certification report underlying the 2011 certification.

2. Confidentiality of Information

In the September 2010 NOPR, DOE proposed to clarify in its regulations that the following information submitted pursuant to the certification requirements is considered public record: The manufacturer's name, brand name, model number(s), and all of the product-specific information submitted on the certification report. In addition, the Department retained the current approach whereby certifying entities seeking to withhold other information submitted to the Department from public disclosure must provide redacted copies at the time of submission.

In response, a number of commenters expressed strong support for public access to certification data. (*See, e.g.,* AWE, No. 38.1 at p. 2; NRDC, No. 80.1 at p. 6, NEEA, No. 67.1 at p. 3; Earthjustice, No. 83.1 at p. 2) As one commenter explained: "Providing the public with a ready means to access efficiency testing results strengthens the incentive for manufacturers to follow the law and helps ensure that they will be held accountable if they failed to meet efficiency standards." (*See* Lish, No. 58.1 at p. 2) Several commenters encouraged DOE to establish a public online database as the repository for all product and equipment information to increase transparency and public access. (*See, e.g.,* NRDC, No. 80.1 at p. 6; NEEA, No. 67.1 at p. 3, First Co., No. 76.1 at p. 3) First Company, for example, offered "strong support for the development of a single DOE/FTC list of certified equipment that is published and publicly available on the DOE Web site," that would include certification reports and notices of discontinuance. (First Co., No. 76.1 at p. 3)

As for the specific information to be considered as a matter of public record, several parties objected to making public the business relationship between a manufacturer and private labeler of a covered product. Delta Faucet, for example, commented that certification information related to private labelers should be segregated and kept confidential due to concerns for contracting with potential customers and release of such information to competitors. (Delta, No. 94.1 at p. 1) Similarly, AHAM recognized that who manufactures a privately labeled product "may be valid and valuable information to DOE as a regulator," but that this information "is not publicly known and, in many cases, would harm companies' competitive postures if * * * such arrangements were disclosed." (AHAM, No. 98.1 at p. 6) First Company suggested that, to avoid consumer confusion, only the following information should be made public for central air conditioners and heat pumps: "manufacturer name, private labeler name, brand name, basic model number, individual model numbers covered by that basic model, capacity, SEER and HSPF (if applicable) of the model." (First Co., No. 76.1 at p. 3)

AHAM further opposed making CT(l), CT(m) and standard temperature sensor location information for refrigerators, refrigerator-freezers, and freezers available to the public because they would reveal confidential information. (AHAM, No. 98.1 at p. 6) AHAM also asserted that certification information should only be made public once the product is released into commerce. AHAM believes that releasing such information prior to the product's release will deflate product launches and release information to competitors before it is otherwise known. (AHAM, No. 98.1 at pp. 6–7)

The Department believes that making data accessible to the public provides increased transparency and accountability to the Department's regulatory regime. At the same time, the Department recognizes that certain information may be confidential in nature and exempt by law from public disclosure. To balance these interests, the final rule adopts the following framework for addressing the public disclosure of information submitted to DOE under Part 429, while protecting valid claims of confidential business information.

First, certain categories of certification information will be considered a matter of public record that DOE intends to make available to the public on its Web site. The Department is developing a public, searchable database that will allow the public ready access to certain certification information for covered products. This certification database is still being developed, and the Department hopes to make it available to interested parties in the coming year. While this will be a DOE database, we are continuing to work with FTC and EPA on establishing a consolidated Federal database of energy and water efficiency information.

Using this database, the Department intends to publicize the following certification information for covered products: The brand name, model number(s), and product-specific certification information for which no confidentiality concerns have been raised. With respect to manufacturer and private labeler information, we understand from the comments that there may be heightened competitive sensitivity attached to the identity of manufacturers and private labelers of certain products. We also note that the FTC has chosen not to publicize this information on its Web site. In recognition of this, the Department will follow the FTC's approach and publicize brand information in lieu of information that reveals business relationships between manufacturers and private labelers. Although DOE has decided not to include the manufacturer and brand relationship on the public database, the Department still requires this information be submitted as part of the certification report to the Department and it will be subject to the confidentiality provisions outlined below.

DOE also intends to publish in the public database product-specific information that is already available or is readily available, such as the energy or water ratings and volume measurements. Though some of this information is technical, no party has deemed it proprietary and it will increase the accountability of manufacturers' self-certification and DOE's compliance and enforcement activities. DOE will not publicize the CT(l), CT(m) and standard temperature sensor location for refrigerators and freezers in light of the concerns that this information would reveal design details of the control mechanisms of a product that manufacturers treat as confidential. All other product-specific certification information will be made publicly available.

Once the database is available, these public categories of certification information will be posted promptly upon receipt and remain available until DOE receives a notice of discontinuance. With respect to AHAM's concerns about the posting of information prior to product launch, we note that manufacturers can wait to file a certification report until a model is about to be distributed in commerce. Furthermore, DOE believes that instances in which the entirety of a certification filing must be kept confidential will be exceedingly rare. Should such instances occur, manufacturers should contact DOE, in advance, and provide a full explanation of the extenuating circumstances justifying such confidential treatment.

Second, for all other information submitted pursuant to Part 429, today's rule provides a mechanism for submitting parties to claim confidentiality on a case-by-case basis at the time of submission. Any person submitting information or data pursuant to Part 429 that the person believes to be confidential and exempt by law from public disclosure should submit via an attachment to CCMS: (1) A request for confidential treatment; (2) one complete copy, and (3) one copy from which the information believed to be confidential has been deleted or redacted. The request for confidential treatment must contain a comprehensive statement of the reasons for withholding the information from disclosure, including: (1) A description of the specific items for which confidential treatment is sought, (2) whether and why such items are customarily treated as confidential within the industry, (3) whether the information is generally known by or available from other sources, (4) whether the information has previously been made available to others without obligation concerning its confidentiality, (5) an explanation of the competitive injury to the submitting person that would result from public disclosure, (6) a date upon which such information might lose its confidential nature due to the passage of time, (7) why disclosure of the information would be contrary to the public interest; and (8) any other information that the party seeking confidential treatment believes may be useful in assessing whether its request for confidentiality should be granted.

DOE may defer acting on any requests for confidentiality until DOE receives a request for the disclosure of the information covered by the request. The information will be treated as confidential until DOE acts on the request and all subsequent appeal proceedings have been exhausted. In response to a request for the disclosure of information, DOE will review the submitter's views, but will make its own determination with regard to any claim that information submitted be exempt from public disclosure. If the

Department denies a request for confidentiality in whole or in part, seven days' notice of that determination will be given to the submitter pursuant to 10 CFR 1004.11(e) before the information is disclosed.

This approach provides submitters with an opportunity to express claims of confidentiality with particularity at the time the information is submitted, including a request for information to remain confidential for a set period of time, such as prior to a public product launch. Furthermore, it will allow the Department to determine whether a particular piece of information is exempt from public disclosure by law on a case-by-case, fact specific basis. In this way DOE can both consider confidentiality claims effectively and respond to disclosure requests promptly, while protecting against unlawful disclosure of information.

I. Enforcement Testing

1. Initiation of an Enforcement Action

The current regulations provide for enforcement testing only upon DOE's receipt of written information that a covered product or covered equipment may be violating a standard. 10 CFR 430.70(a); 10 CFR 431.373(a). In the September 2010 NOPR, DOE proposed to revise its procedures to make clear that, pursuant to section 6296 of EPCA, the Department retains the discretion to request data, test, or examine the standard compliance of any covered product or covered equipment at any time, and to initiate enforcement investigations and actions based on a belief that a covered product or covered equipment is not compliant with an applicable standard. 75 FR 56803; 56825.

Today's rule removes the requirement that DOE must receive a written complaint alleging a violation of the standard before it can perform enforcement testing to determine a model's compliance. The Department's need to exercise its discretion under the statute and enforce regulations proactively was recognized by a number of comments in the record. Consumer's Union and the Appliance Standards Awareness Project, for example, submitted comments in support of the Department's revision to its regulations to make clear that DOE, on its own, can initiate enforcement actions. (Consumer's Union, No. 74.1 at p. 3; Appliance Standards Awareness Project, Public Meeting Transcript, No. 103 at p. 21) Additionally, IAPMO R&T encouraged DOE to continue to seek companies that are not complying with the testing and reporting requirements so as to ensure a level, competitive playing field. (IAPMO R&T, No. 36.1 and 66.1 at p. 1)

Some commenters urged DOE to retain the existing limit on its discretion and require that it receive written information of a standards violation before testing to determine whether a product is compliant. Specifically, ABB requested that DOE retain the original requirement that a formal complaint must exist prior to the initiation of formal testing. (ABB, No. 53.1 at p. 11) AHRI also commented that the proposed change was unwarranted because DOE should have some reason for initiating an investigation of compliance or at least give preference to written information. (AHRI, No. 91.1 at p. 10)

The Department continues to believe that it is essential to align its regulations with its broad statutory authority under EPCA to initiate enforcement investigations and actions to determine if a covered product or covered equipment is compliant. This will ensure that the Department can enforce its regulations in a timely, effective manner as Congress intended. The enforcement program simply cannot be as effective if the Department can only initiate enforcement testing upon the receipt of an external complaint—DOE must be able to monitor compliance and test products at its own discretion.

Today's final rule reflects the Department's authority to monitor compliance by requesting data and testing products, at any time, and to initiate enforcement investigations and actions based on a belief that a covered product or covered equipment may not be compliant with an applicable standard. This authority comes directly from the statute, *see* 42 U.S.C. 6296, which obligates the Department to ensure that all covered products and equipment comply with applicable Federal conservation standards. In addition, the Department's ability to request records, test products, and examine design standard compliance, at any time, is crucial to the deterrent effect of the Department's enforcement efforts. The Department believes its authority to take these actions will serve to encourage compliance.

Other commenters requested clarification regarding the criteria under which DOE will initiate an enforcement action. (*See* AWE, No. 38.1 at pp. 2–3; American Panel Corporation, No. 59.1 at p. 3; Royal Vendors Inc., No. 64.1 at p. 2; Hill Phoenix, No. 70.1 at p. 1) For example, American Panel Corporation suggested there should be written criteria setting conditions under which DOE may initiate enforcement testing without information from a third party. (American Panel Corporation, No. 59.1 at p. 3) Further, Ingersoll Rand expressed concerns because the September 2010 NOPR did not define the process that will be used to initiate enforcement testing. (Ingersoll Rand, No. 6.1 at p. 3) Similarly, NAMA noted its objection to DOE's ability to initiate enforcement testing at any time without notification, urging DOE to define the causes that would trigger an enforcement investigation. (NAMA, No. 11.1 at p. 6) NEMA commented that DOE should revise its regulations to require that DOE may initiate an investigation of compliance upon verified belief that a basic model may not be compliant. (NEMA, No. 26.1 at p. 11)

In practice, the Department's enforcement actions and how it chooses to exercise its enforcement authority will be dictated by the facts on a case-by-case basis. However, the Department understands commenters' desire for a greater understanding of the factors that DOE will use to guide the exercise of its enforcement discretion. We also recognize the importance of providing notice to regulated entities and making the Department's practices as transparent as possible. To provide further clarity, notice, and accountability, the Department plans to issue a policy statement on enforcement, which will address the types of factors and circumstances it will consider in deciding whether to initiate an enforcement action. The Department will make this policy statement available on its Web site in the near future.

2. Process Provided to Manufacturers During Enforcement Testing

Under the current regulations, DOE initially reviews the underlying test data supporting the certification and provides the manufacturer with an opportunity to come in and meet with the Department upon receipt of information regarding a potential standards violation. 10 CFR 430.70(a); 10 CFR 431.373(a). In the September 2010 NOPR, DOE proposed to allow DOE, at any time, to request any information relevant to determining compliance, including the certification and test data. 75 FR 56825. In addition, DOE removed the provision requiring DOE to offer to meet with the manufacturer prior to initiating testing. *Id.*

Several commenters expressed concerns that removing these provisions would deprive manufacturers of the ability to respond in a timely and informed way to allegations of noncompliance. AHRI, for example,

commented that DOE should retain the requirement in its current regulations that DOE review underlying data provided by the manufacturer and offer the manufacturer the opportunity to meet with DOE to verify the compliance of the model(s) in question before initiating enforcement testing. (AHRI, No. 91.1 at p. 10) Similarly, AHAM argued that before a finding of noncompliance, DOE should communicate with the manufacturer or private labeler during the testing process and invite them to witness testing. (AHAM, No. 98.1 at p. 11) Additionally, AHAM stated that DOE should provide manufacturers with copies of test reports, regardless of whether the product is found to be compliant. *Id.* Traulsen also commented that DOE should provide the manufacturer with an opportunity to witness testing or, at a minimum, review the data and equipment prior to any final rulings. (Traulsen, No. 52.1 at p. 7)

The Department will continue to afford manufacturers due process and an opportunity to respond to allegations in the course of an enforcement investigation. The Department's forthcoming enforcement policy statement will provide additional guidance and detail on the enforcement process. However, in light of the comments, we address a few issues here as well. With respect to the manufacturer's certification test data, the Department agrees with interested parties that reviewing the data underlying the certifications prior to initiating enforcement testing is in an important step in the investigative process because it can reveal additional details that are not apparent in the certification data. Thus, the Department typically reviews the underlying certification data and test reports supporting the certification report prior to proceeding to enforcement testing. However, because there may be rare circumstances where expedited testing is necessary, DOE believes it is important to maintain flexibility by providing DOE with authority to request records and initiate testing at any time. DOE also agrees that manufacturers should have access to enforcement test data. DOE expects to provide the manufacturer with the test data reports after the enforcement testing has been completed. The Department will also return any test units provided by the manufacturer (or at the manufacturer's expense) once the case is officially closed.

3. Test Notice

DOE's current regulations require manufacturers to ship units for enforcement testing within five working days once they have been identified by DOE. 10 CFR 430.70(a)(v); 10 CFR 431.373(a)(v). In the September 2010 NOPR, DOE proposed to reduce the time period by which a manufacturer must ship test units of a basic model to the testing laboratory pursuant to a test notice from 5 to 2 days. 75 FR 56826.

In today's rule, the Department (1) retains the current regulation's five working day shipping rule for high volume, off-the-shelf products and (2) adopts a flexible window for low volume, custom built products. As discussed below, many of the commenters suggested that DOE separate built-to-order from pre-manufactured, off-the-shelf products, giving built-to-order products a longer time period to ship the basic model. The Department agrees and adopts this approach. To ensure that manufacturers have an adequate amount of time to ship test units for such low volume, built-to-order products, the Department is establishing separate shipping time periods by which a manufacturer must ship test units of a basic model for different groups of products.

For off-the-shelf products, which can be acquired at the retail level, DOE is retaining the current five-day window to ship a basic model to a test laboratory in the event a manufacturer receives a notice for enforcement testing from DOE. The record reflects that reducing the time frame from five to two days would impose a significant burden. In particular, JVC, Royal Vendors Inc., ALS, NEEA, Hill Phoenix, Ingersoll Rand, Delta Faucet, AHAM, AHRI, Manitowoc Ice, Craig Industries, Traulsen, GE Prolec, Kysor Panel Systems, and the Appliance Standards Awareness Project generally commented that two days is too short and would work an undue hardship on the manufacturer, distributor or dealer from whom the test samples are being acquired. (JVC, No. 56.1 at p. 1; Royal Vendors Inc., No. 64.1 at p. 2; ALS, No. 66.1 at p. 3, NEEA, No. 67.1 at p. 7; Hill Phoenix, No. 70.1 at p. 2, Ingersoll Rand, No. 6.1 at p. 4; Delta Faucet, No. 94.1at p. 2; AHAM, No. 98.1 at p. 9, AHRI, No. 92.1 at p. 10; Manitowoc Ice, Public Meeting Transcript, No. 103 at pp. 174–175; Craig Industries, Public Meeting Transcript, No. 103 at pp. 179–180; Traulsen, No. 52.1 at p. 6; GE Prolec, No. 95.1 at p. 6; Kysor Panel Systems, Public Meeting Transcript, No. 103 at p. 182; ASAP, Public Meeting Transcript, No. 103 at pp. 183–184)

For products like low-volume or built-to-order models that are unavailable upon receipt of the test notice at the manufacturer's facility, warehouse, distribution chain, or retailer, DOE will work with the manufacturer to obtain units as quickly as possible for a pending enforcement case. The comments in the record support a longer timeframe and a more flexible approach for these types of products. In particular, BWC, American Panel, AO Smith, NEMA, MEUS, NAMA, and ABB generally noted that the existing 5 days is too short, especially for custom, built-to-order products, which require a longer lead time to manufacture. (BWC, No. 45.1 at p. 3; American Panel, No. 59.1 at p. 3; AO Smith, No. 81.1 at p. 4; NEMA, No. 85.1 at p. 5, MEUS, Public Meeting Transcript, No. 103 at p. 183; NAMA, No. 25.2 at p. 5; ABB, No. 53.1 at p. 10) Some of these commenters also suggested a one-size-fits-all approach is impractical for a number of products. For example, American Panel asserted that 3 to 15 days are required to manufacture custom Walk-In Coolers or Freezers (WICFs). (American Panel, No. 59.1 at p. 3) Further, BWC asserted that 30 days is a more appropriate time period for shipping water heater test units, especially niche products, which are almost entirely built-to-order. (BWC, No. 45.1 at p. 3) Today's rule adopts a flexible approach in response to commenters' concern that it may not be feasible for low volume or built-to-order products to comply with a few days lead time for shipping test units for enforcement testing purposes.

4. Sampling for Enforcement Testing

The existing sampling procedures to be used for enforcement testing are set forth in Appendix B to Subpart F of Part 430 (consumer products), Appendix B to Subpart K of Part 431 (distribution transformers), Appendix C to Subpart S of Part 431 (metal halide lamp ballast), and Appendix D to Subpart T of Part 431 (certain commercial equipment).The sampling plan for enforcement testing of consumer products requires testing an initial sample of four products. Then, depending on the variation in the testing results of the initial sample, a second sample size of up to 16 additional units may need to be tested to make a determination of compliance or non-compliance per the current regulations. (Appendix B to Subpart F of Part 430)

For commercial products, DOE's existing regulations are similar to those of consumer products except there are provisions for testing a sample of less

than four products for commercial heating, ventilation, air-conditioning, and water heating equipment when the full sample cannot be obtained. In addition, the tolerances for certain commercial products are different due to the equipment-specific attributes such as manufacturing practices and testing procedures.

In the September 2010 NOPR, DOE proposed to increase the maximum sample size for enforcement testing of all products to 21 units. 75 FR 56826. DOE proposed this increase in the maximum number of units to account for the test sample needed for certain types of consumer lighting products. 75 FR 56804.

In addition, DOE recognized that a sample size of 20 total units under the existing regulations may not always be available for basic models that are low-volume or built-to-order. To accommodate these circumstances and reduce burden on manufacturers, DOE proposed to modify the existing sampling procedures to account for low-volume and built-to-order basic models. 75 FR 56803–804; 56826. Further, DOE proposed to retain the discretion to determine whether the basic model qualifies as low-volume or built-to-order. DOE proposed to make such determination by evaluating the number of units of a given basic model available at the manufacturer's site and all distributors. *Id.*

Today's rule makes two general changes to the current enforcement sampling regulations. First, it increases the maximum number of units that may be tested to 21. Second, it adopts new, flexible sampling provisions for low volume or custom-built products. Together, these provisions permit the Department to identify units for enforcement testing effectively, depending on the circumstances of a particular case.

First, for high-volume, consumer products and commercial equipment, DOE retains its sampling plan proposal, under which DOE tests an initial sample size of four units per basic model and, depending on the variability of the test results, may test up to 17 additional units, as required, for enforcement testing. DOE believes this is the best approach to provide robust test results and ensure that products are not incorrectly found out of compliance. DOE notes that with the exception of increasing the maximum sample size for off-the-shelf products from 20 to 21—which reflects the test sample needed for certain types of consumer lighting products—the sampling provisions for enforcement testing are nearly identical to the current provisions found in DOE's regulations and those currently being used for enforcement testing.

Second, DOE agrees with many of the comments on the importance of flexibility where units are not available for testing, especially in the case of low-volume or built-to-order basic models. American Panel Corporation stated its belief that DOE should allow for additional sampling based on analysis of the first sample(s) since the initial testing of products could be impacted by testing queues of as much as six months. (American Panel Corporation, No. 59.1 at p. 3) Ingersoll Rand recommended that DOE consider the nature and the cost of the product under test. (Ingersoll Rand, Public Meeting Transcript, No. 103 at p. 319 and No. 6.1 at p. 3) General Electric Lighting encouraged DOE to do computer simulation of enforcement testing to ensure that DOE has a high degree of confidence that DOE will not produce a false signal of non-compliance. (General Electric Lighting, Public Meeting Transcript, No. 103 at p. 229) IAPMO R&T stated its support for DOE's current proposal for enforcement testing. (IAPMO R&T, No. 36.1 at p. 2) Royal Vendors misunderstood DOE's proposal and commented that an initial sample size of four units and an additional sample size of up to 21 units is troublesome because of the unit cost, which could be burdensome and the availability of those units could be difficult to obtain. (Royal Vendors, No. 64.1 at p. 2) NAMA opposed the enforcement sampling size procedures as they related to beverage vending machines because the manufacturers do not have the economic capacity to warehouse up to 20 beverage vending machines of each basic model. NAMA urged DOE to use its discretion when fewer than two beverage vending machines of a given model are available for testing within 30 days of the test notice. (NAMA, No. 25.1 at pp. 4–5) Hoshizaki America, Inc. stated its belief that test samples should be minimized for commercial equipment, generally, because these units can be costly to make and house if limited machines are sold each year. (Hoshizaki America, Inc. No. 75.1 at p. 1)

Recognizing these concerns, DOE has decided to adopt several enforcement sampling provisions that take account of low-volume or built-to-order consumer products and commercial equipment. First, DOE specifies provisions for certain covered products and equipment where there is a lower volume market and manufacturing tends to be more customized. These include automatic commercial ice makers, commercial refrigeration equipment, refrigerated bottled or canned vending machines, commercial HVAC and WH equipment, and distribution transformers. The initial sample size of these units matches that of high-volume consumer and commercial equipment, which is four units.

Second, DOE is including a provision that provides for testing of fewer than four units if they are unavailable at the time the test notice is received. While these provisions were proposed in the September 2010 NOPR, DOE has attempted to clarify them to aid manufacturers in determining the exact sample size required for enforcement testing depending on product or equipment type.

Finally, DOE has also included a general provision applicable to all covered products and covered equipment, which allows DOE to use its discretion in determining the sample size when covered products and covered equipment are generally unavailable. DOE will use many of the considerations that interested parties noted above in their comments, including the availability of units and the availability of third-party testing facilities to run the DOE test procedure.

5. Testing Done for Other Agencies

DOE proposed to allow units tested using the applicable DOE test procedure by DOE or another Federal agency, pursuant to other provisions or programs, to count toward units in the test sample for enforcement testing, so long as the testing is done in accordance with the DOE test procedures and certification testing provisions. 75 FR 56804. The record does not reflect any specific comments on this issue and DOE continues to believe the Department should not have to duplicate efforts taken by itself or by other agencies to re-test units that have already been tested by the Federal government using DOE's test procedure. Thus, DOE is adopting this provision, as proposed, in the final rule.

6. Test Unit Selection

Currently, DOE must obtain units for testing directly from the manufacturer's facility or another location specified by the manufacturer. In the September 2010 NOPR, DOE proposed to revise its test unit selection provisions for enforcement testing to allow DOE to select the units of a basic model to be tested from the manufacturer, a distributor, or directly from a retailer. 75 FR 56826. For low-volume or built-to-order products, DOE proposed that it would determine the most reliable method of selecting units that are

representative of those sold to consumers. *Id.*

In today's rule DOE is adopting in its regulations that DOE may select units of a basic model to be tested for enforcement purposes from a distributor, a retailer, or the manufacturer. Reliable enforcement testing requires the selection and testing of an unbiased sample that is representative of the units distributed in commerce. Based on DOE's experience, it is necessary to obtain units from diverse sources to allow for an unbiased, representative, and sufficient sample to produce the most reliable testing. A number of commenters supported DOE's proposal to obtain test units from retailers and distributors, as well as directly from the manufacturer. (AWE, No. 38.1 at p. 3; NEEA, No. 67.1 at p. 7; NRDC, No. 80.1 at p. 6)

Some commenters objected to this change, arguing that test units should come directly from the manufacturer. BWC stated this was necessary since not every manufacturer distributes their product through the retail channel. (NAMA, No. 25.1 at pp. 5–6; BWC, No. 10049 at p. 3; AHRI, No. 92.1 at p. 10) Commenters also noted that DOE's approach of obtaining test units from retailers would be too burdensome for products with limited or no stock. For example, Craig Industries stated that a WICF test unit is not stocked and would therefore have to be built by the manufacturer and then shipped to DOE at a cost of approximately $6,000 per unit under DOE's test unit selection process. (Craig Industries, Public Meeting Transcript, No. 103 at p. 192) As described above, however, DOE did not propose and is not adopting a process to select exclusively from retail sources. Today's rule broadens the potential sources of units for testing. DOE is not changing from a manufacturer-supplied process to an exclusively retail-supplied process.

NAMA and AHRI further argued against selecting units from distributors or retailers because the manufacturer cannot be held responsible for equipment once it is out of their control. (NAMA, No. 25.1 at pp. 5–6; AHRI, No. 92.1 at p. 10) DOE agrees that manufacturers should not be held responsible for most post-production modifications; however, unaltered equipment should function as intended whether it is obtained directly from the manufacturer or through the manufacturer's normal distribution channels. NAMA also questioned whether DOE is considering testing used or rebuilt equipment that has been modified by the purchasers, which would not provide a valid test of compliance. (NAMA, No. 25.1 at pp. 5–6) DOE has previously stated that its authority does not extend to rebuilt and refurbished equipment, and DOE does not plan to test equipment not covered by regulation. *See, e.g.,* 74 FR 44920. Similarly, DOE is not adopting any change to the existing regulatory requirement that no quality control, testing or assembly be performed on units selected for testing. Therefore, irrespective of the source (retail, distributor or manufacturer), DOE intends to obtain and test units to which no alterations have been made. More generally, DOE believes that selecting units from the retailer or distributor may often provide DOE with the best representation of a typical unit that is distributed in commerce.

DOE recognizes that for low-volume and built-to-order basic models that are not available from retailers or distributors, the only method of obtaining these units, in many cases, is from the manufacturer. Manufacturers of low-volume and built-to-order basic models also explained that they will most likely not have inventory available for enforcement testing. (*See e.g.,* GE Prolec No. 95.1 at pp. 5–6) In such cases, DOE does not intend to require manufacturers to produce units simply for the purpose of enforcement testing. Doing so exclusively could be burdensome and wasteful and could risk introducing bias in the enforcement test sample. Rather, DOE will work with the manufacturer to identify units for enforcement testing, which may include similar alternative models. Moreover, DOE is also adopting a provision in today's final rule, which allows DOE to use its discretion to perform enforcement testing at a manufacturer's laboratory when there are extenuating circumstances, which make testing at a third-party laboratory impracticable or inadvisable. In these rare instances, the manufacturer's lab must also be accredited to the International Organization for Standardization (ISO)/ International Electrotechnical Commission (IEC) 17025, "General requirements for the competence of testing and calibration laboratories", Second edition, May 15, 2005, (ISO/IEC 17025:2005(E)) and DOE will witness the testing. DOE believes this will also facilitate the enforcement process of low-volume and built-to-order products.

Other commenters expressed concern about the mechanism by which manufacturers would be notified of unit selection when units are obtained from retailers or distributors. AO Smith noted that if DOE adopts the approach of selecting test units from retailers, then a clear definition of cost would need to be established as well as a method of notifying a manufacturer that a unit was selected and obtained from a certain supplier. (AO Smith, No. 81.1 at p. 3) AHRI requested that DOE clarify that a manufacturer's reimbursement to the retailer is limited to providing a replacement product without any additional monetary compensation. (AHRI, No. 92.1 at p. 10; AHRI, Public Meeting Transcript, No. 103 at pp. 191–192) AO Smith also commented that although obtaining samples from a distributor or retailer may be a reasonable idea to prevent pre-selection of units by the manufacturer, it will be difficult (if not impossible) to administer. (AO Smith, No. 81.1 at p. 3)

DOE believes that obtaining units from a distributor or retailer will be relatively straightforward, as manufacturers have specified distributors as sources under the current regulations and have arranged some form of compensation to facilitate the transfer of the units to DOE's specified test lab directly from the distributors. Furthermore, DOE is adopting a process that includes the issuance of a test notice, which will specify the source of units for testing. Therefore, the manufacturer will be aware of the selection of units and can make arrangements to compensate the retailer for the units selected for testing. As stated earlier, DOE will communicate with manufacturers during the enforcement process and keep them informed about the investigation. Today's rule does not specify the form of reimbursement the manufacturer provides to the retailer. Such reimbursement may take the form of a replacement unit, monetary compensation, a voucher, or any other mechanism upon which the manufacturer and retailer agree.

Some of the commenters supporting the rule urged DOE to go farther, recommending that DOE adopt a preference for retail selection and obtain samples for testing from the manufacturer only if no retail product is available. NEEA and NRDC, for example, requested that DOE develop a protocol for enforcement testing that would establish off-the-shelf testing as the preferred method for acquiring products. (NEEA, No. 67.1 at pp. 7–8; NRDC, No. 80.1 at p. 6) NEEA further suggested that DOE's prioritization process for sourcing products for testing should be aligned to the Energy Star program's prioritization process. (NEEA, No. 67.1 at pp. 7–8)

The Department declines to adopt a systematic preference for sourcing products for enforcement testing from either retail or manufacturer sources. As

the comments reflect, retail sources may be preferred in some instances, while manufacturer sources will be more effective in others. Thus, the Department retains the discretion to select units in the manner most appropriate in a particular case to achieve our goals of unbiased, representative, and sufficient samples. Testing an unbiased sample and obtaining that sample quickly when DOE has identified a potentially noncompliant product is necessary to ensure the American public is receiving the energy efficiency promised by the Federal efficiency standards. The Department will consider many factors when determining where to obtain units, including unit availability and shipping times. DOE realizes that basic models may not always be available from the retailer or distributer, such as if the unit is a seasonal product like a room air conditioner. Consequently, DOE is retaining its discretion to obtain basic models from the manufacturer, a retailer, a distributor, or some combination thereof.

7. Testing at Manufacturer's Option

After the Department has tested a model and determined through statistical analysis that it does not meet the applicable standard, the existing regulations allow a manufacturer to do additional testing at DOE's selected lab at the manufacturer's expense. In the September 2010 NOPR, the Department proposed to remove these sections because manufacturers can perform additional testing on their own at any time.

The Department is removing the regulatory provision governing manufacturer testing because it is both unnecessary—given that manufacturers are free to perform additional testing on their own at any time—and otherwise delays the finality of a compliance determination. In written comments, AHRI, ABB, and NEMA opposed removal of the provisions allowing additional testing at the manufacturer's option. (AHRI, No. 92.1 at p. 11; ABB, No. 53.1 at p. 9, NEMA, No. 85.1 at p. 11) In particular, AHRI commented that this provision provides a safeguard against a "false negative" conclusion and provides manufacturers with fair, due-process in enforcement testing. (AHRI, No. 92.1 at p. 5) AHAM further commented that while it recognizes the Department is interested in minimizing delay in the enforcement process, this should not be at the expense of the Department being fair and obtaining accurate results. (AHAM, Public Meeting Transcript, No. 103 at p. 244)

The Department disagrees that removing the manufacturer optional testing provision will result in unfairness or inaccurate test results. Manufacturers can perform additional testing on their own and provide test results to DOE at any time. There is no need for a regulatory provision to give them this option. Moreover, DOE's enforcement testing is based on a statistically valid sample size. Once the Department has completed its enforcement testing, allowing for any additional testing serves no purpose other than to increase the testing sample size. As NEEA's comment explained, if the enforcement testing is done in a statistically rigorous way (according to procedure, within specified tolerances), then the only impact of further testing, regardless of who does it, is delay in the enforcement process. (NEEA, No. 67.1 at p. 8) Furthermore, under the existing (and proposed) regulation, manufacturers are prohibited from distributing the model in commerce during any additional manufacturer-elected testing, so delay in moving the adjudication process forward works to the disadvantage of the manufacturer.

Raising concerns about the possibility of defects in the tested units, MEUS, Johnson Controls, and Manitowoc Food Service generally commented that it is necessary for manufacturers to have the ability to test the same units that DOE has tested for there to be a determination that a component was defective. (MEUS, Public Meeting Transcript, No. 103 at pp. 233–234; Johnson Controls, Public Meeting Transcript, No. 103 at pp. 233–234; and Manitowoc Food Service, Public Meeting Transcript, No. 103 at pp. 242–243) Similarly, Owens Corning stated at the public meeting that it is imperative for manufacturers to retest a product that has been determined to be out of spec by an outside laboratory to determine whether it was the product or the outside laboratory's test that was at fault. (Owens Corning, Public Meeting Transcript, No. 103 at pp. 226–227) Such comments, however, reflect a misunderstanding of DOE's current regulations, which do not allow the manufacturer (1) to test the same units tested by DOE, (2) to observe the additional testing permitted by the regulation, or (3) to select the test lab for manufacturer-elected testing. Furthermore, today's final rule retains the current regulatory provision addressing defective units, allowing DOE to test a replacement unit if a selected unit is inoperative or is found to be in noncompliance due to failure of the unit to operate according to the manufacturer's design and operating instructions.

Other commenters expressed concerns about variability or uncertainty surrounding how an outside laboratory would conduct enforcement testing, and whether the laboratory would conduct the test in a manner similar to that of the manufacturer. NEMA, for example, asserted that manufacturers of distribution transformers should have some ability to challenge the results of an independent test lab that does not have proven, established experience with the particular product tested. (NEMA, No. 85.1 at p. 11) Similarly, GE Appliances and Lighting asserted that because variability questions exist among laboratories, where labs can test the same or similar products and get very different results, it is difficult for manufacturers to feel comfortable and validate those results. (GE Appliances and Lighting, Public Meeting Transcript, No. 103 at pp. 241–242)

As discussed below, DOE's enforcement testing will be done by appropriately qualified, ISO/IEC 17025:2005 accredited laboratories. However, in recognition of the concerns of the rare instances when laboratories may be unavailable to test certain products or equipment, DOE is adopting a provision in today's final rule that allows DOE to use its discretion to perform DOE-witnessed enforcement testing at a manufacturer's laboratory when there are extenuating circumstances that make testing at an independent laboratory inadequate or unrealistic.

8. Cost Allocation for Testing

In the September 2010 NOPR, DOE tentatively concluded that the cost of enforcement testing should remain with the Department, as existing regulations require. The Department received comments on this issue from the ALA, AWE and Hoshizaki America, Inc. Specifically, ALA commented that it supports DOE's tentative decision that the cost of enforcement testing should remain with DOE. (ALA, No. 97.1 at p. 1) In addition, AWE noted that DOE should consider alternate vehicles to pay for enforcement testing, including certification fees, VICP from manufacturers, and revolving funds paid from successful enforcement fines. (AWE, No. 38.1 at p. 3) Lastly, Hoshizaki America, Inc. suggested that the cost of enforcement testing be on a case-by-case basis, similar to AHRI's current process, which requires that the loser in the challenge process pay for enforcement testing. (Hoshizaki, No. 75.1 at p. 2) Hoshizaki America stated

that the manufacturer should only have to pay for testing with enforcement if they are found to be in non-compliance. (Hoshizaki, No. 75.1 at p. 2)

DOE appreciates the suggestions by the commenters on the variety of potential methods to pay for enforcement testing. Unlike voluntary programs, which could incorporate a potential fee for registration, DOE's regulatory program requires manufacturers to certify with the Department and we currently have no authority to collect filing fees that could be used for administering the enforcement program. DOE agrees with ALA that the cost of enforcement testing should reside with the Department, as this allows the Department with the greatest flexibility in executing the enforcement testing at the third-party laboratory of its choice. Consequently, DOE concludes that the cost of enforcement testing should remain with the Department and is not adopting a change in today's final rule.

9. Third-Party Laboratory Requirements for Enforcement Testing

DOE did not propose specific third-party laboratory requirements for enforcement testing in the September 2010 NOPR. However, DOE sought comment, generally, about the attributes of a laboratory accreditation program as it relates to enforcement testing.

In response, DOE generally received comments supporting some type of broad accreditation for laboratories DOE uses to enforcement test covered products and covered equipment. For example, Earthjustice commented that accreditation should be required for all labs testing covered products and equipment. (Earthjustice, No. 83.1 at p. 1) UL stated its support for laboratory accreditation through the ISO/IEC 17025:2005 process. UL further commented that adoption of an ISO/IEC 17025:2005 requirement will improve initial product quality. (UL, No. 60.1 at p. 2) Similarly, IAPMO R&T commented that the laboratory used for determining compliance in enforcement actions should meet the ISO/IEC 17025:2005 requirements. (IAPMO R&T, No. 36.1 at p. 2) Additionally, the Natural Resources Defense Council, the Appliance Standards Awareness Project, the National Consumer Law Center, and the Northeast Energy Efficiency Partnership submitted a joint comment supporting laboratory accreditation for enforcement testing. (NRDC, ASAP, NCLC, and NEEP, No. 39.1 at p. 4)

As a result of the support to establish some type of laboratory accreditation program for enforcement testing, DOE has taken the initial steps towards this goal by requiring that any laboratory used for enforcement testing by DOE be lab accredited to ISO/IEC 17025:2005. DOE believes this requirement, while limiting the laboratories DOE could use for potential enforcement testing, will provide interested parties with additional reassurance in the robustness and accuracy of the test results. DOE will continue to consider additional accreditation requirements, including test procedure-specific requirements, in the next certification, compliance, and enforcement rulemaking.

10. Enforcement for Imports and Exports

In the September 2010 NOPR, DOE proposed to modify the label on exported products that do not comply with the applicable energy conservation standard to read "NOT FOR SALE IN THE UNITED STATES" to make it clear that those products are not for distribution in commerce in the United States. Additionally, DOE sought comments on how to modify its certification, compliance, and enforcement provisions to more effectively enforce at the border.

In today's final rule, the Department is modifying its proposed label requirement for exported products to read "NOT FOR SALE FOR USE IN THE UNITED STATES." The Department believes this new language makes clear that the labeled item cannot be sold or distributed in the United States for ultimate use in the United States—which is what the statute requires—while incorporating commenters' suggestions that the label explicitly state "NOT FOR USE IN THE UNITED STATES." (*See* AWE, No. 38.1 at p. 3; NEMA, No. 85.1 at p. 4; Baldor Electric, Public Meeting Transcript, No. 103 at p. 317; Rheem, No. 79.1 at p. 6; GE Prolec, No. 95.1 at p. 9) As NEMA explained in its comment, this change to the language will account for the fact that "the commercial process often involves sale to a U.S. based company for subsequent export." (NEMA, No. 85.1 at p. 4). The Department declines to adopt the suggestions from ALS that the label should state "EXPORT," and from Schneider Electric that we should use the term "Installation" instead of "Sale." (ALS, No. 66.1 at p. 5; Schneider Electric, No. 63.1 at p. 3) To enforce compliance with the energy efficiency regulations at the border, the Department believes it is essential to include language on the label clearly indicating the product must not be sold for use in the U.S.

With regard to DOE's question in the September 2010 NOPR on how to modify its regulations to more effectively enforce at the border, the Department received several comments recommending that DOE develop documentation and labeling requirements for determining compliance. For example, GE Prolec recommended that DOE provide additional documentation guidelines for import reviews by U.S. Customs and Border Protection (CBP), since it would be extremely difficult for CBP to determine if a distribution transformer was compliant from only a visual perspective. (GE Prolec, No. 95.1 at p. 9) Additionally, GE Prolec suggested DOE adopt some sort of a labeling requirement, such as a symbol, for commercial products that would explicitly state that it was compliant with the energy efficiency regulations. (GE Prolec, Public Meeting Transcript, No. 103 at pp. 312–314) Similarly, the NEMA Transformer Section recommended that DOE adopt a program, akin to the CC number system used for motor manufacturers, that would indicate to CBP that the product comes from a source that has complied with the certification and compliance requirements of the DOE. (NEMA Transformer Section, No. 84.1 at p. 16) For Medium-Voltage Dry-Type and Liquid-Fill Distribution Transformers, the NEMA Transformers Section proposed requiring a "Circle E" to be placed on all products tested and certified to indicate compliance with the energy conservation standards. (NEMA Transformer Section, No. 84.1 at p. 16)

The Department agrees that it may be beneficial to adopt some type of documentation to verify compliance and will consider these comments in its ongoing discussions with CBP. The Department declines to adopt commenters' suggestions regarding labeling for distribution transformers at this time. DOE questions the value of CC numbers assigned to motor manufacturers and does not wish to extend this practice to distribution transformers. We do not adopt any type of labeling requirement, including placement of a "Circle E" on a product, at this time. While DOE continues to work with CBP for effective enforcement of the energy conservation standards at the border, any labeling requirement DOE would adopt would need to be established in coordination with CBP, as CBP is be the agency that has the authority to deny entrance of any products that are not in compliance with the energy conservation standards.

Other commenters generally suggested that DOE develop some type of enforcement program with CBP to conduct inspections at the port. (*See* NEMA Motor & Generator Section, No.

84.1 at p. 22) For example, the NEMA Lamp Section suggested that DOE work with CBP to determine when regulated products are being imported, particularly to identify companies without a significant brand presence in the U.S. and who may not be familiar with U.S. energy regulations. (NEMA, No. 84.1 at p. 31) The NEMA Lamp Section also recommended that CBP set up a system to assure that products imported comply with DOE regulations. Specifically, NEMA suggested an audit system to follow up with the importer of record to review test reports from a NVLAP accredited lab. (NEMA, No. 84.1 at p. 31) Further, the Office of Energy Efficiency, Natural Sources Canada (NRCAN) recommended that, similar to the requirements of the Canadian Border Services Agency, DOE may want to work with CBP to require that a manufacturer provide to CBP certain data elements as it imports a product, including the purpose of import for the product. (NRCAN, Public Meeting Transcript, No. 103 at pp. 315–317)

As previously stated, the Department is currently working with CBP on ways to ensure effective enforcement of the Federal energy efficiency regulations at the border and will take commenters' suggestions into consideration in developing any new practices with CBP.

Lastly, regarding specific changes to the regulatory text proposed in the September 2010 NOPR, NEMA recommended that DOE revise its proposed language in the imported and exported products rule in the proposed sections 429.25–26. (NEMA, No. 84.1 at pp. 4–5) NEMA asserted that DOE should make clear that the reference to "this part" in proposed sections 429.25 and 429.26 refers not only to Part 429, but also Parts 430 and 431. (NEMA, No. 84.1 at p. 4) NEMA additionally commented that DOE make explicit in proposed section 429.25(b) that there is an exception for a product imported for export. (NEMA, No. 84.1 at p. 5) The Department agrees with NEMA regarding the reference to "this part" in proposed sections 429.25–26 and revises these sections in today's final rule sections 429.5 and 429.6 to include not only Part 429, but also Parts 430 and 431. With respect to NEMA's comment on proposed section 429.25(b), however, DOE believes that no change is needed. The existing text already reflects that there is an exception for a product imported for export, and, of course, section 429.6 specifically addresses exported products.

J. Adjudication

1. Prohibited Acts

In the September 2010 NOPR, DOE proposed to explicitly establish in its rules that a manufacturer's failure to properly certify a covered product or covered equipment and retain records in accordance with DOE regulations may be subject to enforcement action, including the assessment of civil penalties, separate from any determination of whether a covered product or covered equipment does or does not comply with the applicable conservation standard. In addition, the Department proposed to revise its regulations to make clear that the following violations would also constitute a prohibited act subject to enforcement action: (1) A failure to test any covered product or covered equipment subject to any of the conservation standards, including deliberate use of controls or features in such product or equipment to circumvent the requirements of a test procedure and produce test results that are unrepresentative of a product's energy or water consumption if measured pursuant to DOE's required test procedure; (2) a manufacturer or private labeler's distribution in commerce of a basic model after a notice of noncompliance determination has been issued; and (3) the occurrence of a knowing misrepresentation.

DOE received comments from various member sections of NEMA on its proposed enforcement steps. In particular, the NEMA Motor and Generator Section requested clarification that not testing a basic model is not a violation when the efficiency of the basic model has been certified under an AEDM or certification program. (NEMA, No. 85.1 at p. 26) On this point, the Department clarifies that a basic model must be tested in accordance with a DOE test procedure and regulations, which includes sampling plans and alternative methods of testing, to be properly certified. Thus, if a manufacturer is using an AEDM to certify a basic model, then, so long as the manufacturer has substantiated and applied the AEDM properly in accordance with DOE regulations, there is no violation.

The NEMA Motor and Generator Section also commented that DOE should permit a grace period between the time of issuance of a notice of noncompliance determination and the time at which distribution must be fully stopped, since distribution of a noncompliant electric motor may need to be stopped at several locations. *Id.* DOE declines to adopt such a grace period, because EPCA, on its face, clearly prohibits a manufacturer from distributing a noncompliant product. As a matter of law, once a manufacturer receives a notice of noncompliance, the manufacturer must immediately discontinue its sales of the noncompliant product.

Additionally, the NEMA Lamp Section and NEMA Lamp Ballast Section stated that while they accept the need for enforcement steps in cases of knowing misrepresentation, a high level of confidence should be required to establish this and the enforcement standard would have to acknowledge industry and regulatory tolerances. (NEMA, No. 85.1 at pp. 38, 52) These Sections also noted that the sampling provisions can result in an under-representation of the true performance characteristic and expressed concern that this would be considered a knowing misrepresentation. *Id.* The NEMA Lamp Section and NEMA Lamp Ballast Section further questioned DOE's authority to pursue this type of relief against false and misleading statements under EPCA, recommending instead that the FTC has some authority for this type of enforcement under the FTC Act. *Id.*

Today's rule clarifies that a knowing misrepresentation of the efficiency of a product in a required certification report to the Department is a violation under EPCA. Pursuant to EPCA, DOE has the authority to require that manufacturer submissions are both accurate and provided in accordance with its regulations. (*See* 42 U.S.C. 6302(a)(3).) A failure to do so is a prohibited act under EPCA and DOE rules and is subject to enforcement action. A contrary reading would substantially undermine the purpose of the certification and compliance requirements in the first place—to ensure that all covered products distributed in commerce comply with the applicable energy conservation standards and have been tested as prescribed by the rules. The Department also wishes to clarify that a conservative rating is not a misrepresentation. As long as the tested performance of the product is at least as good as its certified rating, a knowing misrepresentation will not have occurred. Rather, a misrepresentation occurs when a manufacturer certifies a product it knows to be noncompliant or when a manufacturer certifies a value it knows cannot be supported by test data. Of course, separate from an EPCA violation, such conduct is also prohibited by 18 U.S.C. 1001, which prohibits knowingly making false statements to the Federal Government.

2. Penalties

In the September 2010 NOPR, the Department proposed to revise its regulations to state clearly that for certification requirement violations, per statutory authority and DOE guidance, the Department would calculate penalties based on each day a manufacturer distributes each basic model in commerce in the United States without having submitted a certification report. Additionally, DOE proposed to explicitly state in its regulations that, consistent with its guidance, it would consider numerous factors in assessing civil penalties, including: The nature and scope of the violation; the provision violated; the violator's history of compliance or noncompliance; whether the violator is a small business; the violator's ability to pay; the violator's timely self-reporting of the violation; the violator's self-initiated corrected action, if any; and such other matters as justice may require. In today's final rule, the Department clarifies its penalty procedure. Further, the Department determines not to add to its regulation the specific factors DOE takes into consideration when assessing civil penalties, as proposed in the September 2010 NOPR.

The Department has determined that it will not adopt its proposal to list explicitly in its regulations the factors that DOE takes into consideration in assessing civil penalties. The Department's previously issued Guidance on the Imposition of Civil Penalties for Violations of EPCA Standards and Certification Obligations (Penalty Guidance), available at *http://www.gc.energy.gov/documents/Penalty_Guidance_5_7_2010_final_(1).pdf,* sets forth the Department's approach to the imposition of penalties for violations of DOE's standards and certification requirements. This guidance provides ample notice to regulated entities and makes more transparent the process by which DOE calculates penalties. Since this guidance already lists the factors that DOE will consider in calculating a penalty, repeating these factors in the Department's regulations would be duplicative.

Although we are not adopting this provision, the Department has considered comments on DOE's proposal in light of the existing Penalty Guidance. For example, Earthjustice suggested that, to make the assessment of penalties fairer, DOE should use the manufacturer's markup across the industry for a product to calculate how much a manufacturer has benefitted from selling a noncompliant product and then take that into consideration in developing a penalty amount. (Earthjustice, Public Meeting Transcript, No. 103 at pp. 268–269) The Department agrees with Earthjustice and will amend its Penalty Guidance to include a manufacturer's markup data as one of the factors the Department may consider in developing a penalty amount.

A few parties objected to some of the factors listed in DOE's Penalty Guidance. Specifically, American Panel stated that certain factors DOE considers in assessing civil penalties, namely the size of violator's business and violator's ability to pay, have merit but could lead to unequal enforcement. (American Panel, No. 59.1 at p. 3) The NEMA Motor & Generator Section similarly commented that penalties should be the same for any violator, regardless of size or ability to pay (NEMA, No. 85.1 at p. 26) The Department is mindful of such concerns and wishes to reassure parties that it will balance concerns of fairness and equity in the assessment of penalties to achieve deterrence and encourage timely resolution of any instances of non-compliance. While DOE will look at a company's size and their ability to pay, this will just be one factor among others from which the Department determines the appropriate penalty in any given case.

Interested parties also suggested including additional penalties for frivolous claims. Specifically, the NEMA Motor & Generator Section recommended that a penalty be assessed on anyone who submits a frivolous claim about a violation which is found to be untrue. *Id.* American Panel also suggested there should be some sort of penalty for frivolous turn-in, so that regulated entities are deterred from turning in their competitors without merit. (American Panel, Public Meeting Transcript, No. 103 at pp. 277–278) The Department recognizes commenters' concerns and shares the desire to prevent the filing of frivolous complaints. However, DOE does not have the authority under EPCA to assess penalties for frivolous claims. Under the statute, the Department may only assess penalties for specified prohibited acts, and frivolous claims do not fit into any of these prohibitions. The Department will, however, exercise its discretion in initiating enforcement actions and will consider the source of the complaint and the Department's prior experience with involved parties in making such decisions.

Lastly, with regard to distribution transformers, Schneider Electric commented that the language in section 429.55 relating to the assessment of civil penalties should be modified from "each day of noncompliance" to "each day energized" since the distribution transformer can sit un-energized for months. (Schneider Electric, No. 63.1 at pp. 4–5) The Department understands that products may be used or not used in a variety of ways once distributed in commerce and that a distribution transformer may be distributed in commerce but not energized for some periods of time. But EPCA prohibits the distribution in commerce of noncompliant products, and this cannot turn on whether and how the product is used or energized once sold. Therefore, DOE declines to adopt Schneider Electric's proposal.

3. Imposition of Additional Certification Testing Requirements as Remedy for Non-Compliance

As an additional tool to ensure compliance with the DOE conservation standards and regulations, the Department proposed in the September 2010 NOPR to revise its regulations to provide that the DOE may require independent, third-party testing for certification of covered products and covered equipment where DOE has determined a manufacturer or private labeler is in noncompliance with the certification requirements or applicable conservation standards. DOE received no comments in opposition to this proposal and is including this requirement that allows for third-party certification testing for noncompliance in today's final rule.

4. Compromise and Settlement

In the September 2010 NOPR, the Department proposed to outline the steps to be taken by both parties (DOE and respondent) once a compromise or settlement offer has been made. No interested parties opposed this proposal, and the Department is including language outlining the process for compromising or settling a penalty amount assessed under its regulations in today's final rule.

K. Waivers

DOE also addressed the possibility of establishing a mandatory waiver requirement in the September 2010 NOPR. This would obligate manufacturers to obtain a waiver where the test procedure does not evaluate the energy or water consumption characteristics in a representative manner or where the test procedure yields materially inaccurate comparative data.

The Department received comments in support of a mandatory waiver requirement from NRDC, the Appliance Standards Awareness Project,

Consumers Union, NEEA and AWE (NRDC, No. 39.1 at p. 6; Appliance Standards Awareness Project, Public Meeting Transcript, No. 103 at pp. 34–35; Consumers Union, No. 74.1 at p. 5; NEEA, No. 67.1 at p. 3; AWE, No. 38.1 at p. 2) For example, NRDC recommended that DOE require manufacturers to report to DOE any instance where the manufacturer knows or has reason to know that a product uses significantly more energy in normal, real-world performance than as reported in its certification for such product using the approved test procedure. (NRDC, No. 39.1 at p. 6) In such cases, NRDC recommended that DOE establish a protocol for consulting with the manufacturer to determine if a waiver is appropriate. *Id.* Additionally, the Appliance Standards Awareness Project and Consumers Union generally commented that the number of manufacturers requesting waivers is a good indicator that the test procedures being used are out-of-date, and that such a practice would alert DOE to the need to reexamine the relevant rule. (Appliance Standards Awareness Project, Public Meeting Transcript, No. 103 at pp. 34–35; Consumers Union, No. 74.1 at p. 5)

Although various commenters supported a mandatory waiver requirement, DOE is not adding such a requirement to its final rule. While DOE appreciates that such a requirement may serve to prevent manufacturers from deliberately circumventing the test procedures, DOE believes that its existing regulations already provide adequate protections against such circumvention. DOE notes that coverage of a product is not dependent upon whether there is a test procedure that can test a product. Thus, regardless of whether a waiver is obtained for a product that is not covered by a test procedure, a manufacturer must still meet the required energy conservation standard for the product if it is a covered product under DOE's regulatory authority.

Consequently, DOE has multiple processes to address the testing concerns that are not explicitly addressed by DOE's test procedure. First, manufacturers can submit test procedure related questions through DOE's Test Procedure Guidance process. *See http://www1.eere.energy.gov/guidance/default.aspx?pid=2&spid=1* for additional information. Alternatively, DOE's regulations allow manufacturers to apply for a waiver when a manufacturer determines that a given basic model contains one or more design features that prevent testing in accordance with DOE's test procedure. Because new models that cannot be tested using the existing test procedure must obtain a waiver before they are sold, DOE must do better in processing waivers quickly and appropriately. The Department renews its commitment to act swiftly on waiver requests and to update our test procedures promptly to address issues raised by waivers. The Department is also adding an electronic method of submission (*AS_Waiver_Requests@ee.doe.gov*) and revising the mailing address in today's final rule. Second, DOE recognizes that product innovations will always outpace DOE's rulemaking efforts. Thus, to encourage waivers and prevent the Department's administrative waiver process from delaying or deterring the introduction of novel, innovative products into the marketplace, DOE, as a matter of policy, will refrain from enforcement actions related to a waiver request that is pending with the Department.

L. Additional Product Specific Issues

1. Entity Responsible for Certification and Compliance for Walk-In Coolers or Freezers (WICFs)

In the January WICF Test Procedure NOPR, DOE proposed to have a separate test procedure for the WICF envelope and WICF refrigeration system. 75 FR 186. Due to the separate test procedures for each of the components being considered by the Department, DOE explored the idea that the "manufacturer" of an entire walk-in system (*i.e.,* envelope and refrigeration system combined) could be a third party assembler (*i.e.,* essentially a contractor who assembles the walk-in from the separate components in the field). The third party assembler may even be the end-user or owner of the equipment.

DOE received a number of comments about this proposed definition in the January WICF Test Procedure NOPR. DOE addressed these comments in the September 2010 NOPR, where DOE proposed that the "manufacturer" is the entity responsible for compliance with any DOE energy conservation standard. 75 FR 56806. EPCA defines the term "manufacture" as "to manufacture, produce, assemble, or import." (42 U.S.C. 6291(10)) DOE proposed in the September 2010 NOPR that the term "manufacturer" be applied to the entity responsible for designing and/or selecting the various components used in a WICF. 75 FR 56806.

Some stakeholders agreed with DOE's proposed definition of manufacturer. Arctic Industries believes that the person who chooses the specifications for a WIFC should be responsible for its efficiency. (Arctic Industries, Public Meeting Transcript, No. 103 at p. 293) Kysor stated that the installation of the components to create a complete walk-in is accomplished by several different parties: a panel installer, a refrigeration installer, and an electrical contractor, for example. Due to the number of parties involved, Kysor agreed with DOE's clarification of the entity responsible as the person who has control of the completed walk-in and all of its components. (Kysor, No. 68.1 at p. 3) American Panel agreed with the proposed definition but suggested an addition. American Panel stated that the definition of "manufacture" should be modified to state the manufacturer of a WICF means any person who specifies, manufactures, produces, assembles or imports a WICF. American Panel also recommended that the definition of manufacturer should include a food service consultant who prepares a written specification of equipment to be provided on a project. (American Panel, No. 59.1 at p. 4)

Other stakeholders stated that the installer should be involved in WICF compliance. CrownTonka stated that they would be in favor of a definition that held the assembler responsible for compliance, if the definition encompassed the installer. CrownTonka explained that even if components comply, a poor installation will not cause efficiency gains to be realized. (EERE–2008–BT–STD–0015, CrownTonka, Public Meeting Transcript, No. 44 at p. 323) Craig stated that only the installers, who assemble the product in the field, can verify the energy usage for WICFs. (Craig, Public Meeting Transcript, No. 103 at p. 27) Craig expressed concern that unless installers ensure the integrity of the material that goes into a WICF, installers are excluded from the definition of manufacturer even though they can have more impact on the energy use of a WICF than the manufacturers because energy usage depends on proper installation, which the manufacturer cannot control. (Craig, Public Meeting Transcript, No. 103 at p. 25) CrownTonka, Thermalrite, and ICS, also known as the Joint Comment, stated that since the "matched" ratings are applied to remote condensing units the certification should be done by the installer instead of the manufacturer, which would increase the number of responsible parties. (EERE–2008–BT–TP–0014, Joint Comment, No. 2.3.006 at p. 3) Hill Phoenix stated that the responsibility for infiltration testing and compliance should be placed on the installer. (EERE–2008–BT–TP–0014,

Hill Phoenix, No.2.3.007 at p. 2) Kysor recommended that certification should be done by someone at the final site who approves the assembly because energy use depends on the final assembly. (EERE–2008–BT–STD–0015, Public Meeting Transcript, Kysor, No. 44 at p. 43)

Many stakeholders were concerned about the consequences of making the assembler responsible for certifying the entire walk-in. NEEA implied that the proposed definition of a WICF manufacturer was too broad. (NEEA, Public Meeting Transcript, No. 103 at p. 295) NEEA also stated that the current framework would be difficult to enforce (EERE–2008–BT–TP–0014, NEEA, No. 2.3.005 at p. 1) CA State IOU recommended that DOE carefully consider how this rule would be enforced before proceeding under the proposed regulatory framework, which shifts compliance documentation from tens of manufacturers to thousands of contractors and designers, converts this appliance standard to a building standard, and also shifts enforcement from DOE to over 3,000 building departments. (EERE–2008–BT–STD–0015, CA State IOU, No. 60 at p. 4)

Specifically, some stakeholders expressed concern about the cost burden that would be imposed upon the defined "manufacturer." Heatcraft stated that it would be very burdensome for component manufacturers to be responsible for testing different components that they did not manufacture. (EERE–2008–BT–STD–0015, Public Meeting Transcript, Heatcraft, No. 44 at p. 318) Craig stated that the proposals in the September 2010 NOPR were overly burdensome, and costs associated with the proposed regulations would likely put three quarters of the manufacturers out of business. (Craig, Public Meeting Transcript, No. 103 at p. 24) Manitowoc stated that if the assembler is a local contractor, the contractor may not be in a position to handle the responsibility of demonstrating compliance with an overall performance standard. Manitowoc worried that assemblers may get out of the business for fear of noncompliance consequences. (EERE–2008–BT–STD–0015, Public Meeting Transcript, Manitowoc, No. 44 at p. 30) Hill Phoenix stated that requiring manufacturer certification of installers would place undue burden and cost on both manufacturers and consumers. (EERE–2008–BT–TP–0014, Hill Phoenix, No. 1.2.023 at p. 1)

Various stakeholders suggested other compliance, certification, and enforcement paths the DOE could follow. NWEEA and NPCC stated that one way DOE could ensure compliance with these standards is by conventional means at the manufacturer level for WICF system components. (EERE–2008–BT–STD–0015, NWEEA and NPCC, No. 58 at p. 3) Kysor emphasized that certification and compliance to a panel standard should be incumbent upon the panel manufacturer. (Kysor, No. 68.1 at p. 1) Similarly, Master-Bilt stated that door manufacturers should rate their own doors. (EERE–2008–BT–TP–0014, Master-Bilt, No. 2.3.014 at p. 2) Both Kysor's and Master-Bilt's comments are examples of a component level certification approach. Hill Phoenix argued that the definition of walk-in manufacturer should be clarified because in the current definition, the compliance responsibility could be applied to several entities, including the end user, consulting engineer/architect, dealer, wholesaler, and component manufacturer. Hill Phoenix recommended responsibility fall on three possible areas: The component manufacturers, the installer, and the entity that specifies all of the components of a walk-in envelope. Hill Phoenix also recommended that DOE adopt a regulatory framework similar to NEEA's, in which the component manufacturers are responsible for certifying their own components, the installer is responsible for infiltration, and the entity responsible for specifying the components would be responsible for the efficiency of the whole envelope. (Hill Phoenix, No. 70.1 at p. 3; EERE–2008–BT–TP–0014, Hill Phoenix, No. 2.3.007 at p. 1) Kysor stated that the manufacturer of each component should be responsible for testing that component, but should have nothing to do with the finished product in terms of compliance. (Kysor, No. 44 at p. 317, Standards Preliminary Analysis Public Meeting) Kysor explained that the overall installation is typically controlled or at least monitored by the permitting agency, general contractor, building certification official, or owner. These are the only parties in contact with all involved component manufacturers and installers and are the only parties in a position to have complete information from each component manufacturer for compilation; therefore, they are the only parties that could demonstrate compliance of the completed walk-in. (EERE–2008–BT–STD–0015, Kysor, No. 53 at p. 2; EERE–2008–BT–STD–0015, Public Meeting Transcript, Kysor, No. 44 at p. 326). Kysor also stated that DOE could request test data and certification at any time from the supplier for verification. Also, Kysor requested that the manufacturers be allowed to witness any verification testing of their products because testing labs do not always use the same equipment and often disagree on method or interpretation. (Kysor, 68.1 at p. 3) AHRI suggested that DOE should have two compliance paths: a prescriptive path and a performance path, similar to the International Energy Conservation Code. (EERE–2008–BT–STD–0015, Public Meeting Transcript, AHRI, No. 44 at p. 333)

Stakeholders suggested options like labeling and check sheets to make certification, compliance and enforcement easier. Ingersoll Rand stated that a program with a compliance check sheet would be good because the installer would just have to make sure the walk-in incorporates compliant components and would not have to do actual testing. (EERE–2008–BT–STD–0015, Public Meeting Transcript, Ingersoll Rand, No. 44 at p. 343) CrownTonka agreed with Ingersoll Rand's suggestion and stated that it would be self-regulating. (EERE–2008–BT–STD–0015, Public Meeting Transcript, CrownTonka, No. 44 at p. 343) NEEA stated that the overall U-value can be enforced by attaching paperwork to the shipped panels or a label similar to NFRC-rated fenestration products. NEEA continued to suggest that labeled products would make it easier for the manufacturer to calculate a performance metric. (EERE–2008–BT–TP–0014, NEEA, 2.3.005 at p. 1; EERE–2008–BT–TP–0014, NEEA, 2.3.005 at p. 2) Joint Utilities, which comprises of Southern California Edison, Pacific Gas & Electric, San Diego Gas & Electric, Sacramento Municipal Utility District, and CA State IOU stated that products intended for walk-ins must have certified ratings and have a label and catalog information that indicates that these products are approved for walk-ins. (EERE–2008–BT–TP–0014, Joint Utilities, 2.3.003 at p. 6; EERE–2008–BT–STD–0015, CA State IOU, No. 60 at p. 4) Carpenter Co. suggested WICF components be labeled with their energy consumption to streamline inspection and eliminate confusion when components are from different manufacturers. (EERE–2008–BT–TP–0014, Carpenter Co., 2.3.012 at p. 2) Adjuvant, Kysor, CrownTonka, and ICS all supported labeling WICF components. (EERE–2008–BT–STD–0015; Public Meeting Transcript, Adjuvant, No. 44 at p. 52; EERE–2008–BT–STD–0015, Public Meeting Transcript, Kysor, No. 44 at p. 55; EERE–2008–BT–STD–0015, CrownTonka and ICS, No. 56 at p. 1) NWEEA and NPCC suggested

component labels that could be checked by field inspectors as part of the compliance process. (EERE–2008–BT–STD–0015, NWEEA and NPCC, No. 58 at p. 3)

Stakeholders also discussed who would enforce the WICF standards. Manitowoc stated that a framework exists for oversight by health inspectors and oversight of structural and other elements, and recommended that DOE examine the existing framework to see if it can support energy efficiency measures. (EERE–2008–BT–STD–0015, Public Meeting Transcript, Manitowoc, No. 44 at p. 48) Adjuvant stated that in its experience with the California Title 20 standard, building and health inspectors could not inspect for energy efficiency because it was impossible to tell if a walk-in complied with energy regulations just by looking at it. (EERE–2008–BT–STD–0015, Public Meeting Transcript, Adjuvant, No. 44 at p. 52) CA Codes and Standards stated that building officials trying to evaluate a performance standard (*e.g.,* tradeoffs between components) would add cost to the States because inspection would be more difficult. (EERE–2008–BT–STD–0015, Public Meeting Transcript, CA C&S, No. 44 at p. 335) Joint Utilities stated that the local jurisdictions may not have the technical background to assure that compliant refrigeration equipment selections have been made. (EERE–2008–BT–TP–0014, Joint Utilities, No. 2.3.003 at p. 5) Craig recommended that enforcement could occur from sampling, and field testing could ensure representative calculations. (EERE–2008–BT–TP–0014, Craig, 2.3.013 at p. 6)

In light of the comments, DOE is modifying the definition of manufacturer as it relates to WICFs in the final rule. DOE notes that the current legislative design standards set forth by the Energy Independence and Security Act of 2007 (EISA 2007) provide the framework for a component-based approach since each design standard is based on the performance of a given component of the WICF. Using this approach, component manufacturers would be the entity responsible for certifying compliance of the components they manufacture for walk-in applications and ensuring compliance with the applicable standards for those components. This system would follow Master-Bilt's suggestion that door manufacturers certify their own doors. Since the current Federal standards are component level standards, DOE is able to make certification as conventional as possible, as suggested by NWEEA and NPCC. Enabling component manufacturers to certify their own components would also relieve testing and cost burden from the assembler, which s an issue identified by Heatcraft, Craig, and Manitowoc, and Hill Phoenix.

DOE also is specifying certain requirements for the manufacturers or assemblers of complete walk-ins, whether they are assembled in a factory or on-site. Even if the component manufacturers test and certify their components to the Department as required by this final rule, DOE must still ensure that only compliant components are used in walk-ins. Therefore, DOE notes that definition of manufacturer being adopted today extends the compliance responsibility to both the component manufacturer and the assembler even though the component manufacturer is the sole entity responsible for certification. Assemblers of the complete walk-in system are required to use only components that are certified to meet the Federal energy conservation standards in the assembled walk-in. The manufacturer or assembler of the complete walk-in does not have to certify each walk-in, as this could be unduly burdensome. Rather, DOE anticipates that the market will police itself and report noncompliant installations to the Department, especially if component manufacturers educate their purchasers about compliance requirements. This approach is very similar to the compliance pathways proposed by Ingersoll Rand and CrownTonka, Hill Phoenix, and Kysor.

In this final rule, DOE adopts a framework for enforcement in which DOE will determine whether the manufacturer of the component or manufacturer or assembler of the complete walk-in (or both) is responsible for noncompliance on a case-by-case basis. If a component manufacturer certifies a noncompliant component as compliant, or if the component is not properly tested and certified, DOE would initiate an enforcement action against the component manufacturer. If a walk-in is assembled from non-compliant components, DOE would initiate an enforcement action against the manufacturer or assembler of the complete walk-in. This approach provides DOE with flexibility in enforcing WICF standards. Although the outlined approach may not reduce the number of manufacturers, as CA State IOU warned, this approach clearly identifies who is responsible for compliance and certification, and how the standard will be enforced.

2. Basic Model Definition for Walk-In Coolers or Freezers (WICFs)

In the January WICF Test Procedure NOPR, DOE proposed to define "basic model" as all units of a given type of walk-in equipment manufactured by a single manufacturer, and—(1) With respect to envelopes, which do not have any differing construction methods, materials, components, or other characteristics that significantly affect the energy consumption characteristics. (2) With respect to refrigeration systems, which have the same primary energy source and which do not have any differing electrical, physical, or functional characteristics that significantly affect energy consumption. DOE requested comment on this proposed approach. 75 FR 189.

In the September WICF Test Procedure SNOPR, DOE proposed that envelope models grouped within a basic model could still differ in terms of non-energy characteristics (*e.g.,* color, shelving, metal skin material type, exterior finish, or door kick plate) but any change to a characteristic that affects normalized energy consumption (*e.g.* panel systems, door systems, electrical components, and infiltration reduction devices) would constitute a new basic model. (75 FR 55072)

Later in the September 2010 NOPR, DOE described the concept of "basic model" as a group of manufacturers' models that have essentially identical energy consumption characteristics such that the manufacturer would derive the efficiency rating for all models in the group from testing sample units of these models. DOE anticipated that applying this concept within the energy conservation program would streamline certification and compliance and alleviate burden on manufacturers by reducing the amount of testing they must do to rate the efficiencies of their products. DOE asked for comment on how manufacturers determine that a particular model constitutes a basic model, and what modifications to an existing model would make it a new basic model subject to the new model certification requirement. 75 FR 56798–56799.

Interested parties, including many manufacturers of walk-in coolers and freezers, submitted comments on the basic model concept to both this rulemaking docket and the WICF test procedure rulemaking docket. For consistency, all comments pertaining to basic model of WICF will be addressed in this rulemaking.

A large number of interested parties expressed concern that DOE's typical approach of using the basic model

concept to categorize equipment would not be applicable to walk-in coolers and freezers. American Panel, Arctic Industries, Bally, Craig Industries, Heatcraft, and Hill Phoenix all commented that developing a basic model definition or categorization could be difficult because there are a vast number of variations in walk-in shape and size that could each be a different basic model. (American Panel, Public Meeting Transcript, No. 103 at p. 89; Arctic Industries, Public Meeting Transcript, No. 103 at p. 67; EERE–2008–BT–TP–0014, Bally, No. 46 at p. 1; Craig Industries, Public Meeting Transcript, No. 103 at p. 59; Heatcraft, No. 65.1 at p. 1; EERE–2008–BT–TP–0014, Hill Phoenix, No. 2.3.007 at p. 3) Bally, Hill Phoenix, and Kysor Panel pointed out that walk-ins are often or, for some manufacturers, always engineered to order or custom designed for a particular customer. (Bally, No. 46 at p. 1; Kysor Panel, Public Meeting Transcript, No. 103 at p. 88; Kysor Panel, No. 68.1 at p. 1; Hill Phoenix, No. 70.1 at p. 1; EERE–2008–BT–TP–0014, Hill Phoenix, No. 2.3.007 at p. 1) Craig Industries, Heatcraft and Master-Bilt commented that the basic model concept as defined by DOE could cause a large testing burden on the WICF industry, and AHRI urged DOE to adopt a practical definition of basic model to reduce testing burden. (Craig Industries, Public Meeting Transcript, No. 103 at p. 60; Heatcraft, No. 65.1 at p. 1; EERE–2010–BT–TP–0014, Heatcraft, No. 2.3.009 at p. 1; EERE–2010–BT–TP–0014, Master-Bilt, No. 2.3.014 at p. 1; EERE–2010–BT–TP–0014, AHRI, No. 2.3.015 at p. 3) Craig Industries and Hill Phoenix commented on the particular burden of testing on small businesses under DOE's proposed basic model approach. (EERE–2010–BT–TP–0014, Craig Industries, No. 2.3.013 at p. 2; H EERE–2010–BT–TP–0014, Hill Phoenix, No. 2.3.007 at p. 3) Carpenter added that DOE's proposed basic model concept would be costly and cumbersome, and that 75% of WICF envelopes are custom designed. (EERE–2010–BT–TP–0014, Carpenter, No. 2.3.012 at p. 1) American Panel, Hill Phoenix and Kysor Panel further stated that model numbers are typically not used in the WICF industry, so DOE should not define basic model for walk-ins in terms of model numbers; American Panel further suggested tracking and keeping records of WICF equipment by manufacturing number and date of manufacture or date code. (American Panel, No. 59.1 at p. 4; Kysor Panel, No. 68.1 at p. 1; Kysor Panel, Public Meeting Transcript, No. 103 at p. 88; Hill Phoenix, No. 70.1 at p. 1; EERE–2010–BT–TP–0014, Hill Phoenix, No. 2.3.007 at p. 2) Craig Industries and Kysor Panel added that instead of model number, WICFs are characterized by some aspect of size. (Craig Industries, Public Meeting Transcript, No. 103 at p. 97; Kysor Panel, Public Meeting Transcript, No. 103 at p. 99) Not all interested parties disagreed with the basic model concept: CPI supported the basic model definition because it distinguishes envelopes that vary in normalized energy consumption from those that differ only cosmetically, and NRDC agreed that a basic model for WICF would provide a baseline to compare envelopes from different manufacturers. (EERE–2010–BT–STD–0015, CPI, No. 51 at p. 2; EERE–2010–BT–TP–0014, NRDC, No. 2.3.008 at p. 2)

Despite the supportive comments from CPI and NRDC, DOE notes that the basic model concept is particularly suited for instances where manufacturers make products that tend to be the same with respect to energy consumption; in that case the basic model concept would reduce the number of models that would need to be tested and certified. However, the comments from AHRI, American Panel, Arctic Industries, Bally, Craig Industries, Heatcraft, Hill Phoenix, Kysor Panel, and Master-Bilt indicate that most walk-ins would tend to differ in energy consumption, making each walk-in effectively a different basic model. Therefore, DOE realizes the need to carefully consider its basic model concept as it applies to walk-ins.

Many interested parties offered suggestions on how to improve the basic model concept so that it could be applied to walk-ins. Some suggested DOE adopt a calculation methodology or allow manufacturers to use a calculation methodology to reduce the number of tests. Hill Phoenix stated that allowing manufacturers to test a limited number of models and then calculate performance of other models would reduce burden. (EERE–2010–BT–TP–0014, Hill Phoenix, No. 2.3.007 at p. 3) Arctic Industries and Craig Industries recommended a calculation or formula based on size. (EERE–2010–BT–CE–0014, Public Meeting Transcript, Arctic Industries, No. 103 at p. 67; EERE–2010–BT–TP–0014, Craig Industries, No. 2.3.013 at p. 6) Heatcraft, Hill Phoenix and SBA stated that manufacturers could calculate the energy consumption based on component test results. (EERE–2010–BT–CE–0014, Heatcraft, No. 65 at p. 1; EERE–2010–BT–CE–0014, Hill Phoenix, No. 70 at p. 1; EERE–2010–BT–TP–0014, SBA, No. 2.3.011 at p. 2) Other interested parties, specifically American Panel, Heatcraft, and SBA, agreed with an approach DOE considered in the Test Procedure SNOPR to group basic models into a more general "family" and only require manufacturers to certify some basic models within the family. (75 FR 55072) (EERE–2010–BT–TP–0014, American Panel, No. 2.3.001 at p. 1; EERE–2010–BT–TP–0014, Heatcraft, No. 2.3.009 at p. 2; EERE–2010–BT–TP–0014, SBA, No. 2.3.011 at p. 3) The Joint Comment recommended that a basic model could represent a family of models as long as a linear relationship could be established with regard to energy consumption over the range of models. (EERE–2010–BT–TP–0014, Joint Comment, No. 1.3.019 at p. 1) Heatcraft also suggested that the family of models could include units of similar design, construction, and function, which would reduce the number of basic models and related equipment tests. (EERE–2010–BT–CE–0014, Heatcraft, No. 65 at p. 1; EERE–2010–BT–TP–0014, Heatcraft, No. 2.3.009 at p. 1) American Panel and Bally suggested DOE allow manufacturers to test one basic unit, with characteristics specified by DOE, for purposes of certifying their walk-ins to DOE. (EERE–2010–BT–CE–0014, Public Meeting Transcript, American Panel, No. 103 at p. 89; EERE–2010–BT–CE–0014, Bally, No. 46 at p. 1)

The majority of interested parties, however, recommended that DOE implement the basic model concept on a component level as this would remove the difficulty of testing and/or certifying different size walk-ins that would have different energy consumption. For instance, American Panel, Craig Industries, Hill Phoenix, and Kysor Panel stated that DOE should define a basic model of a panel which would be distinguished on the basis of insulation value or panel thickness as this characteristic is most closely indicative of the panel's performance. (EERE–2010–BT–TP–0014, American Panel, No. 2.3.001 at p. 1; EERE–2010–BT–CE–0014, Public Meeting Transcript, American Panel, No. 103 at p. 89; EERE–2010–BT–CE–0014, Public Meeting Transcript, Craig Industries, No. 103 at p. 60; EERE–2010–BT–CE–0014, Hill Phoenix, No. 70 at p. 1; EERE–2010–BT–TP–0014, Hill Phoenix, No. 2.3.007 at p. 2; EERE–2010–BT–CE–0014, Kysor Panel, No. 68 at p. 1) Kysor stated that basic model testing should consist of only an R-value test as it distinguishes panels based only on R-value, but NEEA suggested that basic models be defined on the basis of various factors including foam type, panel thickness, panel skin type(s),

framing factor, and panel gasket and joining system. (EERE–2010–BT–CE–0014, Public Meeting Transcript, Kysor Panel, No. 103 at p. 88 and 99; EERE–2010–BT–CE–0014, Kysor Panel, No. 68 at p. 1; EERE–2010–BT–TP–0014, NEEA, No. 2.3.005 at p. 7) Carpenter suggested implementing individual WICF component certifications instead of the proposed approach. (EERE–2010–BT–TP–0014, Carpenter, No. 2.3.012 at p. 1) AHRI recommended that basic model be based on panel design characteristics to minimize test burden. (EERE–2010–BT–TP–0014, AHRI, No. 2.3.015 at p. 2) Owens Corning agreed that one test could represent all the panels of the same configuration. (EERE–2010–BT–TP–0014, Owens Corning, No. 2.3.002 at p. 2) NEEA also agreed with a model that does not rely on walk-in size as that would simplify testing and reporting. (EERE–2010–BT–TP–0014, NEEA, No. 2.3.005 at p. 9)

Although most comments about component certification specifically pertained to panels, some interested parties commented on refrigeration. AHRI urged DOE to group refrigeration models into the same basic model even if there was some difference in energy consumption. (EERE–2010–BT–TP–0014, AHRI, No. 2.3.015 at p. 2) Heatcraft suggested a more detailed system whereby a basic model would consist of units designed with interchangeable components such that data from component testing and calculation could predict the energy consumption of each unit with minimal verification testing necessary. (EERE–2010–BT–TP–0014, Heatcraft, No. 2.3.009 at p. 1)

DOE agrees with the suggestion of applying the basic model concept at the component level. Since DOE is adopting a component-level approach to certification as described in the section above (*i.e.,* definition of manufacturer), DOE is defining a basic model for each of the key components of a walk-in, rather than defining a basic model for the entire walk-in. DOE emphasizes that although basic model is defined on the component level, it is still implemented in the same manner as it is in the rest of DOE's appliance standards program; that is, basic model consists of equipment that is essentially the same with respect to energy consumption, efficiency, or other measure of performance. For example, panels are grouped into basic models not just on the basis of thickness or R-value as suggested by American Panel, Craig Industries, Hill Phoenix, and Kysor Panel, but must consider various design characteristics that could affect performance, as stated by AHRI and NEEA, which could include, but may not be limited to, foam type, panel thickness, and framing factor.

Some interested parties commented on recertification provisions. Craig Industries stated that a restrictive definition of basic model would discourage product improvement because of the corresponding testing expense. (EERE–2010–BT–CE–0014, Public Meeting Transcript, Craig Industries, No. 103 at p. 94) Kysor stated that recertification should only be required if the R-value changes. (EERE–2010–BT–CE–0014, Kysor, No. 68 at p. 1) DOE notes that recertification is only required if a model is re-rated to claim new efficiency or if the model is modified such that testing no longer supports the certified rating. (*See* discussion in Section III.E.1.).

3. Basic Model and Manufacturer Model Number Reporting for Distribution Transformers, WICFs, and External Power Supplies

As discussed above (Section III.B.), DOE is adopting most of the reporting requirements that it proposed in the September 2010 NOPR. For a few specific products, however, DOE is not adopting the requirement to report the individual manufacturer model numbers. Commenters argued against reporting manufacturer model numbers for distribution transformers and WICFs. (*See, e.g.,* NEMA, No. 84.1 at p. 8 (distribution transformers); Hill Phoenix, No. 70.1 at p. 1 (WICFs)) ABB suggested certification reports for distribution transformers should be made on the basis of kVA groupings in lieu of model numbers. (ABB, No. 53.1 at p. 4) GE Prolec argued that the concept of a manufacturer's model does not fit the characteristics of the distribution transformers industry. (GE Prolec, No. 95.1 at p. 2) Distribution transformers not only do not have model numbers, but due to the custom nature of the product, would have to report thousands of models annually. (*See* GE Prolec, No. 96)

DOE is adopting a requirement for manufacturers of distribution transformers to report the characteristics of the most and least efficient basic models within the kVA grouping. The term "kVA grouping" is defined to mean a group of basic models, which all have the same kVA rating, have the same insulation type (*i.e.,* low-voltage dry-type, medium-voltage dry-type or liquid-immersed), have the same number of phases (*i.e.,* single-phase or three-phase), and, for medium-voltage dry-types, have the same BIL group rating (*i.e.,* 20–45 kV BIL, 46–95 kV BIL or greater than or equal to 96 kV BIL). DOE notes that by certifying using these broad groupings in lieu of reporting basic models, the manufacturer assumes the risk that if one model in a kVA grouping is found noncompliant, all of the models in that grouping are noncompliant. In an enforcement action, DOE should be able to determine all of the individual models that fall within a kVA grouping certification using the required certification information and basic model design and testing information. While DOE is not requiring a requirement for manufacturers to tell DOE all the individual model numbers that fall into a kVA grouping, DOE expects manufacturers to make this information available, as necessary, during enforcement actions.

Generally, the WICF comments in opposition to reporting manufacturer model numbers were based on DOE's proposal, which required certification of each basic model of completed WICF. (*See, e.g.,* Hill Phoenix, No. 70.1 at p. 1) Kysor, however, specifically opposed requiring reporting of model numbers for the panel component of a WICF. (Kysor, No. 68.1 at p. 2) Because DOE has adopted a reporting requirement for the components of the WICF rather than for the completed product, DOE does not have sufficient information to determine whether reporting of model numbers for WICF components is feasible. Accordingly, this final rule does not require WICF manufacturers to report manufacturer model numbers. DOE intends to revisit this issue in a future rulemaking. Upon the effective date specified in this final rule, manufacturers of WICF components are required to certify that each basic model of WICF component complies with the applicable standard.

For external power supplies, DOE is adopting product-specific regulatory text to permit certification on the basis of either a basic model or a design family. Irrespective of the model grouping option chosen, the certification report must include the manufacturer model numbers covered by the basic model or the design family. DOE notes that by certifying using the broader grouping of design family in lieu of reporting basic models, the manufacturer assumes the risk that if one model in a design family is found noncompliant, all of the models in that grouping are noncompliant.

M. Additional Issues for Which DOE Sought Comment in September 2010 NOPR

1. Verification Testing

In the September 2010 NOPR, DOE requested comments on a variety of issues relating to the establishment of a potential verification program for covered products and covered equipment. Specifically, DOE requested comment about the requirements and details for verification testing programs (*e.g.,* the use of an independent testing laboratory and a specific number of samples that should be randomly tested for each product). DOE received numerous comments from a variety of interested parties. 75 FR 56805. DOE plans to consider these comments in the next certification, compliance, and enforcement rulemaking. DOE continues to believe that a potential verification testing program may be an integral part to meeting DOE's compliance and enforcement objectives and will continue to accept comments relating to a DOE verification program.

2. Voluntary Industry Certification Programs

DOE noted in the September 2010 NOPR that it was not proposing modifications to DOE's provisions defining voluntary industry certification programs (VICP) at that time. However, because the Department is considering imposing a verification testing requirement for all product and equipment types, which may entail changes to the current provisions governing VICPs, DOE sought comment regarding the criteria defining VICPs, and the use of VICPs in DOE's certification, compliance, and enforcement programs for both consumer products and commercial and industrial equipment. Specifically, DOE requested comment about the actions taken by the VICP in conjunction with DOE when a unit is found to have failed the verification testing program of the VICP.

3. Certification, Compliance and Enforcement for Electric Motors

Although DOE did not propose revisions to the requirements for electric motors in the September 2010 NOPR, DOE noted in the NOPR that it intends to propose to move and harmonize, where possible, the certification, compliance, and enforcement provisions for electric motors in new Part 429, as well as add an annual certification requirement, in a second rulemaking. As such, DOE sought comment on the existing provisions for electric motors, including any previous proposals for small electric motors and any changes DOE should consider in the next rulemaking applicable to these products. With regard to an annual certification requirement, DOE specifically sought comment on if and how the certification compliance numbers for electric motors could be modified to clearly demonstrate compliance when there is a change in the Federal energy conservation standards for these products.

Because DOE did not propose to amend any provisions with respect to electric motors, DOE has made amendments to the language of sections 431.403 through 431.407. These amendments make it clear that the general provisions in these sections relate to and maintain the status quo for electric motors.

4. Revisions to Sampling Plans for Certification Testing

In the September 2010 NOPR, DOE noted that it is considering adding sampling plans and tolerances for other features of covered products and covered equipment which impact the water or energy characteristics of a product. DOE sought comment on this approach, and the methodologies DOE should consider if it decides to extend the sampling provisions to features other than the regulatory metrics.

In response to these four broad categories, DOE received a plethora of feedback and valuable suggestions for it to consider in the next certification, compliance, and enforcement rulemaking. At that time, DOE will further discuss and address the general issues that were noted by interested parties in this docket.

IV. 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. Accordingly, this action was not subject to review under that Executive Order by the Office of Information and Regulatory Affairs (OIRA) of the Office of Management and Budget (OMB).

B. Review Under the Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) requires preparation of an initial regulatory flexibility analysis (IRFA) for any rule that by law must be proposed for public comment, unless the agency certifies that the rule, if promulgated, will not have a significant economic impact on a substantial number of small entities. As required by E.O. 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 rulemaking process. 68 FR 7990. DOE has made its procedures and policies available on the Office of General Counsel's Web site, *http://www.gc.doe.gov.*

DOE reviewed the certification, compliance, and enforcement requirements being adopted in today's final rule under the provisions of the Regulatory Flexibility Act and the procedures and policies published on February 19, 2003. As discussed in more detail below, DOE found that because a subset of the certification, compliance, and enforcement regulations have not previously been required of manufacturers, all manufacturers, including small manufacturers, could potentially experience a financial burden associated with new certification, compliance, and enforcement requirements. While examining this issue, DOE determined that it could not certify that the final rule, if promulgated, would not have a significant effect on a substantial number of small entities. Therefore, DOE has prepared a final regulatory flexibility analysis (FRFA) for this rulemaking. The FRFA describes potential impacts on small businesses associated with certification, compliance, and enforcement requirements on covered products and covered equipment. This final rule includes changes made to the FRFA in response to the comments from interested parties on the September 2010 NOPR.

1. Reasons for the Final Rule

The reasons for this final rule are discussed elsewhere in the preamble and not repeated here.

2. Objectives of and Legal Basis for the Final Rule

The objectives of and legal basis for the final rule are discussed elsewhere in the preamble and not repeated here.

3. Description and Estimated Number of Small Entities Regulated

DOE used the small business size standards published on January 31, 1996, as amended, by the SBA to determine whether any small entities would be required to comply with the rule. 61 FR 3286; *see also* 65 FR 30836, 30850 (May 15, 2000), as amended at 65 FR 53533, 53545 (September 5, 2000).

The size standards are codified at 13 CFR Part 121. The standards are listed by North American Industry Classification System (NAICS) code and industry description and are available at *http://www.sba.gov/idc/groups/public/documents/sba_homepage/serv_sstd_tablepdf.pdf.*

This final rule potentially impacts manufacturers of almost all types of covered products and covered equipment subject to DOE's energy conservation, water conservation, and design standards.

TABLE IV.1—SMALL BUSINESS CLASSIFICATIONS FOR COVERED PRODUCTS AND COVERED EQUIPMENT

Covered product or covered equipment type	NAICS code	NAICS definition of small manufacturer (number of employees)	Total number of small manufacturers
Residential refrigerators, residential refrigerator-freezers, and residential freezers	335222	≤1000	1
Room air conditioners	333415	≤750	0
Residential central air conditioners and heat pumps	333415	≤750	13
Small-duct, high velocity	333415	≤750	2
Through-the-wall air conditioners and heat pumps	333415	≤750	1
Residential water heaters	335228	≤500	6
Residential furnaces and boilers	333415	≤750	25
Dishwashers	335228	≤500	0
Residential clothes washers	335224	≤1000	1
Clothes dryers	335224	≤1000	0
Direct heating equipment	333414	≤500	12
Cooking products	335221	≤750	2
Pool heaters	333414	≤500	1
Fluorescent lamp ballasts	335311	≤750	11
General service fluorescent lamps	335110	≤1000	1
Incandescent reflector lamps	335110	≤1000	0
Ceiling fans	335211	≤750	91
Ceiling fan light kits	335211	≤750	91
Torchieres	335121	≤500	404
Medium base compact fluorescent lamps	335110	≤1000	70
Dehumidifiers	335211	≤750	0
External power supplies	335999	≤500	250
General service incandescent lamps	335110	≤1000	67
Candelabra base incandescent lamp	335110	≤1000	67
Intermediate base incandescent lamp	335110	≤1000	67
Commercial refrigeration equipment	333415	≤750	20
Commercial warm air furnaces	333415	≤750	3
Commercial packaged boilers	333414 or 332410	≤500	13
Commercial package air-conditioning and heating equipment	333415	≤750	1
Packaged terminal air conditioners and heat pumps	333415	≤750	6
Single package vertical units	333415	≤750	5
Commercial water heaters	333319	≤500	7
Automatic commercial ice makers	333415	≤750	2
Commercial clothes washers	333312	≤500	0
Distribution transformers	335311	≤750	45
Illuminated exit signs	335129	≤500	269
Traffic signal modules and pedestrian modules	335129	≤500	269
Refrigerated bottled or canned beverage vending machines	333311	≤500	6
Walk-in coolers and freezers	333415	≤750	45
Metal halide fixtures	335122	≤500	75
Faucets	332913	≤500	62
Showerheads	332913	≤500	42
Water closets	327111	≤750	9
Urinals	327111	≤750	2
Commercial prerinse spray valves	332919	≤500	8

4. Description and Estimate of Compliance Requirements

Many of the certification, compliance, and enforcement provisions subject to today's final rule are already codified in existing regulations for consumer products and commercial and industrial equipment. As a result, DOE expects the impact on all manufactures to be minimal. Many of the changes being adopted in today's final rule surround expanding DOE's existing certification requirements and could slightly increase the recordkeeping burden. DOE does not expect manufacturers of all types to incur any capital expenditures as a result of the proposals, since the rulemaking does not impose any product specific requirements that would require changes to existing plants, facilities, product specifications, or test procedures. Rather, this rule clarifies sampling requirements and imposes certain data reporting requirements, which may have a slight impact on labor costs.

With regard to sampling for certification testing, this rule clarifies that the minimum number of units tested for certification compliance must be no less than 2 unless a different minimum number is specified. DOE does not believe this specification increases the testing burden on manufacturers because DOE has always required a minimum of 2 samples, if not

more, to achieve a realistic sample mean and to mitigate the risk of a product to be out of compliance. For a small number of products, DOE is proposing statistical sampling procedures that are based on previously established procedures for consumer products and commercial equipment. These procedures are designed to keep the testing burden on manufacturers as low as possible, while still providing confidence that the test results can be applied to all units of the same basic model. In some cases, manufacturers are permitted to use analytical procedures, such as computer simulations, to determine the efficiencies of their products, which will further minimize testing burden.

With regard to certification, the final provisions require manufacturers of covered products and covered equipment to certify annually that their products meet the applicable energy conservation standard, water conservation standard or design standard. It is expected that manufacturers will re-submit the original certification testing information each year for basic models with no modifications affecting energy consumption, water consumption, or design. As DOE currently requires manufacturers to submit certification information at the introduction of a new or modified basic model, DOE does not anticipate that annual certification on products already submitted will add substantial additional burden to manufacturers.

The cost of certification testing will depend on the number of basic models a manufacturer produces. The cost of certifying should be minimal once testing for each basic model has occurred pursuant to the test procedures prescribed by DOE.

DOE estimates that a typical firm would spend approximately 20 hours complying with the additional certification, compliance, and enforcement procedures being considered in today's final rule. This estimate does not include any testing burden, which results from DOE's test procedures. DOE has already considered this burden on all manufacturers in the test procedure rulemakings for individual manufacturers. Instead, this burden represents the time it would take a certification engineer to gather the appropriate data, apply the statistical sampling methods required, and submit the required certification to DOE both for new basic models and on an annual basis. DOE has tried to mitigate the impacts on all manufacturers by aligning the annual certification schedule with the Federal Trade Commission's model submission schedule for consumer products. At most, DOE expects an average manufacturer to allocate 4 of the 20 hours to meeting the annual certification reporting requirement.

DOE notes that these values likely overestimate the manufacturer reporting burden, as the Federal Trade Commission currently requires annual submission of data regarding all basic models distributed into commerce for consumer products, and many voluntary programs also require annual data submission.

In addition, to minimize the impact that annual certification filings may have on manufacturers, DOE has introduced the online CCMS system through which manufacturers would be required to submit their products for certification. In addition, DOE is making available CCMS templates for each product, which clearly lay out the certification requirements for each covered product and covered equipment.

5. Duplication, Overlap, and Conflict With Other Rules and Regulations

DOE is not aware of any rules or regulations that duplicate, overlap, or conflict with the proposed rule being considered today.

6. Significant Alternatives to the Rule

This section considers alternatives to the proposals in today's certification, compliance, and enforcement rulemaking. DOE could mitigate the small potential impacts on small manufacturers by reducing the number of samples used, eliminating the annual certification filing, or by expanding the groupings of models. However, DOE strongly believes the proposals in today's rulemaking are essential to a sustainable and consistent enforcement program for all of the covered products and covered equipment. While these alternatives may mitigate the potential economic impacts on small entities compared to the proposed provisions, the ability for DOE to enforce its energy conservation regulations far exceeds any potential burdens. Thus, DOE rejected these alternatives and is adopting the certification, compliance, and enforcement provisions set forth in this rulemaking for all manufacturers of covered products and covered equipment. DOE continues to seek input from businesses that would be affected by this rulemaking and will consider comments received in the development of any final rule.

C. Review Under the Paperwork Reduction Act

1. Description of the Requirements

DOE is developing regulations to implement reporting requirements for energy conservation, water conservation, and design standards, and to address other matters including compliance certification, prohibited actions, and enforcement procedures for covered consumer products and commercial and industrial equipment covered by EPCA.

DOE is adopting provisions to require manufacturers of covered consumer products and commercial and industrial equipment to maintain records about how they determined the energy efficiency, energy consumption, water consumption or design features of their products. DOE is also going to require manufacturers to submit a certification report indicating that all basic models currently produced comply with the applicable standards using DOE's testing procedures, as well as include the necessary product specific certification data. The certification reports are submitted for each basic model, either when the requirements go into effect (for models already in distribution) or when the manufacturer begins distribution of a particular basic model, and annually thereafter. Reports must be updated when a new model is introduced or a change affecting energy efficiency or use is made to an existing model. The collection of information is necessary for monitoring compliance with the conservation standards and testing requirements for the consumer products and commercial and industrial equipment mandated by EPCA.

The information that would be required by these regulations, once effective, and that is the subject of the collection of information, would be submitted by manufacturers to certify compliance with energy conservation, water conservation, and design standards established by DOE. DOE would also use the information to determine whether an enforcement action is warranted and to better inform DOE during a test procedure and energy conservation standards rulemaking.

The certification and recordkeeping requirements for certain consumer products in 10 CFR part 430 have previously been approved by OMB and assigned OMB control number 1910–1400. As part of the September 2010 NOPR, DOE proposed to renew the previously approved certification and recordkeeping requirements, as well as submitted a new proposed certification and recordkeeping requirements for all consumer products and commercial and

industrial equipment subject to certification, compliance, and enforcement regulations to OMB for review and approval under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* DOE received OMB approval for collecting certification, compliance, and enforcement information for all covered products and covered equipment on February 3, 2011, under OMB control number 1910–1400. These products generally include: Residential refrigerators, refrigerator-freezers, and freezers, room air conditioners, central air conditioners and heat pumps, residential water heaters, residential furnaces and boilers, dishwashers, residential clothes washers, residential clothes dryers, direct heating equipment, conventional cooking tops, conventional ovens, microwave ovens, pool heaters, fluorescent lamp ballasts, general service fluorescent lamps, general service incandescent lamps, incandescent reflector lamps, faucets, showerheads, water closets, urinals, ceiling fans, ceiling fan light kits, torchieres, medium base compact fluorescent lamps, dehumidifiers, external power supplies, candelabra base incandescent lamps, intermediate base incandescent lamps, electric motors, commercial refrigerators, freezers, and refrigerator-freezers, commercial heating, ventilating, and air-conditioning equipment, commercial water heating equipment, automatic commercial ice makers, commercial clothes washers, distribution transformers, illuminated exit signs, traffic signal modules and pedestrian modules, commercial unit heaters, commercial prerinse spray valves, refrigerated bottled or canned beverage vending machines, walk-in coolers and walk-in freezers, and metal halide lamp ballasts and fixtures.

2. Method of Collection

Respondents must submit electronic forms using DOE's on-line CCMS system.

3. Data

The following are DOE estimates of the total annual reporting and recordkeeping burden imposed on manufacturers of all consumer products and commercial and industrial equipment subject to certification, compliance, and enforcement provisions. These estimates take into account the time necessary to develop testing documentation, complete the certification, and submit all required documents to DOE electronically.

OMB Control Number: 1910–1400.

Form Number: None.

Type of Review: Regular submission.

Affected Public: Manufacturers of consumer products and commercial and industrial equipment covered by the rulemakings discussed above.

Estimated Number of Respondents: 2,916.

Estimated Time per Response: Certification reports, 20 hours.

Estimated Total Annual Burden Hours: 58,320.

Estimated Total Annual Cost to the Manufacturers: $4,374,000 in recordkeeping/reporting costs.

D. Review Under the National Environmental Policy Act

DOE has determined that this rule falls into a class of actions that are categorically excluded from review under the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*) and DOE's implementing regulations at 10 CFR part 1021. Specifically, this rule amends an existing rule without changing its environmental effect and, therefore, is covered by the Categorical Exclusion in 10 CFR part 1021, subpart D, paragraph A5. Accordingly, neither an environmental assessment nor an environmental impact statement is required.

E. Review Under Executive Order 13132

DOE reviewed this rule pursuant to Executive Order 13132, "Federalism," 64 FR 43255 (August 4, 1999), which imposes certain requirements on agencies formulating and implementing policies or regulations that preempt State law or that have federalism implications. In accordance with DOE's statement of policy describing the intergovernmental consultation process it will follow in the development of regulations that have federalism implications, 65 FR 13735 (March 14, 2000), DOE examined today's final rule and determined that the rule 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. *See* 74 FR 61497. Therefore, DOE has taken no further action in today's final rule with respect to Executive Order 13132.

F. Review Under Executive Order 12988

With respect to the review of existing regulations and the promulgation of new regulations, section 3(a) of Executive Order 12988, "Civil Justice Reform" (61 FR 4729 (February 7, 1996)) imposes on Federal agencies the general duty to adhere to the following requirements: (1) Eliminate drafting errors and ambiguity; (2) write regulations to minimize litigation; and (3) provide a clear legal standard for affected conduct rather than a general standard and promote simplification and burden reduction. Section 3(b) of Executive Order 12988 specifically requires that Executive agencies make every reasonable effort to ensure that the regulation: (1) Clearly specifies the preemptive effect, if any; (2) clearly specifies any effect on existing Federal law or regulation; (3) provides a clear legal standard for affected conduct while promoting simplification and burden reduction; (4) specifies the retroactive effect, if any; (5) adequately defines key terms; and (6) addresses other important issues affecting clarity and general draftsmanship under any guidelines issued by the Attorney General. Section 3(c) of Executive Order 12988 requires Executive agencies to review regulations in light of applicable standards in section 3(a) and section 3(b) to determine whether they are met or it is unreasonable to meet one or more of them. DOE has completed the required review and determined that, to the extent permitted by law, the regulations being adopted in today's final rule meet 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; 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 a proposed regulatory action likely to result in a rule that may cause the expenditure by State, local, and Tribal governments, in the aggregate, or by the private sector, of $100 million or more in any one year (adjusted annually for inflation), section 202 of UMRA requires a Federal agency to publish estimates of the resulting costs, benefits, and other effects on the national economy. (2 U.S.C. 1532(a), (b)) UMRA also requires a Federal agency to develop an effective process to permit timely input by elected officers of State, local, and Tribal governments on a proposed "significant intergovernmental mandate," and requires an agency plan for giving notice and opportunity for timely input to potentially affected small governments before establishing any requirements that might significantly or uniquely affect such governments. On March 18, 1997, DOE published a statement of policy on its process for intergovernmental consultation under UMRA. 62 FR 12820. (The policy is also available at

http://www.gc.doe.gov). Today's final rule contains neither an intergovernmental mandate nor a mandate that may result in an expenditure of $100 million or more in any year, so these requirements do not apply.

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

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

I. Review Under Executive Order 12630

DOE determined under Executive Order 12630, "Governmental Actions and Interference with Constitutionally Protected Property Rights," 53 FR 8859 (March 18, 1988), that today's proposed rule would not result in any takings that might require compensation under the Fifth Amendment to the U.S. Constitution. *See* 74 FR 61497–98.

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

Section 515 of the Treasury and General Government Appropriations Act, 2001 (44 U.S.C. 3516 note) provides for agencies to review most disseminations of information to the public under guidelines established by each agency pursuant to general guidelines issued by OMB. OMB's guidelines were published at 67 FR 8452 (February 22, 2002), and DOE's guidelines were published at 67 FR 62446 (October 7, 2002). DOE has reviewed today's final rule under 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 OIRA a Statement of Energy Effects for any proposed significant energy action. A "significant energy action" is defined as any action by an agency that promulgates or is expected to lead to promulgation of a final rule, and that (1) is a significant regulatory action under Executive Order 12866, or any successor order; and (2) is likely to have a significant adverse effect on the supply, distribution, or use of energy; or (3) is designated by the Administrator of OIRA as a significant energy action. For any proposed significant energy action, the agency must give a detailed statement of any adverse effects on energy supply, distribution, or use if the proposal is implemented, and of reasonable alternatives to the action and their expected benefits on energy supply, distribution, and use. Today's regulatory action, which adopts amendments to the Department's certification, compliance, enforcement procedures, 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, it is not a significant energy action, and, accordingly, DOE has not prepared a Statement of Energy Effects.

V. Approval of the Office of the Secretary

The Secretary of Energy has approved publication of today's final rule.

List of Subjects

10 CFR Part 429

Confidential business information, Energy conservation, Household appliances, Imports, Incorporation by reference, Reporting and recordkeeping requirements.

10 CFR Part 430

Confidential business information, Energy conservation, Household appliances, Imports.

10 CFR Part 431

Confidential business information, Energy conservation, Reporting and recordkeeping requirements.

Issued in Washington, DC, on February 7, 2011.

Cathy Zoi,

Assistant Secretary, Energy Efficiency and Renewable Energy.

Scott Blake Harris,

General Counsel.

For the reasons stated in the preamble, DOE amends chapter II, subchapter D, of title 10 of the Code of Federal Regulations, to read as set forth below:

1. Add new part 429 to read as follows:

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

Subpart A—General Provisions

Sec.
429.1 Purpose and scope.
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429.14 Residential refrigerators, refrigerator-freezers and freezers.
429.15 Room air conditioners.
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429.17 Residential water heaters.
429.18 Residential furnaces.
429.19 Dishwashers.
429.20 Residential clothes washers.
429.21 Residential clothes dryers.
429.22 Direct heating equipment.
429.23 Conventional cooking tops, conventional ovens, microwave ovens.
429.24 Pool heaters.
429.25 Television sets. [Reserved]
429.26 Fluorescent lamp ballasts.
429.27 General service fluorescent lamps, general service incandescent lamps, and incandescent reflector lamps.
429.28 Faucets.
429.29 Showerheads.
429.30 Water closets.
429.31 Urinals.
429.32 Ceiling fans.
429.33 Ceiling fan light kits.
429.34 Torchieres.
429.35 Bare or covered medium base compact fluorescent lamps.
429.36 Dehumidifiers.
429.37 Class A external power supplies.
429.38 Non-class A external power supplies. [Reserved]
429.39 Battery chargers.
429.40 Candelabra base incandescent lamps and intermediate base incandescent lamps.
429.41 Electric motors. [Reserved]
429.42 Commercial refrigerators, freezers, and refrigerator-freezers.
429.43 Commercial heating, ventilating, air-conditioning (HVAC) equipment.
429.44 Commercial water heating (WH) equipment.
429.45 Automatic commercial ice makers.
429.46 Commercial clothes washers.
429.47 Distribution transformers.
429.48 Illuminated exit signs.
429.49 Traffic signal modules and pedestrian modules.
429.50 Commercial unit heaters.
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429.52 Refrigerated bottled or canned beverage vending machines.

429.53 Walk-in coolers and Walk-in freezers.
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429.70 Alternative methods for determining efficiency or energy use.
429.71 Maintenance of records.

Appendix A to Subpart B of Part 429—Student's t-Distribution Values for Certification Testing

Subpart C—Enforcement

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429.104 Assessment testing.
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Appendix A to Subpart C of Part 429—Sampling Plan for Enforcement Testing of Covered Products and Certain High-Volume Covered Equipment

Appendix B to Subpart C of Part 429—Sampling Plan for Enforcement Testing of Covered Commercial Equipment and Certain Low-Volume Covered Products

Appendix C to Subpart C of Part 429—Sampling Plan for Enforcement Testing of Distribution Transformers

Authority: 42 U.S.C. 6291–6317.

Subpart A—General Provisions

§ 429.1 Purpose and scope.

This part sets forth the procedures to be followed for certification, determination and enforcement of compliance of covered products and covered equipment with the applicable conservation standards set forth in parts 430 and 431 of this subchapter. This part does not cover motors or electric motors as defined in § 431.12, and all references to "covered equipment" in this part exclude such motors.

§ 429.2 Definitions.

(a) The definitions found in §§ 430.2, 431.2, 431.62, 431.72, 431.82, 431.92, 431.102, 431.132, 431.152, 431.172, 431.192, 431.202, 431.222, 431.242, 431.262, 431.292, 431.302, 431.322, and 431.442 apply for purposes of this part.

(b) The following definitions apply for the purposes of this part. Any words or terms defined in this section or elsewhere in this part shall be defined as provided in sections 321 and 340 of the Energy Policy Conservation Act, as amended, hereinafter referred to as "the Act."

Energy conservation standard means any standards meeting the definitions of that term in 42 U.S.C. 6291(6) and 42 U.S.C. 6311(18) as well as any other water conservation standards and design requirements found in this part or parts 430 or 431.

Manufacturer's model number means the identifier used by a manufacturer to uniquely identify the group of identical or essentially identical covered products or covered equipment to which a particular unit belongs. The manufacturer's model number typically appears on the product nameplates, in product catalogs and in other product advertising literature.

§ 429.4 Materials incorporated by reference.

(a) General. We incorporate by reference the following standards into Part 429. The material listed has been approved for incorporation by reference by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Any subsequent amendment to a standard by the standard-setting organization will not affect the DOE regulations unless and until amended by DOE. Material is incorporated as it exists on the date of the approval and a notice of any change in the material will be published in the **Federal Register**. All approved material is available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to: *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.* Also, this material is available for inspection at U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Program, 6th Floor, 950 L'Enfant Plaza, SW., Washington, DC 20024, (202) 586–2945, or go to: *http://www1.eere.energy.gov/buildings/appliance_standards/.* Standards can be obtained from the sources below.

(b) *AHAM.* Association of Home Appliance Manufacturers, 1111 19th Street, NW., Suite 402, Washington, DC 20036, 202–872–5955, or go to *http://www.aham.org.*

(1) ANSI/AHAM DW–1–1992, American National Standard, Household Electric Dishwashers, approved February 6, 1992, IBR approved for § 429.19.

(2) [Reserved]

(c) *ISO.* International Organization for Standardization, ch. de la Voie-Creuse CP 56 CH–1211 Geneva 20 Switzerland, telephone +41 22 749 01 11, or go to *http://www.iso.org/iso.*

(1) International Organization for Standardization (ISO)/International Electrotechnical Commission, ("ISO/IEC 17025:2005(E)"), "General requirements for the competence of testing and calibration laboratories", Second edition, May 15, 2005, IBR approved for § 429.110.

(2) [Reserved]

§ 429.5 Imported products.

(a) Any person importing any covered product or covered equipment into the United States shall comply with the provisions of this part, and parts 430 and 431, and is subject to the remedies of this part.

(b) Any covered product or covered equipment offered for importation in violation of this part, or part 430 or 431, shall be refused admission into the customs territory of the United States under rules issued by the U.S. Customs and Border Protection (CBP) and subject to further remedies as provided by law, except that CBP may, by such rules, authorize the importation of such covered product or covered equipment upon such terms and conditions (including the furnishing of a bond) as may appear to CBP appropriate to ensure that such covered product or covered equipment will not violate this part, or part 430 or 431, or will be exported or abandoned to the United States.

§ 429.6 Exported products.

This part, and parts 430 and 431, shall not apply to any covered product or covered equipment if:

(a) Such covered product or covered equipment is manufactured, sold, or held for sale for export from the United States or is imported for export;

(b) Such covered product or covered equipment or any container in which it is enclosed, when distributed in commerce, bears a stamp or label stating "NOT FOR SALE FOR USE IN THE UNITED STATES"; and

(c) Such product is, in fact, not distributed in commerce for use in the United States.

§ 429.7 Confidentiality.

(a) The following records are not exempt from public disclosure: The brand name, and applicable model number(s), and the energy or water rating submitted by manufacturers to DOE pursuant to § 429.19(b)(13).

(b) Pursuant to the provisions of 10 CFR 1004.11(e), any person submitting

information or data which the person believes to be confidential and exempt by law from public disclosure should—at the time of submission—submit:

(1) One complete copy, and one copy from which the information believed to be confidential has been deleted.

(2) A request for confidentiality containing the submitter's views on the reasons for withholding the information from disclosure, including:

(i) A description of the items sought to be withheld from public disclosure,

(ii) Whether and why such items are customarily treated as confidential within the industry,

(iii) Whether the information is generally known by or available from other sources,

(iv) Whether the information has previously been made available to others without obligation concerning its confidentiality,

(v) An explanation of the competitive injury to the submitting person which would result from public disclosure,

(vi) A date upon which such information might lose its confidential nature due to the passage of time, and

(vii) Why disclosure of the information would be contrary to the public interest.

(c) In accordance with the procedures established in 10 CFR 1004.11(e), DOE shall make its own determination with regard to any claim that information submitted be exempt from public disclosure.

§ 429.8 Subpoena.

For purposes of carrying out parts 429, 430, and 431, the General Counsel (or delegee), may sign and issue subpoenas for the attendance and testimony of witnesses and the production of relevant books, records, papers, and other documents, and administer oaths. Witnesses summoned under the provisions of this section shall be paid the same fees and mileage as are paid to witnesses in the courts of the United States. In case of contumacy by, or refusal to obey a subpoena served, upon any persons subject to parts 429, 430, or 431, the General Counsel (or delegee) may seek an order from the District Court of the United States for any District in which such person is found or resides or transacts business requiring such person to appear and give testimony, or to appear and produce documents. Failure to obey such order is punishable by such court as contempt thereof.

Subpart B—Certification

§ 429.10 Purpose and scope.

This subpart sets forth the procedures for manufacturers to certify that their covered products and covered equipment comply with the applicable energy conservation standards.

§ 429.11 General sampling requirements for selecting units to be tested.

(a) When testing of covered products or covered equipment is required to comply with section 323(c) of the Act, or to comply with rules prescribed under sections 324, 325, or 342, 344, 345 or 346 of the Act, a sample comprised of production units (or units representative of production units) of the basic model being tested shall be selected at random and tested, and shall meet the criteria found in §§ 429.14 through 429.54 of this subpart. Components of similar design may be substituted without additional testing if the substitution does not affect energy or water consumption. Any represented values of measures of energy efficiency, water efficiency, energy consumption, or water consumption for all individual models represented by a given basic model must be the same.

(b) Unless otherwise specified, the minimum number of units tested shall be no less than two (except where a different minimum limit is specified in §§ 429.14 through 429.54 of this subpart); and

§ 429.12 General requirements applicable to certification reports.

(a) *Certification.* Each manufacturer, before distributing in commerce any basic model of a covered product or covered equipment subject to an applicable energy conservation standard set forth in parts 430 or 431, and annually thereafter on or before the dates provided in paragraph (e) of this section, shall submit a certification report to DOE certifying that each basic model meets the applicable energy conservation standard(s). The certification report(s) must be submitted to DOE in accordance with the submission procedures of paragraph (i) of this section.

(b) *Certification report.* A certification report shall include a compliance statement (*see* paragraph (c) of this section), and for each basic model, the information listed in this paragraph (b):

(1) Product or equipment type;

(2) Product or equipment class (as denoted in the provisions of part 430 or 431 containing the applicable energy conservation standard);

(3) Manufacturer's name and address;

(4) Private labeler's name(s) and address (if applicable);

(5) Brand name, if applicable;

(6) For each brand, the basic model number and the individual manufacturer's model numbers covered by that basic model with the following exceptions: For external power supplies that certify based on design families, the design family model number and the individual manufacturer's model numbers covered by that design family must be submitted for each brand. For walk-in coolers, the basic model number for each brand must be submitted. For distribution transformers, the basic model number or kVA grouping model number (depending on the certification method) for each brand must be submitted;

(7) Whether the submission is for a new model, a discontinued model, a correction to a previously submitted model, data on a carryover model, or a model that has been found in violation of a voluntary industry certification program;

(8) The test sample size (*i.e.,* number of units tested for each basic model);

(9) Certifying party's U.S. Customs and Border Protection (CBP) importer identification numbers assigned by CBP pursuant to 19 CFR 24.5, if applicable;

(10) Whether certification is based upon any waiver of test procedure requirements under § 430.27 or § 431.401 and the date of such waivers;

(11) Whether certification is based upon any exception relief from an applicable energy conservation standard and the date such relief was issued by DOE's Office of Hearing and Appeals;

(12) Whether certification is based upon the use of an alternate way of determining measures of energy conservation (*e.g.,* an ARM or AEDM), or other method of testing, for determining measures of energy conservation and the approval date, if applicable, of any such alternate rating, testing, or efficiency determination method; and

(13) Product specific information listed in §§ 429.14 through 429.54 of this part.

(c) *Compliance statement.* The compliance statement required by paragraph (b) of this section shall include the date, the name of the company official signing the statement, and his or her signature, title, address, telephone number, and facsimile number and shall certify that:

(1) The basic model(s) complies with the applicable energy conservation standard(s);

(2) All required testing has been conducted in conformance with the applicable test requirements prescribed in parts 429, 430 and 431, as appropriate, or in accordance with the terms of an applicable test procedure waiver;

(3) All information reported in the certification report is true, accurate, and complete; and

(4) The manufacturer is aware of the penalties associated with violations of the Act, the regulations thereunder, and 18 U.S.C. 1001 which prohibits knowingly making false statements to the Federal Government.

(d) *Annual filing.* All data required by paragraphs (a) through (c) shall be submitted to DOE annually, on or before the following dates:

Product category	Deadline for data submission
Fluorescent lamp ballasts, Medium base compact fluorescent lamps, Incandescent reflector lamps, General service fluorescent lamps, General service incandescent lamps, Intermediate base incandescent lamps, Candelabra base incandescent lamps, Residential ceiling fans, Residential ceiling fan light kits, Residential showerheads, Residential faucets, Residential water closets, and Residential urinals.	Mar. 1.
Residential water heater, Residential furnaces, Residential boilers, Residential pool heaters, Commercial water heaters, Commercial hot water supply boilers, Commercial unfired hot water storage tanks, Commercial packaged boilers, Commercial warm air furnaces, and Commercial unit heaters.	May 1
Residential dishwashers, Commercial prerinse spray valves, Illuminated exit signs, Traffic signal modules, Pedestrian modules, and Distribution transformers.	June 1.
Room air conditioners, Residential central air conditioners, Residential central heat pumps, Small duct high velocity system, Space constrained products, Commercial package air-conditioning and heating equipment, Packaged terminal air conditioners, Packaged terminal heat pumps, and Single package vertical units.	July 1.
Residential refrigerators, Residential refrigerators-freezers, Residential freezers, Commercial refrigerator, freezer, and refrigerator-freezer, Automatic commercial automatic ice makers, Refrigerated bottled or canned beverage vending machine, Walk-in coolers, and Walk-in freezers.	Aug. 1.
Torchieres, Residential dehumidifiers, Metal halide lamp fixtures, and External power supplies	Sept. 1.
Residential clothes washers, Residential clothes dryers, Residential direct heating equipment, Residential cooking products, and Commercial clothes washers.	Oct. 1.

(e) *New model filing.* (1) In addition to the annual filing schedule in paragraph (d) of this section, any new basic models must be certified pursuant to paragraph (a) of this section before distribution in commerce. A modification to a model that increases the model's energy or water consumption or decreases its efficiency resulting in re-rating must be certified as a new basic model pursuant to paragraph (a) of this section.

(2) For general service fluorescent lamps or incandescent reflector lamps: Prior to or concurrent with the distribution of a new basic model each manufacturer shall submit an initial certification report listing the basic model number, lamp wattage, and date of first manufacture (*i.e.,* production date) for that basic model. The certification report must also state how the manufacturer determined that the lamp meets or exceeds the energy conservation standards, including a description of any testing or analysis the manufacturer performed. Manufacturers of general service fluorescent lamps and incandescent reflector lamps shall submit the certification report required by paragraph (b) of this section within one year after the first date of new model manufacture.

(3) For distribution transformers, the manufacturer shall submit all information required in paragraphs (b) and (c) of this section for the new basic model, unless the manufacturer has previously submitted to the Department a certification report for a basic model of distribution transformer that is in the same kVA grouping as the new basic model.

(f) *Discontinued model filing.* When production of a basic model has ceased and it is no longer being sold or offered for sale by the manufacturer or private labeler, the manufacturer shall report this discontinued status to DOE as part of the next annual certification report following such cessation. For each basic model, the report shall include the information specified in paragraphs (b)(1) through (b)(7) of this section.

(g) *Third party submitters.* A manufacturer may elect to use a third party to submit the certification report to DOE (for example, a trade association, independent test lab, or other authorized representative, including a private labeler acting as a third party submitter on behalf of a manufacturer); however, the manufacturer is responsible for submission of the certification report to DOE. DOE may refuse to accept certification reports from third party submitters who have failed to submit reports in accordance with the rules of this part. The third party submitter must complete the compliance statement as part of the certification report. Each manufacturer using a third party submitter must have an authorization form on file with DOE. The authorization form includes a compliance statement, specifies the third party authorized to submit certification reports on the manufacturer's behalf and provides the contact information and signature of a company official.

(h) *Method of submission.* Reports required by this section must be submitted to DOE electronically at *http://www.regulations.doe.gov/ccms* (CCMS). A manufacturer or third party submitter can find product-specific templates for each covered product or covered equipment with certification requirements online at *https://www.regulations.doe.gov/ccms/templates.html.* Manufacturers and third party submitters must submit a registration form, signed by an officer of the company, in order to obtain access to CCMS.

§ 429.13 Testing requirements.

(a) The determination that a basic model complies with an applicable energy conservation standard shall be determined from the values derived pursuant to the applicable testing and sampling requirements set forth in parts 429, 430 and 431. The determination that a basic model complies with the applicable design standard shall be based upon the incorporation of specific design requirements in parts 430 and 431 or as specified in section 325 and 342 of the Act.

(b) Where DOE has determined a particular entity is in noncompliance with an applicable standard or certification requirement, DOE may impose additional testing requirements as a remedial measure.

§ 429.14 Residential refrigerators, refrigerator-freezers and freezers.

(a) *Sampling plan for selection of units for testing.*

(1) The requirements of § 429.11 are applicable to residential refrigerators, refrigerator-freezers and freezers; and

(2) For each basic model of residential refrigerators, refrigerator-freezers, and freezers, a sample of sufficient size shall be randomly selected and tested to ensure that—

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

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

or,

(B) The upper 95 percent confidence limit (UCL) of the true mean divided by 1.10, where:

$$UCL = \bar{x} + t_{.95}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.95}$ is the t statistic for a 95% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

and

(ii) Any represented value of the energy factor or other measure of energy consumption of a basic model for which consumers would favor higher values shall be less than or equal to the lower of:

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

or,

(B) The lower 95 percent confidence limit (LCL) of the true mean divided by 0.90, where:

$$LCL = \bar{x} - t_{.95}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.95}$ is the t statistic for a 95% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

(b) *Certification reports.*

(1) The requirements of § 429.12 are applicable to residential refrigerators, refrigerator-freezers and freezers; and

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information: The annual energy use in kilowatt hours per year (kWh/yr), total adjusted volume in cubic feet (cu ft), and measured height of the unit.

(3) Pursuant to § 429.12(b)(13), a certification report shall include the following additional product-specific

information: whether the basic model has variable defrost control (in which case, manufacturers must also report the values, if any, of CT_L and CT_M (For an example, *see* section 5.2.1.3 in Appendix A to Subpart B of Part 430) used in the calculation of energy consumption), whether the basic model has variable anti-sweat heater control (in which case, manufacturers must also report the values of heater Watts at the ten humidity levels 5%, 15%, through 95% used to calculate the variable anti-sweat heater "Correction Factor"), and whether testing has been conducted with modifications to the standard temperature sensor locations specified by the figures referenced in section 5.1 of Appendices A1, B1, A, and B to Subpart B of Part 430.

§ 429.15 Room air conditioners.

(a) *Sampling plan for selection of units for testing.* (1) The requirements of § 429.11 are applicable to room air conditioners; and

(2) For each basic model of room air conditioners, a sample of sufficient size shall be randomly selected and tested to ensure that—

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

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

or,

(B) The upper 97½; percent confidence limit (UCL) of the true mean divided by 1.05, where:

$$UCL = \bar{x} + t_{.975}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.975}$ is the t statistic for a 97.5% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

and

(ii) Any represented value of the energy efficiency ratio or other measure of energy consumption of a basic model for which consumers would favor higher values shall be less than or equal to the lower of:

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

or,

(B) The lower 97½; percent confidence limit (LCL) of the true mean divided by 0.95, where:

$$LCL = \bar{x} - t_{.975}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.975}$ is the t statistic for a 97.5% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

(b) *Certification reports.* (1) The requirements of § 429.12 are applicable to room air conditioners; and

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information: The energy efficiency ratio (EER in British thermal units per Watt-hour (Btu/W-h)), cooling capacity in British thermal units per hour (Btu/h), and the electrical power input in watts (W).

§ 429.16 Central air conditioners and heat pumps.

(a) *Sampling plan for selection of units for testing.* (1) The general requirements of § 429.11 are applicable to central air conditioners and heat pumps; and

(2)(i) For central air conditioners and heat pumps, each single-package system and each condensing unit (outdoor unit) of a split-system, when combined with a selected evaporator coil (indoor unit) or a set of selected indoor units, must have a sample of sufficient size tested in accordance with the applicable provisions of this subpart. The represented values for any model of a single-package system, any model of a tested split-system combination, any model of a tested mini-split system combination, or any model of a tested multi-split system combination must be assigned such that—

(A) Any represented value of annual operating cost, energy consumption or other measure of energy consumption of the central air conditioner or heat pump for which consumers would favor lower values shall be greater than or equal to the higher of:

(*1*) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(*2*) The upper 90 percent confidence limit (UCL) of the true mean divided by 1.05, where:

$$UCL = \bar{x} + t_{.90}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.90}$ is the t statistic for a 90% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

and

(B) Any represented value of the energy efficiency or other measure of energy consumption of the central air conditioner or heat pump for which consumers would favor higher values shall be less than or equal to the lower of:

(*1*) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(*2*) The lower 90 percent confidence limit (LCL) of the true mean divided by 0.95, where:

$$LCL = \bar{x} - t_{.90}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.90}$ is the t statistic for a 90% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

(C) For heat pumps, all units of the sample population must be tested in both the cooling and heating modes and the results used for determining the heat pump's certified Seasonal Energy Efficiency Ratio (SEER) and Heating Seasonal Performance Factor (HSPF) ratings in accordance with paragraph (a)(2)(i)(B) of this section.

(ii) For split-system air conditioners and heat pumps, the condenser-evaporator coil combination selected for tests pursuant to paragraph (a)(2)(i) of this section shall include the evaporator coil that is likely to have the largest volume of retail sales with the particular model of condensing unit. For mini-split condensing units that are designed to always be installed with more than one indoor unit, a "tested combination" as defined in 10 CFR 430.2 shall be used for tests pursuant to paragraph (a)(2)(i) of this section. For multi-split systems, each model of condensing unit shall be tested with two different sets of indoor units. For one set, a "tested combination" composed entirely of non-ducted indoor units shall be used. For the second set, a "tested combination" composed entirely of ducted indoor units shall be used. However, for any split-system air conditioner having a single-speed compressor, the condenser-evaporator coil combination selected for tests pursuant to paragraph (a)(2)(i) of this section shall include the indoor *coil-only* unit that is likely to have the largest volume of retail sales with the particular model of outdoor unit. This *coil-only* requirement does not apply to split-system air conditioners that are only sold and installed with *blower-coil* indoor units, specifically mini-splits, multi-splits, and through-the-wall units. This *coil-only* requirement does not apply to any split-system heat pumps. For every other split-system combination that includes the same model of condensing unit but a different model of evaporator coil and for every other mini-split and multi-split system that includes the same model of condensing unit but a different set of evaporator coils, whether the evaporator coil(s) is manufactured by the same manufacturer or by a component manufacturer, either—

(A) A sample of sufficient size, comprised of production units or representing production units, must be tested as complete systems with the resulting ratings for the outdoor unit-indoor unit(s) combination obtained in accordance with paragraphs (a)(2)(i)(A) and (a)(2)(i)(B) of this section; or

(B) The representative values of the measures of energy efficiency must be assigned as follows:

(*1*) Using an alternative rating method (ARM) that has been approved by DOE in accordance with the provisions of § 429.70(e)(1) and (2); or

(*2*) For multi-split systems composed entirely of non-ducted indoor units, set equal to the system tested in accordance with paragraph (a)(2)(i) of this section whose tested combination was entirely non-ducted indoor units; or

(*3*) For multi-split systems composed entirely of ducted indoor units, set equal to the system tested in accordance with paragraph (a)(2)(i) of this section when the tested combination was entirely ducted indoor units; or

(*4*) For multi-split systems having a mix of non-ducted and ducted indoor units, set equal to the mean of the values for the two systems—one having the tested combination of all non-ducted units and the second having the tested combination of all ducted indoor units—tested in accordance with paragraph (a)(2)(i) of this section.

(iii) Whenever the representative values of the measures of energy consumption, as determined by the provisions of paragraph (a)(2)(ii)(B) of this section, do not agree within 5 percent of the energy consumption as determined by actual testing, the values determined by actual testing must be used to comply with section 323(c) of the Act or to comply with rules under section 324 of the Act.

(b) *Certification reports.* (1) The requirements of § 429.12 are applicable to central air conditioners and heat pumps; and

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information:

(i) Residential central air conditioners: The seasonal energy efficiency ratio (SEER in British thermal units per Watt-hour (Btu/W-h)), the cooling capacity in British thermal units per hour (Btu/h), and the manufacturer and individual manufacturer's model numbers of the indoor and outdoor unit. For central air conditioners whose seasonal energy efficiency ratio is based on an installation that includes a particular model of ducted air mover (*e.g.,* furnace, air handler, blower kit), the manufacturer's model number of this ducted air mover must be included among the model numbers listed on the certification report.

(ii) Residential central air conditioning heat pumps: The seasonal energy efficiency ratio (SEER in British thermal units per Watt-hour (Btu/W-h)), the cooling capacity in British thermal units per hour (Btu/h), the heating seasonal performance factor (HSPF in British thermal units per Watt-hour (Btu/W-h)), and the manufacturer and individual model numbers of the indoor and outdoor unit. For central air conditioning heat pumps whose seasonal energy efficiency ratio and heating seasonal performance factor are based on an installation that includes a particular model of ducted air mover (*e.g.,* furnace, air handler, blower kit), the model number of this ducted air mover must be included among the model numbers listed on the certification report.

(iii) Small duct, high velocity air conditioners: The seasonal energy efficiency ratio (SEER in British thermal units per Watt-hour (Btu/W-h)) and the cooling capacity in British thermal units per hour (Btu/h).

(iv) Small duct, high velocity heat pumps: The seasonal energy efficiency ratio (SEER in British thermal units per Watt-hour (Btu/W-h)), the heating seasonal performance factor (HSPF in British thermal units per Watt-hour (Btu/W-h)), and the cooling capacity in British thermal units per hour (Btu/h).

(iv) Space constrained air conditioners: The seasonal energy

efficiency ratio (SEER in British thermal units per Watt-hour (Btu/W-h)) and the cooling capacity in British thermal units per hour (Btu/h).

(v) Space constrained heat pumps: The seasonal energy efficiency ratio (SEER in British thermal units per Watt-hour (Btu/W-h)), the coefficient of performance, and the cooling capacity in British thermal units per hour (Btu/h).

(c) *Alternative methods for determining efficiency or energy use* for central air conditioners and heat pumps can be found in § 429.70 of this subpart.

§ 429.17 Residential water heaters.

(a) *Sampling plan for selection of units for testing.* (1) The requirements of § 429.11 are applicable to residential water heaters; and

(2) For each basic model of residential water heaters, a sample of sufficient size shall be randomly selected and tested to ensure that—

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

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(B) The upper 95 percent confidence limit (UCL) of the true mean divided by 1.10, where:

$$UCL = \bar{x} + t_{.95}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.95}$ is the t statistic for a 95% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

and

(ii) Any represented value of the energy factor or other measure of energy consumption of a basic model for which consumers would favor higher values shall be less than or equal to the lower of:

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(B) The lower 95 percent confidence limit (LCL) of the true mean divided by 0.90, where:

$$LCL = \bar{x} - t_{.95}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.95}$ is the t statistic for a 95% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

(b) *Certification reports.* (1) The requirements of § 429.12 are applicable to residential water heaters; and

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information: The energy factor (EF), rated storage volume in gallons (gal), first hour rating (maximum gallons per minute), and recovery efficiency (percent).

§ 429.18 Residential furnaces.

(a) *Sampling plan for selection of units for testing.* (1) The requirements of § 429.11 are applicable to residential furnaces; and

(2) (i) For each basic model of furnaces, other than basic models of those sectional cast-iron boilers (which may be aggregated into groups having identical intermediate sections and combustion chambers) a sample of sufficient size shall be randomly selected and tested to ensure that—

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

(*1*) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(*2*) The upper 97½ percent confidence limit (UCL) of the true mean divided by 1.05, where:

$$UCL = \bar{x} + t_{.975}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.975}$ is the t statistic for a 97.5% one-tailed confidence interval with n-1 degrees of freedom (from Appendix A).

and

(B) Any represented value of the annual fuel utilization efficiency or other measure of energy consumption of a basic model for which consumers would favor higher values shall be less than or equal to the lower of:

(*1*) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(*2*) The lower 97½ percent confidence limit (LCL) of the true mean divided by 0.95, where:

$$LCL = \bar{x} - t_{.975}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.975}$ is the t statistic for a 97.5% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

(ii) For the lowest capacity basic model of a group of basic models of those sectional cast-iron boilers having identical intermediate sections and combustion chambers, a sample of sufficient size shall be randomly selected and tested to ensure that—

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

(*1*) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(*2*) The upper 97½ percent confidence limit (UCL) of the true mean divided by 1.05, where:

$$UCL = \bar{x} + t_{.975}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.975}$ is the t statistic for a 97.5% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

and

(B) Any represented value of the fuel utilization efficiency or other measure of energy consumption of a basic model for which consumers would favor higher values shall be less than or equal to the lower of:

(*1*) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(*2*) The lower 97½ percent confidence limit (LCL) of the true mean divided by 0.95, where:

$$LCL = \bar{x} - t_{.975}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.975}$ is the t statistic for a 97.5% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

(iii) For the highest capacity basic model of a group of basic models of those sectional cast-iron boilers having identical intermediate sections and combustion chambers, a sample of sufficient size shall be randomly selected and tested to ensure that—

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

(*1*) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(*2*) The upper 97½ percent confidence limit (UCL) of the true mean divided by 1.05, where:

$$UCL = \bar{x} + t_{.975}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.975}$ is the t statistic for a 97.5% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

and

(B) Any represented value of the fuel utilization efficiency or other measure of energy consumption of a basic model for which consumers would favor higher values shall be less than or equal to the lower of:

(*1*) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(*2*) The lower 97½ percent confidence limit (LCL) of the true mean divided by 0.95, where:

$$LCL = \bar{x} - t_{.975}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.975}$ is the t statistic for a 97.5% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

(iv) For each basic model or capacity other than the highest or lowest of the group of basic models of sectional cast-iron boilers having identical intermediate sections and combustion chambers, represented values of measures of energy consumption shall be determined by either—

(A) A linear interpolation of data obtained for the smallest and largest capacity units of the family, or

(B) Testing a sample of sufficient size to ensure that:

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

(*i*) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(*ii*) The upper 97½ percent confidence limit (UCL) of the true mean divided by 1.05, where:

$$UCL = \bar{x} + t_{.975}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.975}$ is the t statistic for a 97.5% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

and

(*2*) Any represented value of the energy factor or other measure of energy consumption of a basic model for which consumers would favor higher values shall be less than or equal to the lower of:

(*i*) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(*ii*) The lower 97½ percent confidence limit (LCL) of the true mean divided by 0.95, where:

$$LCL = \bar{x} - t_{.975}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.975}$ is the t statistic for a 97.5% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

(v) Whenever measures of energy consumption determined by linear interpolation do not agree with measures of energy consumption determined by actual testing, the values determined by testing must be used for certification.

(vi) In calculating the measures of energy consumption for each unit tested, use the design heating requirement corresponding to the mean

of the capacities of the units of the sample.

(b) *Certification reports.* (1) The requirements of § 429.12 are applicable to residential furnaces; and

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information:

(i) Residential furnaces and boilers: The annual fuel utilization efficiency (AFUE) in percent (%) and the input capacity in British thermal units per hour (Btu/h).

(ii) For cast-iron sectional boilers: The type of ignition system for gas-fired steam and hot water boilers no later than September 1, 2012.

(3) Pursuant to § 429.12(b)(13), a certification report shall include the following additional product-specific information: For cast-iron sectional boilers: a declaration of whether certification is based on linear interpolation or testing. For hot water boilers, a declaration that the manufacturer has incorporated the applicable design requirements no later than September 1, 2012.

§ 429.19 Dishwashers.

(a) *Sampling plan for selection of units for testing.* (1) The requirements of § 429.11 are applicable to dishwashers; and

(2) For each basic model of dishwashers, a sample of sufficient size shall be randomly selected and tested to ensure that—

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

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(B) The upper 97½ percent confidence limit (UCL) of the true mean divided by 1.05, where:

$$UCL = \bar{x} + t_{.975}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.975}$ is the t statistic for a 97.5% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

and

(ii) Any represented value of the energy or water factor or other measure of energy or water consumption of a basic model for which consumers would favor higher values shall be less than or equal to the lower of:

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(B) The lower 97½ percent confidence limit (LCL) of the true mean divided by 0.95, where:

$$LCL = \bar{x} - t_{.975}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.975}$ is the t statistic for a 97.5% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

(b) *Certification reports.* (1) The requirements of § 429.12 are applicable to dishwashers; and

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information: The annual energy use in kilowatt hours per year (kWh/yr) and the water factor in gallons per cycle.

(3) Pursuant to § 429.12(b)(13), a certification report shall include the following additional product-specific information: the capacity in number of place settings as specified in ANSI/AHAM DW–1 (incorporated by reference, *see* § 429.4), presence of a soil sensor (if yes, the number of cycles required to reach calibration), and the water inlet temperature used for testing in degrees Fahrenheit (°F).

§ 429.20 Residential clothes washers.

(a) *Sampling plan for selection of units for testing.* (1) The requirements of § 429.11 are applicable to residential clothes washers; and

(2) For each basic model of residential clothes washers, a sample of sufficient size shall be randomly selected and tested to ensure that—

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

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(B) The upper 97½ percent confidence limit (UCL) of the true mean divided by 1.05, where:

$$UCL = \bar{x} + t_{.975}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.975}$ is the t statistic for a 97.5% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

and

(ii) Any represented value of the modified energy factor or other measure of energy or water consumption of a basic model for which consumers would favor higher values shall be less than or equal to the lower of:

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(B) The lower 97½ percent confidence limit (LCL) of the true mean divided by 0.95, where:

$$LCL = \bar{x} - t_{.975}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.975}$ is the t statistic for a 97.5% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

(b) *Certification reports.* (1) The requirements of § 429.12 are applicable to residential clothes washers; and

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information: The modified energy factor (MEF) in cubic feet per kilowatt hour per cycle (cu ft/kWh/cycle) and the capacity in cubic feet (cu ft). For standard-size residential clothes washers, a water factor (WF) in gallons per cycle per cubic feet (gal/cycle/cu ft).

§ 429.21 Residential clothes dryers.

(a) *Sampling plan for selection of units for testing.* (1) The requirements of § 429.11 are applicable to clothes dryers; and

(2) For each basic model of clothes dryers a sample of sufficient size shall be randomly selected and tested to ensure that—

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

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(B) The upper 97½ percent confidence limit (UCL) of the true mean divided by 1.05, where:

$$UCL = \bar{x} + t_{.975}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.975}$ is the t statistic for a 97.5% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

and

(ii) Any represented value of the energy factor or other measure of energy consumption of a basic model for which consumers would favor higher values shall be less than or equal to the lower of:

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(B) The lower 97½ percent confidence limit (LCL) of the true mean divided by 0.95, where:

$$LCL = \bar{x} - t_{.975}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.975}$ is the t statistic for a 97.5% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

(b) *Certification reports.* (1) The requirements of § 429.12 are applicable to clothes dryers; and

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information: The energy factor in pounds per kilowatt hours (lb/kWh), the capacity in cubic feet (cu ft), and the voltage in volts (V) (for electric dryers only).

§ 429.22 Direct heating equipment.

(a) *Sampling plan for selection of units for testing.* (1) The requirements of § 429.11 are applicable to direct heating equipment; and

(2) (i) For each basic model of direct heating equipment (not including furnaces) a sample of sufficient size shall be randomly selected and tested to ensure that—

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

(*1*) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(*2*) The upper 97½ percent confidence limit (UCL) of the true mean divided by 1.05, where:

$$UCL = \bar{x} + t_{.975}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.975}$ is the t statistic for a 97.5% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

and

(B) Any represented value of the fuel utilization efficiency or other measure of energy consumption of a basic model for which consumers would favor higher values shall be less than or equal to the lower of:

(*1*) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(*2*) The lower 97½ percent confidence limit (LCL) of the true mean divided by 0.95, where:

$$LCL = \bar{x} - t_{.975}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.975}$ is the t statistic for a 97.5% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

(ii) In calculating the measures of energy consumption for each unit tested, use the design heating requirement corresponding to the mean of the capacities of the units of the sample.

(b) *Certification reports.* (1) The requirements of § 429.12 are applicable to direct heating equipment; and

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information: Direct heating equipment, the annual fuel utilization efficiency (AFUE) in percent (%), the mean input capacity in British thermal units per hour (Btu/h), and the mean output capacity in British thermal units per hour (Btu/h). Note, vented hearth heaters as defined in § 430.2 must report no later than April 16, 2013.

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

(a) *Sampling plan for selection of units for testing.* (1) The requirements of § 429.11 are applicable to conventional cooking tops, conventional ovens and microwave ovens; and

(2) For each basic model of conventional cooking tops, conventional ovens and microwave ovens a sample of sufficient size shall be randomly selected and tested to ensure that—

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

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(B) The upper 97½ percent confidence limit (UCL) of the true mean divided by 1.05, where:

$$UCL = \bar{x} + t_{.975}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.975}$ is the t statistic for a 97.5% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

and

(ii) Any represented value of the energy factor or other measure of energy consumption of a basic model for which consumers would favor higher values shall be less than or equal to the lower of:

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(B) The lower 97½ percent confidence limit (LCL) of the true mean divided by 0.95, where:

$$LCL = \bar{x} - t_{.975}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.975}$ is the t statistic for a 97.5% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

(b) *Certification reports.* (1) The requirements of § 429.12 are applicable to conventional cooking tops, conventional ovens and microwave ovens; and

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information: The type of pilot light and a declaration that the manufacturer has incorporated the applicable design requirements.

§ 429.24 Pool heaters.

(a) *Sampling plan for selection of units for testing.* (1) The requirements of § 429.11 are applicable to pool heaters; and

(2) For each basic model of pool heater a sample of sufficient size shall be randomly selected and tested to ensure that any represented value of the thermal efficiency or other measure of energy consumption of a basic model for which consumers would favor higher values shall be less than or equal to the lower of:

(i) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(ii) The lower 97½ percent confidence limit (LCL) of the true mean divided by 0.95, where:

$$LCL = \bar{x} - t_{.975}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.975}$ is the t statistic for a 97.5% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

(b) *Certification reports.* (1) The requirements of § 429.12 are applicable to pool heaters; and

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information: The thermal efficiency in percent (%) and the input capacity in British thermal units per hour (Btu/h).

§ 429.25 Television sets. [Reserved]

§ 429.26 Fluorescent lamp ballasts.

(a) *Sampling plan for selection of units for testing.* (1) The requirements of § 429.11 are applicable to fluorescent lamp ballasts; and

(2) For each basic model of fluorescent lamp ballasts, a sample of sufficient size, not less than four, shall be randomly selected and tested to ensure that—

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

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(B) The upper 99 percent confidence limit (UCL) of the true mean divided by 1.01, where:

$$UCL = \bar{x} + t_{.99}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.99}$ is the t statistic for a 99% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

and

(ii) Any represented value of the ballast efficacy factor or other measure of the energy consumption of a basic model for which consumers would favor a higher value shall be less than or equal to the lower of:

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(B) The lower 99 percent confidence limit (LCL) of the true mean divided by 0.99, where

$$LCL = \bar{x} - t_{.99}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.99}$ is the t statistic for a 99% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

(b) *Certification reports.* (1) The requirements of § 429.12 are applicable to fluorescent lamp ballasts; and

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information: The ballast efficacy factor, the ballast power factor, the number of lamps operated by the ballast, and the type of lamps operated by the ballast.

§ 429.27 General service fluorescent lamps, general service incandescent lamps, and incandescent reflector lamps.

(a) *Sampling plan for selection of units for testing.* (1) The requirements of § 429.11 are applicable to general service fluorescent lamps, general service incandescent lamps and incandescent reflector lamps; and

(2)(i) For each basic model of general service fluorescent lamp, general service incandescent lamp, and incandescent reflector lamp, samples of production lamps shall be obtained from a 12-month period, tested, and the results averaged. A minimum sample of 21 lamps shall be tested. The manufacturer shall randomly select a minimum of three lamps from each month of production for a minimum of 7 out of the 12-month period. In the instance where production occurs during fewer than 7 of such 12 months, the manufacturer shall randomly select 3 or more lamps from each month of production, where the number of lamps

selected for each month shall be distributed as evenly as practicable among the months of production to attain a minimum sample of 21 lamps. Any represented value of lamp efficacy of a basic model shall be based on the sample and shall be less than or equal to the lower of:

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(B) The lower 95 percent confidence limit (LCL) of the true mean divided by .97, where:

$$LCL = \bar{x} - t_{.95}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.95}$ is the t statistic for a 95% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

(ii) For each basic model of general service fluorescent lamp, the color rendering index (CRI) shall be measured from the same lamps selected for the lumen output and watts input measurements in paragraph (a)(2)(i) of this section, *i.e.,* the manufacturer shall measure all lamps for lumens, watts input, and CRI. The CRI shall be represented as the average of a minimum sample of 21 lamps and shall be less than or equal to the lower of:

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(B) The lower 95 percent confidence limit (LCL) of the true mean divided by .97, where:

$$LCL = \bar{x} - t_{.95}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.95}$ is the t statistic for a 95% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

(b) *Certification reports.* (1) The requirements of § 429.12 are applicable to general service fluorescent lamps, general service incandescent lamps and incandescent reflector lamps; and

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information:

(i) General service fluorescent lamps: the testing laboratory's National Voluntary Laboratory Accreditation Program (NVLAP) identification number or other NVLAP-approved accreditation identification, production dates of the units tested, the 12-month average lamp efficacy in lumens per watt (lm/W),

lamp wattage (W), correlated color temperature in Kelvin (K), and the 12-month average Color Rendering Index (CRI).

(ii) Incandescent reflector lamps: The laboratory's NVLAP identification number or other NVLAP-approved accreditation identification, production dates of the units tested, the 12-month average lamp efficacy in lumens per watt (lm/W), and lamp wattage (W).

(iii) General service incandescent lamps: On or after the effective dates specified in § 430.32, the testing laboratory's National Voluntary Laboratory Accreditation Program (NVLAP) identification number or other NVLAP-approved accreditation identification, production dates of the units tested, the 12-month average maximum rate wattage in watts (W), the 12-month average minimum rated lifetime (hours), and the 12-month average Color Rendering Index (CRI).

(c) *Test data.* Manufacturers must include the production date codes and the accompanying decoding scheme corresponding to all of the units tested for a given basic model in the detailed test records maintained under § 429.71.

§ 429.28 Faucets.

(a) *Sampling plan for selection of units for testing.* (1) The requirements of § 429.11 are applicable to faucets; and

(2) For each basic model of faucet, a sample of sufficient size shall be randomly selected and tested to ensure that any represented value of water consumption of a basic model for which consumers favor lower values shall be no less than the higher of the higher of:

(i) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(ii) The upper 95 percent confidence limit (UCL) of the true mean divided by 1.05, where:

$$UCL = \bar{x} + t_{.95}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.95}$ is the t statistic for a 95% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

(b) *Certification reports.* (1) The requirements of § 429.12 are applicable to faucets; and

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information: The maximum water use in gallons per minute (gpm) or, in the case of metering faucets, gallons per cycle (gal/cycle) for each faucet and the flow water pressure in pounds per square inch (psi).

§ 429.29 Showerheads.

(a) *Sampling plan for selection of units for testing.* (1) The requirements of § 429.11 are applicable to showerheads; and

(2) For each basic model of a showerhead, a sample of sufficient size shall be randomly selected and tested to ensure that any represented value of water consumption of a basic model for which consumers favor lower values shall be greater than or equal to the higher of:

(i) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(ii) The upper 95 percent confidence limit (UCL) of the true mean divided by 1.05, where:

$$UCL = \bar{x} + t_{.95}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.95}$ is the t statistic for a 95% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

(b) *Certification reports.* (1) The requirements of § 429.12 are applicable to showerheads; and

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information: The maximum water use in gallons per minute (gpm) and the maximum flow water pressure in pounds per square inch (psi).

(3) Pursuant to § 429.12(b)(13), a certification report shall include the following additional product-specific information: A declaration that the showerhead meets the requirements of ASME/ANSI A112.18.1M:1996.

§ 429.30 Water closets.

(a) *Sampling plan for selection of units for testing.* (1) The requirements of § 429.11 are applicable to water closets; and

(2) For each basic model of water closet, a sample of sufficient size shall be randomly selected and tested to ensure that any represented value of water consumption of a basic model for which consumers favor lower values shall be greater than or equal to the higher of:

(i) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(ii) The upper 90 percent confidence limit (UCL) of the true mean divided by 1.1, where:

$$UCL = \bar{x} + t_{.90}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.90}$ is the t statistic for a 90% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

(b) *Certification reports.* (1) The requirements of § 429.12 are applicable to water closets; and

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information: The maximum water use in gallons per flush (gpf).

§ 429.31 Urinals.

(a) *Sampling plan for selection of units for testing.* (1) The requirements of § 429.11 are applicable to urinals; and

(2) For each basic model of urinal, a sample of sufficient size shall be randomly selected and tested to ensure that any represented value of water consumption of a basic model for which consumers favor lower values shall be greater than or equal to the higher of:

(i) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(ii) The upper 90 percent confidence limit (UCL) of the true mean divided by 1.1, where:

$$UCL = \bar{x} + t_{.90}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.90}$ is the t statistic for a 90% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

(b) *Certification reports.* (1) The requirements of § 429.12 are applicable to urinals; and

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information: The maximum water use in gallons per flush and for trough-type urinals, the maximum flow rate in gallons per minute (gpm) and the length of the trough in inches (in).

§ 429.32 Ceiling fans.

(a) *Sampling plan for selection of units for testing.* The requirements of § 429.11 are applicable to ceiling fans.

(b) *Certification reports.* (1) The requirements of § 429.12 are applicable to ceiling fans; and

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information: The number of speeds within the ceiling fan controls and a declaration that the manufacturer has incorporated the applicable design requirements.

§ 429.33 Ceiling fan light kits.

(a) *Sampling plan for selection of units for testing.* (1) The requirements of § 429.11 are applicable to ceiling fan light kits; and

(2) For each basic model of ceiling fan light kit with sockets for medium screw base lamps or pin-based fluorescent lamps selected for testing, a sample of sufficient size shall be randomly selected and tested to ensure that—

(i) Any value of estimated energy consumption or other measure of energy consumption of a basic model for which consumers would favor lower values shall be greater than or equal to the higher of:

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(B) The upper 95 percent confidence limit (UCL) of the true mean divided by 1.1, where:

$$UCL = \bar{x} + t_{.95}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.95}$ is the t statistic for a 95% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

and

(ii) Any represented value of the efficacy or other measure of energy consumption of a basic model for which consumers would favor higher values shall be less than or equal to the lower of:

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(B) The lower 95 percent confidence limit (LCL) of the true mean divided by 0.9, where:

$$LCL = \bar{x} - t_{.95}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.95}$ is the t statistic for a 95% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

(b) *Certification reports.* (1) The requirements of § 429.12 are applicable to ceiling fan light kits; and

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information:

(i) Ceiling fan light kits with sockets for medium screw base lamps: the rated wattage in watts (W) and the system's efficacy in lumens per watt (lm/W).

(ii) Ceiling fan light kits with pin-based sockets for fluorescent lamps: the rated wattage in watts (W), the system's efficacy in lumens per watt (lm/W), and the length of the lamp in inches (in).

(iii) Ceiling fan light kits with any other socket type: the rated wattage in watts (W) and the number of individual sockets.

(3) Pursuant to § 429.12(b)(13), a certification report shall include the following additional product-specific information: Ceiling fan light kits with any other socket type: a declaration that the basic model meets the applicable design requirement and the features that have been incorporated into the ceiling fan light kit to meet the applicable design requirement (*e.g.,* circuit breaker, fuse, ballast).

§ 429.34 Torchieres.

(a) *Sampling plan for selection of units for testing.* (1) The requirements of § 429.11 are applicable to torchieres; and

(2) Reserved

(b) *Certification reports.* (1) The requirements of § 429.12 are applicable to torchieres; and

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following additional product-specific information: A declaration that the basic model meets the applicable design requirement and the features that have been incorporated into the torchiere to meet the applicable design requirement (*e.g.,* circuit breaker, fuse, ballast).

§ 429.35 Bare or covered (no reflector) medium base compact fluorescent lamps.

(a) *Sampling plan for selection of units for testing.* (1) The requirements of § 429.11 are applicable to bare or covered (no reflector) medium base compact fluorescent lamps; and

(2) For each basic model of bare or covered (no reflector) medium base compact fluorescent lamp

(i) No less than five units per basic model must be used when testing for the efficacy, 1,000-hour lumen maintenance, and the lumen maintenance. Each unit must be tested in the base-up position unless the product is labeled restricted by the manufacturer, in which case the unit should be tested in the manufacturer specified position. Any represented value of efficacy, 1,000-hour lumen maintenance, and lumen maintenance shall be based on a sample randomly selected and tested to ensure that the represented value is less than or equal to the lower of:

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(B) The lower 97.5 percent confidence limit (LCL) of the true mean divided by 0.95, where:

$$LCL = \bar{x} - t_{.975}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.975}$ is the t statistic for a 97.5% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

(ii) No less than 6 unique units (*i.e.,* units that have not previously been tested) per basic model must be used when testing for the rapid cycle stress. Each unit can be tested in the base up or base down position as stated by the manufacturer.

(iii) No less than 10 units per basic model must be used when testing for the average rated lamp life. Half the sample should be tested in the base up position and half of the sample should be tested in the base down position, unless specific use or position appears on the packaging of that particular unit.

(b) *Certification reports.* (1) The requirements of § 429.12 are applicable to bare of covered medium base compact fluorescent lamps; and

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information: The testing laboratory's NVLAP identification number or other NVLAP-approved accreditation identification, production dates for the units tested, the minimum initial efficacy in lumens per watt (lm/W), the lumen maintenance at 1,000 hours in percent (%), the lumen maintenance at 40 percent of rated life in percent (%), the rapid cycle stress test in number of units passed, and the lamp life in hours (h).

(c) *Test data.* Manufacturers must include the production date codes and the accompanying decoding scheme corresponding to all of the units tested for a given basic model in the detailed test records maintained under § 429.71.

§ 429.36 Dehumidifiers.

(a) *Sampling plan for selection of units for testing.* (1) The requirements of § 429.11 are applicable to dehumidifiers; and

(2) For each basic model of dehumidifier selected for testing, a sample of sufficient size shall be randomly selected and tested to ensure that—

(i) Any represented value of energy consumption or other measure of energy consumption of a basic model for which consumers would favor lower values shall be greater than or equal to the higher of:

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(B) The upper 95 percent confidence limit (UCL) of the true mean divided by 1.10, where:

$$UCL = \bar{x} + t_{.95}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.95}$ is the t statistic for a 95% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

and

(ii) Any represented value of the energy factor or other measure of energy consumption of a basic model for which consumers would favor higher values shall be less than or equal to the lower of:

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(B) The lower 95 percent confidence limit (LCL) of the true mean divided by 0.90, where:

$$LCL = \bar{x} - t_{.95}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.95}$ is the t statistic for a 95% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

(b) *Certification reports.* (1) The requirements of § 429.12 are applicable to dehumidifiers; and

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information: The energy factor in liters per kilowatt hour (liters/kWh) and capacity in pints per day.

§ 429.37 Class A external power supplies.

(a) *Sampling plan for selection of units for testing.* (1) The requirements of § 429.11 are applicable to external power supplies; and

(2) For each basic model of external power supply selected for testing, a sample of sufficient size shall be randomly selected and tested to ensure that—

(i) Any represented value of the estimated energy consumption of a basic model for which consumers would favor lower values shall be greater than or equal to the higher of:

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(B) The upper 97.5 percent confidence limit (UCL) of the true mean divided by 1.05, where:

$$UCL = \bar{x} + t_{.975}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.975}$ is the t statistic for a 97.5% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

and

(ii) Any represented value of the estimated energy consumption of a basic model for which consumers would favor higher values shall be less than or equal to the lower of:

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(B) The lower 97.5 percent confidence limit (LCL) of the true mean divided by 0.95, where:

$$LCL = \bar{x} - t_{.975}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.975}$ is the t statistic for a 97.5% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

(b) *Certification reports.* (1) The requirements of § 429.12 are applicable to external power supplies except that required information may be reported on the basis of a basic model or a design family. If certifying using a design family, for § 429.12(b)(6), report the individual manufacturer's model numbers covered by the design family.

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information:

(i) External power supplies: The average active mode efficiency as a percent (%), no-load mode power consumption in watts (W), nameplate output power in watts (W), and, if missing from the nameplate, the output current in amperes (A) of the basic model or the output current in amperes (A) of the highest- and lowest-voltage models within the external power supply design family.

(ii) Switch-selectable single-voltage external power supplies: The average active mode efficiency as a percent (%), no-load mode power consumption in watts (W) at the lowest and highest selectable output voltage, nameplate output power in watts (W), and, if missing from the nameplate, the output current in amperes (A).

§ 429.38 Non-class A external power supplies. [Reserved]

§ 429.39 Battery chargers.

(a) *Sampling plan for selection of units for testing.* (1) The requirements of § 429.11 are applicable to battery chargers; and

(2) For each basic model of battery charger selected for testing, a sample of sufficient size shall be randomly selected and tested to ensure that—

(i) Any represented value of the estimated non-active energy ratio or other measure of energy consumption of a basic model for which consumers would favor lower values shall be greater than or equal to the higher of:

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(B) The upper 97.5 percent confidence limit (UCL) of the true mean divided by 1.05, where:

$$UCL = \bar{x} + t_{.975}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.975}$ is the t statistic for a 97.5% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

and

(ii) Any represented value of the estimated non-active energy ratio or other measure of energy consumption of a basic model for which consumers would favor higher values shall be less than or equal to the lower of:

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(B) The lower 97.5 percent confidence limit (LCL) of the true mean divided by 0.95, where:

$$LCL = \bar{x} - t_{.975}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.975}$ is the t statistic for a 97.5% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D of this part).

(b) *Certification reports.* [Reserved]

§ 429.40 Candelabra base incandescent lamps and intermediate base incandescent lamps.

(a) *Sampling plan for selection of units for testing.* (1) The requirements of § 429.11 are applicable to candelabra base incandescent lamps; and

(2) For each basic model of candelabra base incandescent lamp and intermediate base incandescent lamp, a minimum sample of 21 lamps shall be randomly selected and tested. Any represented value of lamp wattage of a basic model shall be based on the sample and shall be less than or equal to the lower of:

(i) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(ii) The lower 97.5 percent confidence limit (LCL) of the true mean divided by 0.95, where:

$$LCL = \bar{x} - t_{.975}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.975}$ is the t statistic for a 97.5% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D of this part).

(b) *Certification reports.* (1) The requirements of § 429.12 are applicable to candelabra base and intermediate base incandescent lamps; and

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information:

(i) Candelabra base incandescent lamp: The rated wattage in watts (W).

(ii) Intermediate base incandescent lamp: The rated wattage in watts (W).

§ 429.41 Electric motors. [Reserved]

§ 429.42 Commercial refrigerators, freezers, and refrigerator-freezers.

(a) *Sampling plan for selection of units for testing.* (1) The requirements of § 429.11 are applicable to commercial refrigerators, freezers, and refrigerator-freezers; and

(2) For each basic model of commercial refrigerator, freezer, or refrigerator-freezer selected for testing, a sample of sufficient size shall be randomly selected and tested to ensure that—

(i) Any value of estimated maximum daily energy consumption or other measure of energy consumption of a basic model for which consumers would favor lower values shall be greater than or equal to the higher of:

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the maximum of the ith sample;

Or,

(B) The upper 95 percent confidence limit (UCL) of the true mean divided by 1.10, where:

$$UCL = \bar{x} + t_{.95}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.95}$ is the t statistic for a 95% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

and

(ii) Any represented value of the energy efficiency or other measure of energy consumption of a basic model for which consumers would favor higher values shall be less than or equal to the lower of:

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(B) The lower 95 percent confidence limit (LCL) of the true mean divided by 0.90, where:

$$LCL = \bar{x} - t_{.95}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.95}$ is the t statistic for a 95% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

(b) *Certification reports.* (1) The requirements of § 429.12 are applicable to commercial refrigerators, freezers, and refrigerator-freezers; and

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information:

(i) Self-contained commercial refrigerators with solid doors, commercial refrigerators with transparent doors, commercial freezers with solid doors, and commercial freezers with transparent doors: the maximum daily energy consumption in kilowatt hours per day (kWh/day) and the chilled or frozen compartment volume in cubic feet (ft^3).

(ii) Self-contained commercial refrigerator-freezers with solids doors: the maximum average daily energy consumption in kilowatt hours per day (kWh/day) and the adjusted volume in cubic feet (ft^3).

(iii) Remote condensing commercial refrigerators, freezers, and refrigerator-freezers, self-contained commercial refrigerators, freezers, and refrigerator-freezers without doors, commercial ice-cream freezers, and commercial refrigeration equipment with two or more compartments (*i.e.,* hybrid refrigerators, hybrid freezers, hybrid refrigerator-freezers, and non-hybrid refrigerator-freezers): On or after January 1, 2012, the maximum daily energy consumption in kilowatt hours per day (kWh/day), the total display area (TDA) in feet squared (ft^2) or the chilled volume in cubic feet (ft^3) as necessary to demonstrate compliance with the standards set forth in § 431.66, the rating temperature in degrees Fahrenheit (°F), the operating temperature range in degrees Fahrenheit (*e.g.,* ≥32°F, <32°F, and ≤ − 5°F), the equipment family designation as described in § 431.66, and the condensing unit configuration.

§ 429.43 Commercial heating, ventilating, air conditioning (HVAC) equipment.

(a) *Sampling plan for selection of units for testing.* (1) The requirements of § 429.11 are applicable to commercial HVAC equipment; and

(2) For each basic model of commercial heating, ventilating, air conditioning (HVAC) equipment, efficiency must be determined either by testing, in accordance with applicable test procedures in §§ 431.76, 431.86, 431.96, or 431.106 and the provisions of this section, or by application of an alternative efficiency determination method (AEDM) that meets the requirements of § 429.48 and the provisions of this section. For each basic model of commercial HVAC equipment, a sample of sufficient size shall be selected and tested to ensure that—

(i) Any represented value of energy consumption or other measure of energy usage of a basic model for which consumers would favor lower values shall be greater than or equal to the higher of:

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(B) The upper 95 percent confidence limit (UCL) of the true mean divided by 1.05, where:

$$UCL = \bar{x} + t_{.95}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.95}$ is the t statistic for a 95% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

and

(ii) Any represented value of energy efficiency or other measure of energy consumption of a basic model for which consumers would favor higher values shall be less than or equal to the lower of:

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(B) The lower 95 percent confidence limit (LCL) of the true mean divided by 0.95, where:

$$LCL = \bar{x} - t_{.95}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.95}$ is the t statistic for a 95% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

(b) *Certification reports.* (1) The requirements of § 429.12 are applicable to commercial HVAC equipment; and

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information:

(i) Commercial warm air furnaces: The thermal efficiency in percent (%) and the maximum rated input capacity in British thermal units per hour (Btu/h).

(ii) Commercial packaged boilers: The combustion efficiency in percent (%) and the maximum rated input capacity in British thermal unit per hour (Btu/h) for equipment manufactured before March 2, 2012. For equipment manufactured on or after March 2, 2012, either the combustion efficiency in percent (%), or the thermal efficiency in percent (%) as required in § 431.87 and the maximum rated input capacity in British thermal units per hour (Btu/h).

(iii) Commercial package air-conditioning and heating equipment (except small commercial package air conditioning and heating equipment that is air-cooled with a cooling capacity less than 65,000 Btu/h): the energy efficiency ratio (EER in British thermal units per Watt-hour (Btu/Wh)), the coefficient of performance (COP) as necessary to meet the standards set forth in § 431.97, the cooling capacity in British thermal unit per hour (Btu/h), and the type of heating used by the unit.

(iv) Small commercial package air conditioning and heating equipment that is air-cooled with a cooling capacity less than 65,000 Btu/h: The seasonal energy efficiency ratio (SEER in British thermal units per Watt-hour (Btu/Wh)), the heating seasonal performance factor (HSPF in British thermal units per Watt-hour(Btu/Wh)) as necessary to meet the standards set forth in § 431.97, and the cooling capacity in British thermal units per hour (Btu/h).

(v) Package terminal air conditioners: The energy efficiency ratio (EER in British thermal units per Watt-hour (Btu/Wh)), the cooling capacity in British thermal units per hour (Btu/h), and the wall sleeve dimensions in inches (in).

(vi) Package terminal heat pumps: The energy efficiency ratio (EER in British thermal units per Watt-hour (Btu/W-h)), the coefficient of performance (COP), the cooling capacity in British thermal units per hour (Btu/h), and the wall sleeve dimensions in inches (in).

(vii) Single package vertical air conditioner: The energy efficiency ratio (EER in British thermal units per Watt-hour (Btu/Wh)) and the cooling capacity in British thermal units per hour (Btu/h).

(viii) Single package vertical heat pumps: The energy efficiency ratio (EER in British thermal units per Watt-hour

(Btu/Wh)), the coefficient of performance (COP), and the cooling capacity in British thermal units per hour (Btu/h).

(c) Alternative methods for determining efficiency or energy use for commercial HVAC equipment can be found in § 429.70 of this subpart.

§ 429.44 Commercial water heating equipment.

(a) *Sampling plan for selection of units for testing.* (1) The requirements of § 429.11 are applicable to commercial WH equipment; and

(2) For each basic model of commercial water heating (WH) equipment, efficiency must be determined either by testing, in accordance with applicable test procedures in §§ 431.76, 431.86, 431.96, or 431.106 and the provisions of this section, or by application of an alternative efficiency determination method (AEDM) that meets the requirements of § 429.48 and the provisions of this section. For each basic model of commercial WH equipment, a sample of sufficient size shall be selected and tested to ensure that—

(i) Any represented value of maximum standby loss or other measure of energy usage of a basic model for which consumers would favor lower values shall be greater than or equal to the higher of:

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the maximum of the ith sample;

Or,

(B) The upper 95 percent confidence limit (UCL) of the true mean divided by 1.05, where:

$$UCL = \bar{x} + t_{.95}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.95}$ is the t statistic for a 95% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

and

(ii) Any represented value of minimum thermal efficiency or other measure of energy consumption of a basic model for which consumers would favor higher values shall be less than or equal to the lower of:

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the minimum of the ith sample;

Or,

(B) The lower 95 percent confidence limit (LCL) of the true mean divided by 0.95, where:

$$LCL = \bar{x} - t_{.95}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.95}$ is the t statistic for a 95% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

(b) *Certification reports.* (1) The requirements of § 429.12 are applicable to commercial WH equipment; and

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information:

(i) Commercial electric storage water heaters: The maximum standby loss in percent per hour (%/hr), and the measured storage volume in gallons (gal).

(ii) Commercial gas-fired and oil-fired storage water heaters: The minimum thermal efficiency in percent (%), the maximum standby loss in British thermal units per hour (Btu/h), the rated storage volume in gallons (gal), the measured storage volume in gallons (gal) and the nameplate input rate in British thermal units per hour (Btu/h).

(iii) Commercial gas-fired and oil-fired instantaneous water heaters greater than or equal to 10 gallons and gas-fired and oil-fired hot water supply boilers greater than or equal to 10 gallons: the minimum thermal efficiency in percent (%), the maximum standby loss in British thermal units per hour (Btu/h), the rated storage volume in gallons (gal), and the nameplate input rate in Btu/h.

(iv) Commercial gas-fired and oil-fired instantaneous water heaters less than 10 gallons and gas-fired and oil-fired hot water supply boilers less than 10 gallons: the minimum thermal efficiency in percent (%) and the storage volume in gallons (g).

(v) Commercial unfired hot water storage tanks: The minimum thermal insulation (*i.e.,* R-value) and the measured storage volume in gallons (gal).

(c) Alternative methods for determining efficiency or energy use for commercial WH equipment can be found in § 429.70 of this subpart.

§ 429.45 Automatic commercial ice makers.

(a) *Sampling plan for selection of units for testing.* (1) The requirements of § 429.11 are applicable to automatic commercial ice makers; and

(2) For each basic model of automatic commercial ice maker selected for testing, a sample of sufficient size shall be randomly selected and tested to ensure that—

(i) Any represented value of maximum energy use or other measure of energy consumption of a basic model for which consumers would favor lower values shall be greater than or equal to the higher of:

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(B) The upper 95 percent confidence limit (UCL) of the true mean divided by 1.10, where:

$$UCL = \bar{x} + t_{.95}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.95}$ is the t statistic for a 95% two-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

and

(ii) Any represented value of the energy efficiency or other measure of energy consumption of a basic model for which consumers would favor higher values shall be less than or equal to the lower of:

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(B) The lower 95 percent confidence limit (LCL) of the true mean divided by 0.90, where:

$$LCL = \bar{x} - t_{.95}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.95}$ is the t statistic for a 95% two-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

(b) *Certification reports.* (1) The requirements of § 429.12 are applicable to automatic commercial ice makers; and

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information: The maximum energy use in kilowatt hours per 100 pounds of ice (kWh/100 lbs ice), the maximum condenser water use in gallons per 100 pounds of ice (gal/100 lbs ice), the harvest rate in pounds of ice per 24 hours (lbs ice/24 hours), the type of cooling, and the equipment type.

§ 429.46 Commercial clothes washers.

(a) *Sampling plan for selection of units for testing.* (1) The requirements of § 429.11 are applicable to commercial clothes washers; and

(2) For each basic model of commercial clothes washers, a sample of sufficient size shall be randomly selected and tested to ensure that—

(i) Any represented value of energy or water consumption or other measure of energy or water consumption of a basic model for which consumers would favor lower values shall be greater than or equal to the higher of:

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(B) The upper 97½ percent confidence limit (UCL) of the true mean divided by 1.05, where:

$$UCL = \bar{x} + t_{.975}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.975}$ is the t statistic for a 97.5% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

and

(ii) Any represented value of the modified energy factor, water factor, or other measure of energy or water consumption of a basic model for which consumers would favor higher values shall be less than or equal to the lower of:

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(B) The lower 97½; percent confidence limit (LCL) of the true mean divided by 0.95, where:

$$LCL = \bar{x} - t_{.975}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.975}$ is the t statistic for a 97.5% one-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

(b) *Certification reports.* (1) The requirements of § 429.12 are applicable to commercial clothes washers; and

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information: The modified energy factor (MEF) in cubic feet per kilowatt hour per cycle (cu ft/kWh/cycle) and the water factor in gallons per cubic feet per cycle (gal/cu ft/cycle) for units manufactured on or after January 8, 2013.

§ 429.47 Distribution transformers.

(a) *Sampling plan for selection of units for testing.* (1) The requirements of § 429.11 are applicable to distribution transformers; and

(2) For each basic model of distribution transformer, efficiency must be determined either by testing, in accordance with § 431.193 and the provisions of this section, or by application of an AEDM that meets the requirements of § 429.70 and the provisions of this section.

(i) For each basic model selected for testing:

(A) If the manufacturer produces five or fewer units of a basic model over 6 months, each unit must be tested. A manufacturer may not use a basic model with a sample size of fewer than five units to substantiate an AEDM pursuant to § 429.70.

(B) If the manufacturer produces more than five units over 6 months, a sample of at least five units must be selected and tested.

(ii) Any represented value of efficiency of a basic model must satisfy the condition:

$$RE \leq \frac{100}{1 + \left(\frac{100 - \bar{x}}{\bar{x}}\right)\left(\frac{\sqrt{n}}{\sqrt{n} + .08}\right)}$$

where $\bar{x}$ is the average efficiency of the sample.

(b) *Certification reports.* (1) The requirements of § 429.12 are applicable to distribution transformers except that required information in paragraph (b) of this section may be reported by kVA grouping instead of by basic model and paragraph (b)(6) of this section does not apply; and

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information: For the most and least efficient basic models within each "kVA grouping" for which part 431 prescribes an efficiency standard, the kVA rating, the insulation type (*i.e.,* low-voltage dry-type, medium-voltage dry-type or liquid-immersed), the number of phases (*i.e.,* single-phase or three-phase), and the basic impulse insulation level (BIL) group rating (for medium-voltage dry-types).

(c) *Alternative methods for determining efficiency or energy use* for distribution transformers can be found in § 429.70 of this subpart.

(d) *Kilovolt ampere (kVA) grouping.* As used in this section, a "kVA grouping" is a group of basic models which all have the same kVA rating, have the same insulation type (*i.e.,* low-voltage dry-type, medium-voltage dry-type or liquid-immersed), have the same number of phases (*i.e.,* single-phase or three-phase), and, for medium-voltage dry-types, have the same BIL group rating (*i.e.,* 20–45 kV BIL, 46–95 kV BIL or greater than or equal to96 kV BIL).

§ 429.48 Illuminated exit signs.

(a) *Sampling plan for selection of units for testing.* (1) The requirements of § 429.11 are applicable to illuminated exit signs; and

(2) For each basic model of illuminated exit sign selected for testing, a sample of sufficient size shall be randomly selected and tested to ensure that—

(i) Any represented value of input power demand or other measure of energy consumption of a basic model for which consumers would favor lower

values shall be greater than or equal to the higher of:

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(B) The upper 95 percent confidence limit (UCL) of the true mean divided by 1.10, where

$$UCL = \bar{x} + t_{.95}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.95}$ is the t statistic for a 95% two-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

and

(ii) Any represented value of the energy efficiency or other measure of energy consumption of a basic model for which consumers would favor higher values shall be less than or equal to the lower of:

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(B) The lower 95 percent confidence limit (LCL) of the true mean divided by 0.90, where

Or,

$$LCL = \bar{x} - t_{.95}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.95}$ is the t statistic for a 95% two-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

(b) *Certification reports.* (1) The requirements of § 429.12 are applicable to illuminated exit signs; and

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information: The input power demand in watts (W) and the number of faces.

§ 429.49 Traffic signal modules and pedestrian modules.

(a) *Sampling plan for selection of units for testing.* (1) The requirements of § 429.11 are applicable to traffic signal modules and pedestrian modules; and

(2) For each basic model of traffic signal module or pedestrian module selected for testing, a sample of sufficient size shall be randomly selected and tested to ensure that—

(i) Any represented value of estimated maximum and nominal wattage or other measure of energy consumption of a basic model for which consumers would favor lower values shall be greater than or equal to the higher of:

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(B) The upper 95 percent confidence limit (UCL) of the true mean divided by 1.10, where:

$$UCL = \bar{x} + t_{.95}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.95}$ is the t statistic for a 95% two-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

and

(ii) Any represented value of the energy efficiency or other measure of energy consumption of a basic model for which consumers would favor higher values shall be less than or equal to the lower of:

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(B) The lower 95 percent confidence limit (LCL) of the true mean divided by 0.90, where:

$$LCL = \bar{x} - t_{.95}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.95}$ is the t statistic for a 95% two-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

(b) *Certification reports.* (1) The requirements of § 429.12 are applicable to traffic signal modules and pedestrian modules; and

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information: The maximum wattage at 74 degrees Celsius (°C) in watts (W), the nominal wattage at 25 degrees Celsius (°C) in watts (W), and the signal type.

§ 429.50 Commercial unit heaters.

(a) *Sampling plan for selection of units for testing.* (1) The requirements of § 429.11 are applicable to commercial unit heaters; and

(2) [Reserved]

(b) *Certification reports.* (1) The requirements of § 429.12 are applicable to commercial unit heaters; and

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information: The type of ignition system and a declaration that the manufacturer has incorporated the applicable design requirements.

§ 429.51 Commercial pre-rinse spray valves.

(a) *Sampling plan for selection of units for testing.* (1) The requirements of § 429.11 are applicable to commercial pre-rinse spray valves; and

(2) For each basic model of commercial pre-rinse spray valves selected for testing, a sample of sufficient size shall be randomly selected and tested to ensure that—

(i) Any represented value of water consumption or other measure of water consumption of a basic model for which consumers would favor lower values shall be greater than or equal to the higher of:

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(B) The upper 95 percent confidence limit (UCL) of the true mean divided by 1.10, where:

$$UCL = \bar{x} + t_{.95}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.95}$ is the t statistic for a 95% two-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

and

(ii) Any represented value of the water efficiency or other measure of water consumption of a basic model for which consumers would favor higher values shall be less than or equal to the lower of:

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(B) The lower 95 percent confidence limit (LCL) of the true mean divided by 0.90, where:

$$LCL = \bar{x} - t_{.95}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.95}$ is the t statistic for a 95% two-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

(b) *Certification reports.* (1) The requirements of § 429.12 are applicable to commercial pre-rinse spray valves; and

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information: The flow rate in gallons per minute (gpm).

§ 429.52 Refrigerated bottled or canned beverage vending machines.

(a) *Sampling plan for selection of units for testing.* (1) The requirements of § 429.11 are applicable to refrigerated bottled or canned beverage vending machine; and

(2) For each basic model of refrigerated bottled or canned beverage vending machine selected for testing, a sample of sufficient size shall be randomly selected and tested to ensure that—

(i) Any represented value of energy consumption or other measure of energy consumption of a basic model for which consumers would favor lower values shall be greater than or equal to the higher of:

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(B) The upper 95 percent confidence limit (UCL) of the true mean divided by 1.10, where:

$$UCL = \bar{x} + t_{.95}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.95}$ is the t statistic for a 95% two-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

and

(ii) Any represented value of the energy efficiency or other measure of energy consumption of a basic model for which consumers would favor higher values shall be less than or equal to the lower of:

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(B) The lower 95 percent confidence limit (LCL) of the true mean divided by 0.90, where:

$$LCL = \bar{x} - t_{.95}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.95}$ is the t statistic for a 95% two-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

(b) *Certification reports.* (1) The requirements of § 429.12 are applicable to refrigerated bottled or canned beverage vending machine; and

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information: For units manufactured on or after August 31, 2012, the maximum average daily energy consumption in kilowatt hours per day (kWh/day), the refrigerated volume (V) in cubic feet (ft^3) used to demonstrate compliance with standards set forth in § 431.296, the ambient temperature in degrees Fahrenheit (°F), and the ambient relative humidity in percent (%) during the test.

§ 429.53 Walk-in coolers and walk-in freezers.

(a) *Sampling plan for selection of units for testing.* (1) The requirements of § 429.11 are applicable to walk-in coolers and freezers; and

(2) [Reserved]

(b) *Certification reports.* (1) The requirements of § 429.12 are applicable to walk-in coolers and freezers, except that paragraph (b)(6) of this section does not apply; and

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information: The door type, the R-value of the wall, ceiling and door insulation (except for glazed portions of the doors or structural members), the R-value of the floor insulation (for freezers only), the evaporator fan motor type, the efficacy of the lighting including ballast losses, and a declaration that the manufacturer has incorporated the applicable design requirements. In addition, for those walk-in coolers and freezers with transparent reach-in doors and windows: the glass type of the doors and windows (*e.g.,* double-pane with heat reflective treatment, triple-pane glass with gas fill), and the power draw of the antisweat heater in watts.

§ 429.54 Metal halide lamp ballasts and fixtures.

(a) *Sampling plan for selection of units for testing.* (1) The requirements of § 429.11 are applicable to metal halide lamp ballasts; and

(2) For each basic model of metal halide lamp ballast selected for testing, a sample of sufficient size, not less than four, shall be selected at random and tested to ensure that:

(i) Any represented value of estimated energy efficiency calculated as the measured output power to the lamp divided by the measured input power to the ballast (P_{out}/P_{in}), of a basic model is less than or equal to the lower of:

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample;

Or,

(B) The lower 99-percent confidence limit (LCL) of the true mean divided by 0.99.

$$LCL = \bar{x} - t_{.99}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.99}$ is the t statistic for a 99% two-tailed confidence interval with n-1 degrees of freedom (from Appendix D).

(b) *Certification reports.* (1) The requirements of § 429.12 are applicable to metal halide lamp ballasts; and

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information: The minimum ballast efficiency in percent (%), the lamp wattage in watts (W), and the type of ballast (*e.g.,* pulse-start, magnetic probe-start, and non-pulse start electronic).

§ 429.70 Alternative methods for determining energy efficiency or energy use.

(a) *General.* A manufacturer of commercial HVAC and WH equipment, distribution transformers, and central air conditioners and heat pumps may not distribute any basic model of such equipment in commerce unless the manufacturer has determined the energy efficiency of the basic model, either from testing the basic model or from applying an alternative method for determining energy efficiency or energy use (AEDM) to the basic model, in accordance with the requirements of this section. In instances where a manufacturer has tested a basic model to validate the alternative method, the energy efficiency of that basic model must be determined and rated according to results from actual testing. In addition, a manufacturer may not knowingly use an AEDM to overrate the efficiency of a basic model. For each basic model of distribution transformer that has a configuration of windings that allows for more than one nominal rated voltage, the manufacturer must determine the basic model's efficiency either at the voltage at which the highest losses occur or at each voltage at which the transformer is rated to operate.

(b) *Testing.* Testing for each covered product or covered equipment must be done in accordance with the sampling plan provisions established in §§ 429.14 through 429.54 and the testing procedures in parts 430 and 431.

(c) *Alternative efficiency determination method (AEDM) for commercial HVAC and WH*

equipment—(1) *Criteria an AEDM must satisfy.* A manufacturer may not apply an AEDM to a basic model to determine its efficiency pursuant to this section unless:

(i) The AEDM is derived from a mathematical model that represents the energy consumption characteristics of the basic model;

(ii) The AEDM is based on engineering or statistical analysis, computer simulation or modeling, or other analytic evaluation of performance data; and

(iii) The manufacturer has substantiated the AEDM, in accordance with paragraph (c)(2) of this section.

(2) *Substantiation of an AEDM.* Before using an AEDM, the manufacturer must substantiate and validate the AEDM as follows:

(i) A manufacturer must first apply the AEDM to three or more basic models that have been tested in accordance with §§ 431.173(b) and 431.175(a). The predicted efficiency calculated for each such basic model from application of the AEDM must be within five percent of the efficiency determined from testing that basic model, and the predicted efficiencies calculated for the tested basic models must, on average, be within one percent of the efficiencies determined from testing such basic models; and

(ii) Using the AEDM, the manufacturer must calculate the efficiency of three or more of its basic models. They must be the manufacturer's highest-selling basic models to which the AEDM could apply and different models than those used to develop the AEDM (*i.e.,* different models than those used in paragraph (c)(2)(i) of this section); and

(iii) The manufacturer must test each of these basic models in accordance with § 431.173(b), and either § 431.174(b) or 431.175(a), whichever is applicable; and

(iv) The predicted efficiency calculated for each such basic model from application of the AEDM must be within five percent of the efficiency determined from testing that basic model, and the average of the predicted efficiencies calculated for the tested basic models must be within one percent of the average of the efficiencies determined from testing these basic models.

(3) *Subsequent verification of an AEDM.* If a manufacturer has used an AEDM pursuant to this section,

(i) The manufacturer must have available for inspection by the Department records showing:

(A) The method or methods used;

(B) The mathematical model, the engineering or statistical analysis, computer simulation or modeling, and other analytic evaluation of performance data on which the AEDM is based;

(C) Complete test data, product information, and related information that the manufacturer generated or acquired under paragraph (c)(1) through (2) of this section; and

(D) The calculations used to determine the average efficiency and energy consumption of each basic model to which an AEDM was applied.

(ii) If requested by the Department, the manufacturer must perform at least one of the following:

(A) Conduct simulations to predict the performance of particular basic models of the commercial HVAC and WH product;

(B) Provide analyses of previous simulations conducted by the manufacturer;

(C) Conduct sample testing of basic models selected by the Department; or

(D) Conduct a combination of these.

(d) *Alternative efficiency determination method for distribution transformers*—A manufacturer may use an AEDM to determine the efficiency of one or more of its untested basic models only if it determines the efficiency of at least five of its other basic models (selected in accordance with paragraph (d)(3) of this section) through actual testing.

(1) *Criteria an AEDM must satisfy.*

(i) The AEDM has been derived from a mathematical model that represents the electrical characteristics of that basic model;

(ii) The AEDM is based on engineering and statistical analysis, computer simulation or modeling, or other analytic evaluation of performance data; and

(iii) The manufacturer has substantiated the AEDM, in accordance with paragraph (d)(2) of this section, by applying it to, and testing, at least five other basic models of the same type, *i.e.,* low-voltage dry-type distribution transformers, medium-voltage dry-type distribution transformers, or liquid-immersed distribution transformers.

(2) *Substantiation of an AEDM.* Before using an AEDM, the manufacturer must substantiate the AEDM's accuracy and reliability as follows:

(i) Apply the AEDM to at least five of the manufacturer's basic models that have been selected for testing in accordance with paragraph (d)(3) of this section, and calculate the power loss for each of these basic models;

(ii) Test at least five units of each of these basic models in accordance with the applicable test procedure and § 429.42, and determine the power loss for each of these basic models;

(iii) The predicted total power loss for each of these basic models, calculated by applying the AEDM pursuant to paragraph (c)(2)(i) of this section, must be within plus or minus five percent of the mean total power loss determined from the testing of that basic model pursuant to paragraph (c)(2)(ii) of this section; and

(iv) Calculate for each of these basic models the percentage that its power loss calculated pursuant to paragraph (c)(2)(i) of this section is of its power loss determined from testing pursuant to paragraph (c)(2)(ii) of this section, compute the average of these percentages, and that calculated average power loss, expressed as a percentage of the average power loss determined from testing, must be no less than 97 percent and no greater than 103 percent.

(3) *Additional testing requirements.* (i) A manufacturer must select basic models for testing in accordance with the following criteria:

(A) Two of the basic models must be among the five basic models with the highest unit volumes of production by the manufacturer in the prior year, or during the prior 12-calendar-month period beginning in 2003,[1] whichever is later;

(B) No two basic models should have the same combination of power and voltage ratings; and

(C) At least one basic model should be single-phase and at least one should be three-phase.

(ii) In any instance where it is impossible for a manufacturer to select basic models for testing in accordance with all of these criteria, the criteria shall be given priority in the order in which they are listed. Within the limits imposed by the criteria, basic models shall be selected randomly.

(4) *Subsequent verification of an AEDM.* (i) Each manufacturer that has used an AEDM under this section shall have available for inspection by the Department of Energy records showing:

(A) The method or methods used;

(B) The mathematical model, the engineering or statistical analysis, computer simulation or modeling, and other analytic evaluation of performance data on which the AEDM is based;

(C) Complete test data, product information, and related information that the manufacturer has generated or acquired pursuant to paragraph (d)(4) of this section; and

[1] When identifying these five basic models, any basic model that does not comply with Federal energy conservation standards for distribution transformers that may be in effect shall be excluded from consideration.

(D) The calculations used to determine the efficiency and total power losses of each basic model to which the AEDM was applied.

(ii) If requested by the Department, the manufacturer must perform at least one of the following:

(A) Conduct simulations to predict the performance of particular basic models of distribution transformers specified by the Department;

(B) Provide analyses of previous simulations conducted by the manufacturer;

(C) Conduct sample testing of basic models selected by the Department; or

(D) Conduct a combination of these.

(e) *Alternate Rating Method (ARM) for residential split-system central air conditioners and heat pumps—*

(1) *Criteria an ARM must satisfy.* The basis of the ARM referred to in § 429.16(a)(2)(ii) for residential central air conditioners and heat pumps must be a representation of the test data and calculations of a mechanical vapor-compression refrigeration cycle. The major components in the refrigeration cycle must be modeled as "fits" to manufacturer performance data or by graphical or tabular performance data. Heat transfer characteristics of coils may be modeled as a function of face area, number of rows, fins per inch, refrigerant circuitry, air-flow rate and entering-air enthalpy. Additional performance-related characteristics to be considered may include type of expansion device, refrigerant flow rate through the expansion device, power of the indoor fan and cyclic-degradation coefficient. Ratings for untested combinations must be derived from the ratings of a combination tested in accordance with § 429.16(a)(2)(i). The seasonal energy efficiency ratio (SEER) and/or heating seasonal performance factor (HSPF) ratings for an untested combination must be set equal to or less than the lower of the SEER and/or HSPF calculated using the applicable DOE-approved alternative rating method (ARM). If the method includes an ARM/simulation adjustment factor(s), determine the value(s) of the factors(s) that yield the best match between the SEER/HSPF determined using the ARM versus the SEER/HSPF determined from testing in accordance with § 429.16(a)(2)(i). Thereafter, apply the ARM using the derived adjustment factor(s) only when determining the ratings for untested combinations having the same outdoor unit.

(2) *Approval of an ARM.* (i) Manufacturers who elect to use an ARM for determining measures of energy consumption under § 429.16(a)(2)(ii)(B)(1) and paragraph (e)(1) of this section must submit a request for DOE to review the ARM. Send the request to: U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Program (EE–2J), Attention: Alternative Rating Methods (ARM) for Certification and Compliance, Forrestal Building, 1000 Independence Avenue, SW., Washington, DC 20585–0121.

(ii) Each request to DOE for approval of an ARM must include:

(A) The name, mailing address, telephone number, and e-mail address of the official representing the manufacturer.

(B) Complete documentation of the alternative rating method to allow DOE to evaluate its technical adequacy. The documentation must include a description of the methodology, state any underlying assumptions, and explain any correlations. The documentation should address how the method accounts for the cyclic-degradation coefficient, the type of expansion device, and, if applicable, the indoor fan-off delay. The requestor must submit any computer programs—including spreadsheets—having less than 200 executable lines that implement the ARM. Longer computer programs must be identified and sufficiently explained, as specified above, but their inclusion in the initial submittal package is optional. Applicability or limitations of the ARM (*e.g.,* only covers single-speed units when operating in the cooling mode, covers units with rated capacities of 3 tons or less, not applicable to the manufacturer's product line of non-ducted systems) must be stated in the documentation.

(C) Complete test data from laboratory tests on four mixed (*i.e.,* non-highest-sales-volume combination) systems per each ARM.

(*1*) The four mixed systems must include four different indoor units and at least two different outdoor units. A particular model of outdoor unit may be tested with up to two of the four indoor units. The four systems must include two low-capacity mixed systems and two high-capacity mixed systems. The low-capacity mixed systems may have any capacity. The rated capacity of each high-capacity mixed system must be at least a factor of two higher than its counterpart low-capacity mixed system. The four mixed systems must meet the applicable energy conservation standard in § 430.32(c) in effect at the time of the rating.

(*2*) The four indoor units must come from at least two different coil families, with a maximum of two indoor units coming from the same coil family. Data for two indoor units from the same coil family, if submitted, must come from testing with one of the "low-capacity mixed systems" and one of the "high-capacity mixed systems." A mixed system indoor coil may come from the same coil family as the highest-sales-volume-combination indoor unit (*i.e.,* the "matched" indoor unit) for the particular outdoor unit. Data on mixed systems where the indoor unit is now obsolete will be accepted towards the ARM-validation submittal requirement if it is from the same coil family as other indoor units still in production.

(*3*) The first two sentences of paragraph (e)(2)(ii)(C)(*2*) of this section do not apply if the manufacturer offers indoor units from only one coil family. In this case only, all four indoor coils must be selected from this one coil family. If approved, the ARM will be specifically limited to applications for this one coil family.

(D) All product information on each mixed system indoor unit, each matched system indoor unit, and each outdoor unit needed to implement the proposed ARM. The calculated ratings for the four mixed systems, as determined using the proposed ARM, must be provided along with any other related information that will aid the verification process.

(E) If request for approval is for an updated ARM, manufacturers must identify modifications made to the ARM since the last submittal, including any ARM/simulation adjustment factor(s) added since the ARM was last approved by DOE.

(iii) Approval must be received from the Department to use the ARM before the ARM may be used for rating split-system central air conditioners and heat pumps. If a manufacturer has a DOE-approved ARM for products also distributed in commerce by a private labeler, the ARM may also be used by the private labeler for rating these products. Once an ARM is approved, DOE may contact a manufacturer to learn if their ARM has been modified in any way and to verify that the ARM is being applied as approved. DOE will give follow-up priority to individual combinations having questionably high ratings (*e.g.,* a coil-only system having a rating that exceeds the rating of a coil-only highest sales volume combination by more than 6 percent).

(3) *Changes to DOE's regulations requiring re-approval of an ARM.* Manufacturers who elect to use an ARM for determining measures of energy consumption under § 429.16(a)(2)(ii)(B)(*1*) and paragraph (e)(1) of this section must submit a

request for DOE to review the ARM when:

(i) DOE amends the energy conservation standards as specified in § 430.32 for residential central air conditioners and heat pumps. In this case, any testing and evidence required under paragraph (e)(2) of this section shall be developed with units that meet the amended energy conservation standards specified in § 430.32. Re-approval for the ARM must be obtained before the compliance date of amended energy conservation standards. (ii) DOE amends the test procedure for residential air conditioners and heat pumps as specified in Appendix M to Subpart B of Part 430. Re-approval for the ARM must be obtained before the compliance date of amended test procedures.

(4) Manufacturers that elect to use an ARM for determining measures of energy consumption under § 429.16(a)(2)(ii)(B)(*1*) and paragraph (e)(1) of this section must regularly either subject a sample of their units to independent testing, *e.g.,* through a voluntary certification program, in accordance with the applicable DOE test procedure, or have the representations reviewed by an independent state-registered professional engineer who is not an employee of the manufacturer. The manufacturer may continue to use the ARM only if the testing establishes, or the registered professional engineer certifies, that the results of the ARM accurately represent the energy consumption of the unit(s). Any proposed change to the alternative rating method must be approved by DOE prior to its use for rating.

(5) Manufacturers who choose to use computer simulation or engineering analysis for determining measures of energy consumption under § 429.16(a)(2)(ii)(B)(*1*) and paragraphs (e)(1) through (e)(4) of this section must permit representatives of the Department of Energy to inspect for verification purposes the simulation method(s) and computer program(s) used. This inspection may include conducting simulations to predict the performance of particular outdoor unit "indoor" unit combinations specified by DOE, analysis of previous simulations conducted by the manufacturer, or both.

§ 429.71 Maintenance of records.

(a) The manufacturer of any covered product or covered equipment shall establish, maintain, and retain the records of certification reports, of the underlying test data for all certification testing, and of any other testing conducted to satisfy the requirements of this part, part 430, and part 431. Any manufacturer who chooses to use an alternative method for determining energy efficiency or energy use in accordance with § 429.70 must retain the records required by that section, any other records of any testing performed to support the use of the alternative method, and any certifications required by that section, on file for review by DOE for two years following the discontinuance of all models or combinations whose ratings were based on the alternative method.

(b) Such records shall be organized and indexed in a fashion that makes them readily accessible for review by DOE upon request.

(c) The records shall be retained by the manufacturer for a period of two years from the date that the manufacturer or third party submitter has notified DOE that the model has been discontinued in commerce.

Appendix A to Subpart B of Part 429—Student's t-Distribution Values for Certification Testing

FIGURE 1—T-DISTRIBUTION VALUES FOR CERTIFICATION TESTING

[One-Sided]

Degrees of freedom (from Appendix D)	Confidence Interval			
	90%	95%	97.5%	99%
1	3.078	6.314	12.71	31.82
2	1.886	2.920	4.303	6.965
3	1.638	2.353	3.182	4.541
4	1.533	2.132	2.776	3.747
5	1.476	2.015	2.571	3.365
6	1.440	1.943	2.447	3.143
7	1.415	1.895	2.365	2.998
8	1.397	1.860	2.306	2.896
9	1.383	1.833	2.262	2.821
10	1.372	1.812	2.228	2.764
11	1.363	1.796	2.201	2.718
12	1.356	1.782	2.179	2.681
13	1.350	1.771	2.160	2.650
14	1.345	1.761	2.145	2.624
15	1.341	1.753	2.131	2.602
16	1.337	1.746	2.120	2.583
17	1.333	1.740	2.110	2.567
18	1.330	1.734	2.101	2.552
19	1.328	1.729	2.093	2.539
20	1.325	1.725	2.086	2.528

Subpart C—Enforcement

§ 429.100 Purpose and scope.

This subpart describes the enforcement authority of DOE to ensure compliance with the conservation standards and regulations.

§ 429.102 Prohibited acts subjecting persons to enforcement action.

(a) Each of the following actions is prohibited:

(1) Failure of a manufacturer to provide, maintain, permit access to, or copying of records required to be supplied under the Act and this part or failure to make reports or provide other information required to be supplied under the Act and this part, including but not limited to failure to properly certify covered products and covered equipment in accordance with § 429.12 and §§ 429.14 through 429.54;

(2) Failure to test any covered product or covered equipment subject to an

applicable energy conservation standard in conformance with the applicable test requirements prescribed in 10 CFR parts 430 or 431;

(3) Deliberate use of controls or features in a covered product or covered equipment to circumvent the requirements of a test procedure and produce test results that are unrepresentative of a product's energy or water consumption if measured pursuant to DOE's required test procedure;

(4) Failure of a manufacturer to supply at the manufacturer's expense a requested number of covered products or covered equipment to a designated test laboratory in accordance with a test notice issued by DOE;

(5) Failure of a manufacturer to permit a DOE representative to observe any testing required by the Act and this part and inspect the results of such testing;

(6) Distribution in commerce by a manufacturer or private labeler of any new covered product or covered equipment that is not in compliance with an applicable energy conservation standard prescribed under the Act;

(7) Distribution in commerce by a manufacturer or private labeler of a basic model of covered product or covered equipment after a notice of noncompliance determination has been issued to the manufacturer or private labeler;

(8) Knowing misrepresentation by a manufacturer or private labeler by certifying an energy use or efficiency rating of any covered product or covered equipment distributed in commerce in a manner that is not supported by test data;

(9) For any manufacturer, distributor, retailer, or private labeler to distribute in commerce an adapter that—

(i) Is designed to allow an incandescent lamp that does not have a medium screw base to be installed into a fixture or lamp holder with a medium screw base socket; and

(ii) Is capable of being operated at a voltage range at least partially within 110 and 130 volts; or

(10) For any manufacturer or private labeler to knowingly sell a product to a distributor, contractor, or dealer with knowledge that the entity routinely violates any regional standard applicable to the product.

(b) When DOE has reason to believe that a manufacturer or private labeler has undertaken a prohibited act listed in paragraph (a) of this section, DOE may:

(1) Issue a notice of noncompliance determination;

(2) Impose additional certification testing requirements;

(3) Seek injunctive relief;

(4) Assess a civil penalty for knowing violations; or

(5) Undertake any combination of the above.

§ 429.104 Assessment testing.

DOE may, at any time, test a basic model to assess whether the basic model is in compliance with the applicable energy conservation standard(s).

§ 429.106 Investigation of compliance.

(a) DOE may initiate an investigation that a basic model may not be compliant with an applicable conservation standard, certification requirement or other regulation at any time.

(b) DOE may, at any time, request any information relevant to determining compliance with any requirement under parts 429, 430 and 431, including the data underlying certification of a basic model. Such data may be used by DOE to make a determination of compliance or noncompliance with an applicable standard.

§ 429.110 Enforcement testing.

(a) *General provisions.* (1) If DOE has reason to believe that a basic model is not in compliance it may test for enforcement.

(2) DOE will select and test units pursuant to paragraphs (c) and (e) of this section.

(3) Testing will be conducted at a lab accredited to the International Organization for Standardization (ISO)/International Electrotechnical Commission (IEC), "General requirements for the competence of testing and calibration laboratories," ISO/IEC 17025:2005(E) (incorporated by reference; *see* § 429.4). If testing cannot be completed at an independent lab, DOE, at its discretion, may allow enforcement testing at a manufacturer's lab, so long as the lab is accredited to ISO/IEC 17025:2005(E) and DOE representatives witness the testing.

(b) *Test notice.* (1) To obtain units for enforcement testing to determine compliance with an applicable standard, DOE will issue a test notice addressed to the manufacturer in accordance with the following requirements:

(i) DOE will send the test notice to the manufacturer's certifying official or other company official.

(ii) The test notice will specify the basic model that will be selected for testing, the method of selecting the test sample, the maximum size of the sample and the size of the initial test sample, the dates at which testing is scheduled to be started and completed, and the facility at which testing will be conducted. The test notice may also provide for situations in which the selected basic model is unavailable for testing and may include alternative models or basic models.

(iii) DOE will state in the test notice that it will select the units of a basic model to be tested from the manufacturer, from one or more distributors, and/or from one or more retailers. If any unit is selected from a distributor or retailer, the manufacturer shall make arrangements with the distributor or retailer for compensation for or replacement of any such units.

(iv) DOE may require in the test notice that the manufacturer of a basic model ship or cause to be shipped from a retailer or distributor at its expense the requested number of units of a basic model specified in such test notice to the testing laboratory specified in the test notice. The manufacturer shall ship the specified initial test unit(s) of the basic model to the testing laboratory within 5 working days from the time units are selected.

(v) If DOE determines that the units identified are low-volume or built-to-order products, DOE will contact the manufacturer to develop a plan for enforcement testing in lieu of paragraphs (ii)–(iv) of this section.

(2) [Reserved]

(c) *Test unit selection.* (1) To select units for testing from a:

(i) Manufacturer's warehouse, distributor, or other facility affiliated with the manufacturer. DOE will select a batch sample at random in accordance with the provisions in paragraph (e) of this section and the conditions specified in the test notice. DOE will randomly select an initial test sample of units from the batch sample for testing in accordance with appendices A through C of this subpart. DOE will make a determination whether an alternative sample size will be used in accordance with the provisions in paragraph (e)(1)(iv) of this section.

(ii) Retailer or other facility not affiliated with the manufacturer. DOE will select an initial test sample of units at random that satisfies the minimum units necessary for testing in accordance with the provisions in appendices A through C of this subpart and the conditions specified in the test notice. Depending on the results of the testing, DOE may select additional units for testing from a retailer in accordance with appendices A through C of this subpart. If the full sample is not available from a retailer, DOE will make a determination whether an alternative sample size will be used in accordance with the provisions in paragraph (e)(1)(iv) of this section.

(2) Units tested in accordance with the applicable test procedure under this part by DOE or another Federal agency, pursuant to other provisions or programs, may count toward units in the test sample.

(3) The resulting test data shall constitute official test data for the basic model. Such test data will be used by DOE to make a determination of compliance or noncompliance if a sufficient number of tests have been conducted to satisfy the requirements of paragraph (e) of this section and appendices A through C of this subpart.

(d) *Test unit preparation.* (1) Prior to and during testing, a test unit selected for enforcement testing shall not be prepared, modified, or adjusted in any manner unless such preparation, modification, or adjustment is allowed by the applicable DOE test procedure. One test shall be conducted for each test unit in accordance with the applicable test procedures prescribed in parts 430 and 431.

(2) No quality control, testing or assembly procedures shall be performed on a test unit, or any parts and subassemblies thereof, that is not performed during the production and assembly of all other units included in the basic model.

(3) A test unit shall be considered defective if such unit is inoperative or is found to be in noncompliance due to failure of the unit to operate according to the manufacturer's design and operating instructions. Defective units, including those damaged due to shipping or handling, shall be reported immediately to DOE. DOE may authorize testing of an additional unit on a case-by-case basis.

(e) *Basic model compliance.* (1) DOE will evaluate whether a basic model complies with the applicable energy conservation standard(s) based on testing conducted in accordance with the applicable test procedures specified in parts 430 and 431, and with the following statistical sampling procedures:

(i) For products with applicable energy conservation standard(s) in § 430.32, and commercial pre-rinse spray valves, illuminated exit signs, traffic signal modules and pedestrian modules, commercial clothes washers, and metal halide lamp ballasts, DOE will use a sample size of not more than 21 units and follow the sampling plans in appendix A of this subpart (Sampling for Enforcement Testing of Covered Consumer Products and Certain High-Volume Commercial Equipment).

(ii) For automatic commercial ice makers; commercial refrigerators, freezers, and refrigerator-freezers; refrigerated bottled or canned vending machines; and commercial HVAC and WH equipment, DOE will use an initial sample size of not more than four units and follow the sampling plans in appendix B of this subpart (Sampling Plan for Enforcement Testing of Covered Equipment and Certain Low-Volume Covered Products). If fewer than four units of a basic model are available for testing when the manufacturer receives the notice, then:

(A) DOE will test the available unit(s); or

(B) If one or more other units of the basic model are expected to become available within 30 calendar days, DOE may instead, at its discretion, test either:

(*1*) The available unit(s) and one or more of the other units that subsequently become available (up to a maximum of four); or

(*2*) Up to four of the other units that subsequently become available.

(iii) For distribution transformers, DOE will use an initial sample size of not more than five units and follow the sampling plans in appendix C of this subpart (Sampling Plan for Enforcement Testing of Distribution Transformers). If fewer than five units of a basic model are available for testing when the manufacturer receives the test notice, then:

(A) DOE will test the available unit(s); or

(B) If one or more other units of the basic model are expected to become available within 30 calendar days, the Department may instead, at its discretion, test either:

(*1*) The available unit(s) and one or more of the other units that subsequently become available (up to a maximum of five); or

(*2*) Up to five of the other units that subsequently become available.

(iv) Notwithstanding paragraphs (e)(1)(i) through (e)(1)(iii) of this section, if testing of the available or subsequently available units of a basic model would be impractical, as for example when a basic model has unusual testing requirements or has limited production, DOE may in its discretion decide to base the determination of compliance on the testing of fewer than the otherwise required number of units.

(v) When DOE makes a determination in accordance with section (e)(1)(iv) to test less than the number of units specified in parts (d)(1)(i) through (d)(1)(iii) of this section, DOE will base the compliance determination on the results of such testing in accordance with appendix B of this subpart (Sampling Plan for Enforcement Testing of Covered Equipment and Certain Low-Volume Covered Products) using a sample size (n_1) equal to the number of units tested.

(vi) For the purposes of paragraphs (e)(1)(i) through (e)(1)(v) of this section, available units are those that are available for distribution in commerce within the United States.

§ 429.114 Notice of noncompliance and notice to cease distribution of a basic model.

(a) In the event that DOE determines a basic model is noncompliant with an applicable energy conservation standard, or if a manufacturer or private labeler determines a basic model to be in noncompliance, DOE may issue a notice of noncompliance determination to the manufacturer or private labeler. This notice of noncompliance determination will notify the manufacturer or private labeler of its obligation to:

(1) Immediately cease distribution in commerce of the basic model;

(2) Give immediate written notification of the determination of noncompliance to all persons to whom the manufacturer has distributed units of the basic model manufactured since the date of the last determination of compliance; and

(3) Provide DOE, within 30 calendar days of the request, records, reports and other documentation pertaining to the acquisition, ordering, storage, shipment, or sale of a basic model determined to be in noncompliance.

(b) In the event that DOE determines a manufacturer has failed to comply with an applicable certification requirement with respect to a particular basic model, DOE may issue a notice of noncompliance determination to the manufacturer or private labeler. This notice of noncompliance determination will notify the manufacturer or private labeler of its obligation to:

(1) Immediately cease distribution in commerce of the basic model;

(2) Immediately comply with the applicable certification requirement; and/or

(3) Provide DOE within 30 days of the request, records, reports and other documentation pertaining to the acquisition, ordering, storage, shipment, or sale of the basic model.

(c) If a manufacturer or private labeler fails to comply with the required actions in the notice of noncompliance determination as set forth in paragraphs (a) or (b) of this section, the General Counsel (or delegee) may seek, among other remedies, injunctive action and civil penalties, where appropriate.

(d) The manufacturer may modify a basic model determined to be

noncompliant with an applicable energy conservation standard in such manner as to make it comply with the applicable standard. Such modified basic model shall then be treated as a new basic model and must be certified in accordance with the provisions of this part; except that in addition to satisfying all requirements of this part, any models within the basic model must be assigned new model numbers and the manufacturer shall also maintain, and provide upon request to DOE, records that demonstrate that modifications have been made to all units of the new basic model prior to distribution in commerce.

§ 429.116 Additional certification testing requirements.

Pursuant to § 429.102(b)(2), if DOE determines that independent, third-party testing is necessary to ensure a manufacturer's compliance with the rules of this part, part 430, or part 431, a manufacturer must base its certification of a basic model under subpart B of this part on independent, third-party laboratory testing.

§ 429.118 Injunctions.

If DOE has reason to seek an injunction under the Act:

(a) DOE will notify the manufacturer, private labeler or any other person as required, of the prohibited act at issue and DOE's intent to seek a judicial order enjoining the prohibited act unless the manufacturer, private labeler or other person, delivers to DOE within 15 calendar days a corrective action and compliance plan, satisfactory to DOE, of the steps it will take to ensure that the prohibited act ceases. DOE will monitor the implementation of such plan.

(b) If the manufacturer, private labeler or any other person as required, fails to cease engaging in the prohibited act or fails to provide a satisfactory corrective action and compliance plan, DOE may seek an injunction.

§ 429.120 Maximum civil penalty.

Any person who knowingly violates any provision of § 429.102(a) of this part may be subject to assessment of a civil penalty of no more than $200 for each violation. As to § 429.102(a)(1) with respect to failure to certify, and as to § 429.102(a)(2), (5) through (9), each unit of a covered product or covered equipment distributed in violation of such paragraph shall constitute a separate violation. For violations of § 429.102(a)(1), (3), and (4), each day of noncompliance shall constitute a separate violation for each basic model at issue.

§ 429.122 Notice of proposed civil penalty.

(a) The General Counsel (or delegee) shall provide notice of any proposed civil penalty.

(b) The notice of proposed penalty shall:

(1) Include the amount of the proposed penalty;

(2) Include a statement of the material facts constituting the alleged violation; and

(3) Inform the person of the opportunity to elect in writing within 30 calendar days of receipt of the notice to have the procedures of § 429.128 (in lieu of those of § 429.126) apply with respect to the penalty.

§ 429.124 Election of procedures.

(a) In responding to a notice of proposed civil penalty, the respondent may request:

(1) An administrative hearing before an Administrative Law Judge (ALJ) under § 429.126 of this part; or

(2) Elect to have the procedures of § 429.128 apply.

(b) Any election to have the procedures of § 429.128 apply may not be revoked except with the consent of the General Counsel (or delegee).

(c) If the respondent fails to respond to a notice issued under § 429.120 or otherwise fails to indicate its election of procedures, DOE shall refer the civil penalty action to an ALJ for a hearing under § 429.126.

§ 429.126 Administrative law judge hearing and appeal.

(a) When elected pursuant to § 429.124, DOE shall refer a civil penalty action brought under § 429.122 of this part to an ALJ, who shall afford the respondent an opportunity for an agency hearing on the record.

(b) After consideration of all matters of record in the proceeding, the ALJ will issue a recommended decision, if appropriate, recommending a civil penalty. The decision will include a statement of the findings and conclusions, and the reasons therefore, on all material issues of fact, law, and discretion.

(c)(1) The General Counsel (or delegee) shall adopt, modify, or set aside the conclusions of law or discretion contained in the ALJ's recommended decision and shall set forth a final order assessing a civil penalty. The General Counsel (or delegee) shall include in the final order the ALJ's findings of fact and the reasons for the final agency actions.

(2) Any person against whom a penalty is assessed under this section may, within 60 calendar days after the date of the final order assessing such penalty, institute an action in the United States Court of Appeals for the appropriate judicial circuit for judicial review of such order in accordance with chapter 7 of title 5, United States Code. The court shall have jurisdiction to enter a judgment affirming, modifying, or setting aside in whole or in part, the final order, or the court may remand the proceeding to the Department for such further action as the court may direct.

§ 429.128 Immediate issuance of order assessing civil penalty.

(a) If the respondent elects to forgo an agency hearing pursuant to § 429.124, the General Counsel (or delegee) shall issue an order assessing the civil penalty proposed in the notice of proposed penalty under § 429.122, 30 calendar days after the respondent's receipt of the notice of proposed penalty.

(b) If within 60 calendar days of receiving the assessment order in paragraph (a) of this section the respondent does not pay the civil penalty amount, DOE shall institute an action in the appropriate United States District Court for an order affirming the assessment of the civil penalty. The court shall have authority to review de novo the law and the facts involved and shall have jurisdiction to enter a judgment enforcing, modifying, and enforcing as so modified, or setting aside in whole or in part, such assessment.

§ 429.130 Collection of civil penalties.

If any person fails to pay an assessment of a civil penalty after it has become a final and unappealable order under § 429.126 or after the appropriate District Court has entered final judgment in favor of the Department under § 429.128, the General Counsel (or delegee) shall institute an action to recover the amount of such penalty in any appropriate District Court of the United States. In such action, the validity and appropriateness of such final assessment order or judgment shall not be subject to review.

§ 429.132 Compromise and settlement.

(a) DOE may compromise, modify, or remit, with or without conditions, any civil penalty (with leave of court if necessary).

(b) In exercising its authority under paragraph (a) of this section, DOE may consider the nature and seriousness of the violation, the efforts of the respondent to remedy the violation in a timely manner, and other factors as justice may require.

(c) DOE's authority to compromise, modify or remit a civil penalty may be

exercised at any time prior to a final decision by the United States Court of Appeals if § 429.126 procedures are utilized, or prior to a final decision by the United States District Court, if § 429.128 procedures are utilized.

(d) Notwithstanding paragraph (a) of this section, DOE or the respondent may propose to settle the case. If a settlement is agreed to by the parties, the respondent is notified and the case is closed in accordance with the terms of the settlement.

APPENDIX A TO SUBPART C OF PART 429—SAMPLING PLAN FOR ENFORCEMENT TESTING OF COVERED CONSUMER PRODUCTS AND CERTAIN HIGH-VOLUME COMMERCIAL EQUIPMENT

(a) The first sample size (n_1) for enforcement testing must be four or more units, except as provided by § 429.57(e)(1)(i).

(b) Compute the mean of the measured energy performance (x_1) for all tests as follows:

$$x_1 = \frac{1}{n_1}\left(\sum_{i=1}^{n_1} x_i\right) \qquad [1]$$

where x_i is the measured energy or water efficiency or consumption from test i, and n_1 is the total number of tests.

(c) Compute the standard deviation (s_1) of the measured energy performance from the n_1 tests as follows:

$$s_1 = \sqrt{\frac{\sum_{i=1}^{n_1}(x_i - x_1)^2}{n_1 - 1}} \qquad [2]$$

(d) Compute the standard error (s_{x1}) of the measured energy performance from the n_1 tests as follows:

$$s_{x_1} = \frac{s_1}{\sqrt{n_1}} \qquad [3]$$

(e)(1) Compute the upper control limit (UCL_1) and lower control limit (LCL_1) for the mean of the first sample using the applicable DOE energy efficiency standard (EES) as the desired mean and a probability level of 95 percent (two-tailed test) as follows: LCL_1 EES — $ts_{x1\ x}$

$$LCL_1 = EES - ts_{x_1} \qquad [4] \text{ and } UCL_1 = EES + ts_{x_1} \qquad [5]$$

where t is the statistic based on a 95 percent two-tailed probability level with degrees of freedom ($n_1 - 1$).

(2) For an energy efficiency or water efficiency standard, compare the mean of the first sample (x_1) with the upper and lower control limits (UCL_1 and LCL_1) to determine one of the following:

(i) If the mean of the first sample is below the lower control limit, then the basic model is in noncompliance and testing is at an end. (Do not go on to any of the steps below.)

(ii) If the mean of the first sample is equal to or greater than the upper control limit, then the basic model is in compliance and testing is at an end. (Do not go on to any of the steps below.)

(iii) If the sample mean is equal to or greater than the lower control limit but less than the upper control limit, then no determination of compliance or noncompliance can be made and a second sample size is determined by Step (e)(3).

(3) For an energy efficiency or water efficiency standard, determine the second sample size (n_2) as follows:

$$n_2 = \left(\frac{ts_1}{0.05EES}\right)^2 - n_1 \qquad [6]$$

where s_1 and t have the values used in equations 2 and 4, respectively. The term "0.05 EES" is the difference between the applicable energy efficiency or water efficiency standard and 95 percent of the standard, where 95 percent of the standard is taken as the lower control limit. This procedure yields a sufficient combined sample size (n_1+n_2) to give an estimated 97.5

percent probability of obtaining a determination of compliance when the true mean efficiency is equal to the applicable standard. Given the solution value of n_2, determine one of the following:

(i) If the value of n_2 is less than or equal to zero and if the mean energy or water efficiency of the first sample (x_1) is either equal to or greater than the lower control limit (LCL_1) or equal to or greater than 95 percent of the applicable energy efficiency or water efficiency standard (EES), whichever is greater, *i.e.,* if $n_2 \leq 0$ and $x_1 \geq$ max (LCL_1, 0.95 EES), the basic model is in compliance and testing is at an end.

(ii) If the value of n_2 is less than or equal to zero and the mean energy efficiency of the first sample (x_1) is less than the lower control limit (LCL_1) or less than 95 percent of the applicable energy or water efficiency standard (EES), whichever is greater, *i.e.,* if $n_2 \leq 0$ and $x_1 \leq$ max (LCL_1, 0.95 EES), the basic model is not in compliance and testing is at an end.

(iii) If the value of n_2 is greater than zero, then, the value of the second sample size is determined to be the smallest integer equal to or greater than the solution value of n_2 for equation (6). If the value of n_2 so calculated is greater than $21 - n_1$, set n_2 equal to $21 - n_1$.

(4) Compute the combined mean (x_2) of the measured energy or water efficiency of the n_1 and n_2 units of the combined first and second samples as follows:

$$\bar{x}_2 = \frac{1}{n_1 + n_2}\left(\sum_{i=1}^{n_1+n_2} x_i\right) \qquad [7]$$

(5) Compute the standard error (S_{x2}) of the measured energy or water performance of the n_1 and n_2 units in the combined first and second samples as follows:

$$s_{x_2} = \frac{s^1}{\sqrt{n_1 + n_2}} \qquad [8]$$

Note: s_1 is the value obtained in Step (c).

(6) For an energy efficiency standard (EES), compute the lower control limit (LCL_2) for the mean of the combined first and second samples using the DOE EES as the desired mean and a one-tailed probability level of 97.5 percent (equivalent to the two-tailed probability level of 95 percent used in Step (e)(1)) as follows:

$$LCL_2 = EES - ts_{x_2} \qquad [9]$$

where the t-statistic has the value obtained in Step (e)(1) and s_{x2} is the value obtained in Step (e)(5).

(7) For an energy efficiency standard (EES), compare the combined sample mean (x_2) to the lower control limit (LCL_2) to determine one of the following:

(i) If the mean of the combined sample (x_2) is less than the lower control limit (LCL_2) or 95 percent of the applicable energy efficiency standard (EES), whichever is greater, *i.e.,* if $x_2 <$ max (LCL_2, 0.95 EES), the basic model is not compliant and testing is at an end.

(iii) If the mean of the combined sample (x_2) is equal to or greater than the lower control limit (LCL_2) or 95 percent of the applicable energy efficiency standard (EES), whichever is greater, *i.e.,* if $x_2 \geq$ max (LCL_2, 0.95 EES), the basic model is in compliance and testing is at an end.

(f)(1) Compute the upper control limit (UCL_1) and lower control limit (LCL_1) for the mean of the first sample using the applicable DOE energy consumption standard (ECS) as the desired mean and a probability level of 95 percent (two-tailed test) as follows:

$$LCL_1 = ECS - ts_{x_1} \quad \text{and} \quad UCL_1 = ECS + ts_{x_1} \qquad [10]$$

where t is the statistic based on a 95 percent two-tailed probability level with degrees of freedom ($n_1 - 1$).

(2) For an energy or water consumption standard, compare the mean of the first sample (x_1) with the upper and lower control limits (UCL_1 and LCL_1) to determine one of the following:

(i) If the mean of the first sample is above the upper control limit, then the basic model is in noncompliance and testing is at an end. (Do not go on to any of the steps below.)

(ii) If the mean of the first sample is equal to or less than the lower control limit, then the basic model is in compliance and testing is at an end. (Do not go on to any of the steps below.)

(iii) If the sample mean is equal to or less than the upper control limit but greater than the lower control limit, then no determination of compliance or noncompliance can be made and a second sample size is determined by Step (f)(3).

(3) For an Energy or Water Consumption Standard, determine the second sample size (n_2) as follows:

$$n_2 = \left(\frac{ts_1}{0.05ECS}\right)^2 - n_1 \qquad [11]$$

where $s_1$and t have the values used in equations (2) and (10), respectively. The term "0.05 ECS" is the difference between the applicable energy or water consumption standard and 105 percent of the standard, where 105 percent of the standard is taken as the upper control limit. This procedure yields a sufficient combined sample size ($n_1 + n_2$) to give an estimated 97.5 percent probability of obtaining a determination of compliance when the true mean consumption is equal to the applicable standard. Given the solution value of n_2, determine one of the following:

(i) If the value of n_2 is less than or equal to zero and if the mean energy or water consumption of the first sample (x_1) is either equal to or less than the upper control limit (UCL_1) or equal to or less than 105 percent of the applicable energy or water consumption standard (ECS), whichever is less, *i.e.,* if $n_2 \leq 0$ and $x_1 \leq$ min (UCL_1, 1.05 ECS), the basic model is in compliance and testing is at an end.

(ii) If the value of n_2 is less than or equal to zero and the mean energy or water consumption of the first sample (x_1) is greater than the upper control limit (UCL_1) or more than 105 percent of the applicable energy or water consumption standard (ECS), whichever is less, *i.e.,* if $n_2 \leq 0$ and $x_1 >$ min (UCL_1, 1.05 EPS), the basic model is not compliant and testing is at an end.

(iii) If the value of n_2 is greater than zero, then the value of the second sample size is determined to be the smallest integer equal to or greater than the solution value of n_2 for equation (11). If the value of n_2 so calculated is greater than $21 - n_1$, set n_2 equal to $21 - n_1$.

(4) Compute the combined mean (x_2) of the measured energy or water consumption of the n_1 and n_2 units of the combined first and second samples as follows:

$$\bar{x}_2 = \frac{1}{n_1 + n_2}\left(\sum_{i=1}^{n_1+n_2} x_i\right) \qquad [12]$$

(5) Compute the standard error (S_{x2}) of the measured energy or water consumption of the n_1 and n_2 units in the combined first and second samples as follows:

$$s_{x_2} = \frac{s^1}{\sqrt{n_1 + n_2}} \qquad [13]$$

Note: s_1 is the value obtained in Step (c).

(6) For an energy or water consumption standard (ECS), compute the upper control limit (UCL_2) for the mean of the combined first and second samples using the DOE ECS as the desired mean and a one-tailed probability level of 97.5 percent (equivalent to the two-tailed probability level of 95 percent used in Step (f)(1)) as follows:

$$UCL_1 = ECS + ts_{x_1} \qquad [14]$$

where the t-statistic has the value obtained in (f)(1).

(7) For an energy or water consumption standard (ECS), compare the combined sample mean (x_2) to the upper control limit (UCL_2) to determine one of the following:

(i) If the mean of the combined sample (x_2) is greater than the upper control limit (UCL_2) or 105 percent of the ECS whichever is less, *i.e.,* if $x_2 > \min(UCL_2, 1.05\ ECS)$, the basic model is not compliant and testing is at an end.

(ii) If the mean of the combined sample (x_2) is equal to or less than the upper control limit (UCL_2) or 105 percent of the applicable energy or water performance standard (ECS), whichever is less, *i.e.,* if $x_2 \leq \min(UCL_2, 1.05\ ECS)$, the basic model is in compliance and testing is at an end.

APPENDIX B TO SUBPART C OF PART 429—SAMPLING PLAN FOR ENFORCEMENT TESTING OF COVERED EQUIPMENT AND CERTAIN LOW-VOLUME COVERED PRODUCTS

The Department will determine compliance as follows:

(a) The first sample size (n_1) must be four or more units, except as provided by § 429.57(e)(1)(ii).

(b) Compute the mean of the measured energy performance (x_1) for all tests as follows:

$$x_1 = \frac{1}{n_1}\left(\sum_{i=1}^{n_1} x_i\right) \qquad [1]$$

where x_i is the measured energy efficiency or consumption from test i, and n_1 is the total number of tests.

(c) Compute the standard deviation (s_1) of the measured energy performance from the n_1 tests as follows:

$$s_1 = \sqrt{\frac{\sum_{i=1}^{n_1}(x_i - x_1)^2}{n_1 - 1}} \qquad [2]$$

(d) Compute the standard error (s_{x1}) of the measured energy performance from the n_1 tests as follows:

$$s_{x_1} = \frac{s_1}{\sqrt{n_1}} \qquad [3]$$

(e)(1) For an energy efficiency standard (EES), determine the appropriate lower control limit (LCL_1) according to:

$$LCL_1 = EES - ts_{x_1} \qquad [4a]$$

or

$$LCL_1 = 0.95EES, \qquad [4b]$$

And use whichever is greater. Where EES is the energy efficiency standard and t is a statistic based on a 97.5 percent, one-sided confidence limit and a sample size of n_1.

(2) For an energy consumption standard (ECS), determine the appropriate upper control limit (UCL_1) according to:

$$UCL_1 = ECS + ts_{x_1} \quad [5a]$$

or

$$UCL_1 = 1.05ECS, \quad [5b]$$

And use whichever is less, where ECS is the energy consumption standard and t is a statistic based on a 97.5 percent, one-sided confidence limit and a sample size of n_1.

(f)(1) Compare the sample mean to the control limit.

(i) The basic model is in compliance and testing is at an end if:

(A) For an energy or water efficiency standard, the sample mean is equal to or greater than the lower control limit, or

(B) For an energy or water consumption standard, the sample mean is equal to or less than the upper control limit.

APPENDIX C TO SUBPART C OF PART 429—SAMPLING PLAN FOR ENFORCEMENT TESTING OF DISTRIBUTION TRANSFORMERS

(a) When testing distribution transformers, the number of units in the sample (m_1) shall be in accordance with § 429.47(a) and DOE shall perform the following number of tests:

(1) If DOE tests four or more units, it will test each unit once;

(2) If DOE tests two or three units, it will test each unit twice; or

(3) If DOE tests one unit, it will test that unit four times.

(b) DOE shall determine compliance as follows:

(1) Compute the mean (X_1) of the measured energy performance of the n_1 tests in the first sample as follows:

$$X_1 = \frac{1}{n_1}\sum_{i=1}^{n_1} X_i \quad [1]$$

where X_i is the measured efficiency of test i.

(2) Compute the sample standard deviation (S_1) of the measured efficiency of the n_1 tests in the first sample as follows:

$$S_1 = \sqrt{\sum_{i=1}^{n_1}\frac{(X_i - X_1)^2}{n_1 - 1}} \quad [2]$$

(3) Compute the standard error ($SE(X_1)$) of the mean efficiency of the first sample as follows:

$$SE(X_1) = \frac{S_1}{\sqrt{n_1}} \quad [3]$$

(4) Compute the sample size discount ($SSD(m_1)$) as follows:

$$SSD(m_1) = \frac{100}{1 + \left(1 + \frac{0.08}{\sqrt{m_1}}\right)\left(\frac{100}{RE} - 1\right)} \quad [4]$$

where m_1 is the number of units in the sample, and RE is the applicable DOE efficiency when the test is to determine compliance with the applicable energy conservation standard, or is the labeled efficiency when the test is to determine compliance with the labeled efficiency value.

(5) Compute the lower control limit (LCL_1) for the mean of the first sample as follows:

$$LCL_1 = SSD(m_1) - tSE(\bar{X}_1) \quad [5]$$

Where t is statistic based on a 97.5 percent one-tailed t test with degrees of freedom (from Appendix D) $n_1 - 1$.

(6) Compare the mean of the first sample (X_1) with the lower control limit (LCL_1) to determine one of the following:

(i) If the mean of the first sample is below the lower control limit, then the basic model is not compliant and testing is at an end.

(ii) If the mean is equal to or greater than the lower control limit, no final determination of compliance or noncompliance can be made; proceed to Step (7).

(7) Determine the recommended sample size (n) as follows:

$$n = \left[\frac{tS_1(108 - 0.08RE)}{RE(8 - 0.08RE)}\right]^2 \quad [6]$$

Given the value of n, determine one of the following:

(i) If the value of n is less than or equal to n_1 and if the mean energy efficiency of the first sample (X_1) is equal to or greater than the lower control limit (LCL_1), the basic model is in compliance and testing is at an end.

(ii) If the value of n is greater than n_1, the basic model is not compliant. The size of a second sample n_2 is determined to be the smallest integer equal to or greater than the difference $n - n_1$. If the value of n_2 so calculated is greater than $21 - n_1$, set n_2 equal to $21 - n_1$.

(8) Compute the combined (X_2) mean of the measured energy performance of the n_1 and n_2 units of the combined first and second samples as follows:

$$\bar{X}_2 = \frac{1}{n_1 + n_2}\sum_{i=1}^{n_1+n_2} X_i \quad [7]$$

(9) Compute the standard error ($SE(X_2)$) of the mean full-load efficiency of the n_1 and n_2 units in the combined first and second samples as follows:

$$SE(\bar{X}_2) = \frac{S_1}{\sqrt{n_1 + n_2}} \quad [8]$$

(Note that S_1 is the value obtained above in (2).)

(10) Set the lower control limit (LCL_2) to,

$$LCL_2 = SSD(m_1) - tSE(\bar{X}_2) \quad [9]$$

where t has the value obtained in (5) and $SSD(m_1)$ is sample size discount determined in (4), and compare the combined sample mean (X_2) to the lower control limit (LCL_2) to determine one of the following:

(i) If the mean of the combined sample (X_2) is less than the lower control limit (LCL_2), the basic model is not compliant and testing is at an end.

(ii) If the mean of the combined sample (X_2) is equal to or greater than the lower control limit (LCL_2), the basic model is in compliance and testing is at an end.

PART 430—ENERGY CONSERVATION PROGRAM FOR CONSUMER PRODUCTS

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

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

■ 3. In § 430.2 revise the definitions of "Act," "basic model," and "Energy conservation standard" to read as follows:

§ 430.2 Definitions.

* * * * *

Act means the Energy Policy and Conservation Act of 1975, as amended, 42 U.S.C. 6291–6316.

* * * * *

Basic model means all units of a given type of covered product (or class thereof) manufactured by one manufacturer, having the same primary energy source, and which have essentially identical electrical, physical, and functional (or hydraulic) characteristics that affect energy consumption, energy efficiency, water consumption, or water efficiency; and

(1) With respect to general service fluorescent lamps, general service incandescent lamps, and incandescent reflector lamps: Lamps that have essentially identical light output and electrical characteristics—including lumens per watt (lm/W) and color rendering index (CRI).

(2) With respect to faucets and showerheads: Have the identical flow control mechanism attached to or installed within the fixture fittings, or the identical water-passage design features that use the same path of water in the highest flow mode.

* * * * *

Energy conservation standard means any standards meeting the definitions of that term in 42 U.S.C. 6291(6) and 42 U.S.C. 6311(18) as well as any other water conservation standards and design requirements found in this part or parts 430 or 431.

* * * * *

§ 430.24 [Removed and Reserved]

■ 4. Remove and reserve § 430.24.

■ 5. In § 430.27 revise paragraph (b)(1) to read as follows:

§ 430.27 Petitions for waiver and applications for interim waiver.

* * * * *

(b)(1) A Petition for Waiver shall be submitted either electronically to *AS_Waiver_Requests@ee.doe.gov* or by mail, in triplicate, to U.S. Department of Energy, Building Technologies Program, Test Procedure Waiver, 1000 Independence Avenue, SW., Mailstop EE–2J, Washington, DC 20585–0121. Each Petition for Waiver shall:

* * * * *

■ 6. In Appendix A to subpart B of part 430, revise paragraph 5.1 to read as follows:

Appendix A to Subpart B of Part 430—Uniform Test Method for Measuring the Energy Consumption of Electric Refrigerators and Electric Refrigerator-Freezers

* * * * *

5. Test Measurements

5.1 Temperature Measurements. Temperature measurements shall be made at the locations prescribed in Figures 5.1 and 5.2 of HRF–1–2008 (incorporated by reference; *see* § 430.3) and shall be accurate to within ± 0.5 °F (0.3 °C). No freezer temperature measurements need be taken in an all-refrigerator model.

If the interior arrangements of the cabinet do not conform with those shown in Figure 5.1 and 5.2 of HRF–1–2008, the product may be tested by relocating the temperature sensors from the locations specified in the figures to avoid interference with hardware or components within the cabinet, in which case the specific locations used for the temperature sensors shall be noted in the test data records maintained by the manufacturer in accordance with 10 CFR 429.14, and the certification report shall indicate that non-standard sensor locations were used.

* * * * *

■ 7. In Appendix A1 to subpart B of part 430, revise paragraph 5.1 to read as follows:

Appendix A1 to Subpart B of Part 430—Uniform Test Method for Measuring the Energy Consumption of Electric Refrigerators and Electric Refrigerator-Freezers

* * * * *

5. Test Measurements

5.1 Temperature Measurements. Temperature measurements shall be made at the locations prescribed in Figures 7.1 and 7.2 of HRF–1–1979 (incorporated by reference; *see* § 430.3) and shall be accurate to within ±0.5 °F (0.3 °C). No freezer temperature measurements need be taken in an all-refrigerator model.

If the interior arrangements of the cabinet do not conform with those shown in Figure 7.1 and 7.2 of HRF–1–1979, the product may be tested by relocating the temperature sensors from the locations specified in the figures to avoid interference with hardware or components within the cabinet, in which case the specific locations used for the temperature sensors shall be noted in the test data records maintained by the manufacturer in accordance with 10 CFR 429.14, and the certification report shall indicate that non-standard sensor locations were used.

* * * * *

■ 8. In Appendix B to subpart B of part 430, revise paragraph 5.1 to read as follows:

Appendix B to Subpart B of Part 430—Uniform Test Method for Measuring the Energy Consumption of Freezers

* * * * *

5. Test Measurements

5.1 Temperature Measurements. Temperature measurements shall be made at the locations prescribed in Figure 5–2 of HRF–1–2008 (incorporated by reference; *see* § 430.3) and shall be accurate to within ± 0.5 °F (0.3 °C).

If the interior arrangements of the cabinet do not conform with those shown in Figure 5.2 of HRF–1–2008, the product may be tested by relocating the temperature sensors from the locations specified in the figures to avoid interference with hardware or components within the cabinet, in which case the specific locations used for the temperature sensors shall be noted in the test data records maintained by the manufacturer in accordance with 10 CFR 429.14, and the certification report shall indicate that non-standard sensor locations were used.

* * * * *

■ 9. In Appendix B1 to subpart B of part 430, revise paragraph 5.1 to read as follows:

Appendix B1 to Subpart B of Part 430—Uniform Test Method for Measuring the Energy Consumption of Freezers

* * * * *

5. Test Measurements

5.1 Temperature Measurements. Temperature measurements shall be made at the locations prescribed in Figure 7.2 of HRF–1–1979 (incorporated by reference; *see* § 430.3) and shall be accurate to within ±0.5 °F (0.3 °C).

If the interior arrangements of the cabinet do not conform with those shown in Figure 7.2 of HRF–1–1979, the product may be tested by relocating the temperature sensors from the locations specified in the figures to avoid interference with hardware or components within the cabinet, in which case the specific locations used for the temperature sensors shall be noted in the test data records maintained by the manufacturer in accordance with 10 CFR 429.14, and the certification report shall indicate that non-standard sensor locations were used.

* * * * *

Subpart F [Removed and Reserved]

■ 10. Remove and reserve Subpart F, consisting of §§ 430.60 through 430.75, and Appendix A and B to subpart F of part 430.

PART 431—ENERGY EFFICIENCY PROGRAM FOR CERTAIN COMMERCIAL AND INDUSTRIAL EQUIPMENT

■ 11. The authority citation for part 431 continues to read as follows:

Authority: 42 U.S.C. 6291–6317.

■ 12. In § 431.2 add the definitions of "alternate efficiency determination method or AEDM," "Commercial HVAC &WH product," "Energy conservation standard," "Flue loss," "Industrial equipment," and "Private labeler," in alphabetical order to read as follows:

§ 431.2 Definitions.

* * * * *

Alternate efficiency determination method or AEDM means a method of calculating the efficiency of a commercial HVAC and WH product, in terms of the descriptor used in or under section 342(a) of the Act to state the energy conservation standard for that product.

Commercial HVAC & WH product means any small or large commercial package air-conditioning and heating equipment, packaged terminal air conditioner, packaged terminal heat pump, commercial packaged boiler, hot water supply boiler, commercial warm air furnace, instantaneous water heater, storage water heater, or unfired hot water storage tank.

* * * * *

Energy conservation standard means any standards meeting the definitions of that term in 42 U.S.C. 6291(6) and 42 U.S.C. 6311(18) as well as any other water conservation standards and design requirements found in this part or parts 430 or 431.

* * * * *

Flue loss means the sum of the sensible heat and latent heat above room temperature of the flue gases leaving the appliance.

* * * * *

Industrial equipment means an article of equipment, regardless of whether it is in fact distributed in commerce for industrial or commercial use, of a type which:

(1) In operation consumes, or is designed to consume energy;

(2) To any significant extent, is distributed in commerce for industrial or commercial use; and

(3) Is not a "covered product" as defined in Section 321(2) of EPCA, 42 U.S.C. 6291(2), other than a component of a covered product with respect to which there is in effect a determination under Section 341(c) of EPCA, 42 U.S.C. 6312(c).

* * * * *

Private labeler means, with respect to a commercial HVAC & WH product, an owner of a brand or trademark on the label of a product which bears a private label. A commercial HVAC & WH product bears a private label if:

(1) Such product (or its container) is labeled with the brand or trademark of a person other than a manufacturer of such product;

(2) The person with whose brand or trademark such product (or container) is labeled has authorized or caused such product to be so labeled; and

(3) The brand or trademark of a manufacturer of such product does not appear on such label.

* * * * *

■ 13. In § 431.62 revise the definition of "Basic model" to read as follows:

§ 431.62 Definitions concerning commercial refrigerators, freezers and refrigerator-freezers.

* * * * *

Basic model means all units of a given type of covered product (or class thereof) manufactured by one manufacturer, having the same primary energy source, and which have essentially identical electrical, physical, and functional (or hydraulic) characteristics that affect energy consumption, energy efficiency, water consumption, or water efficiency.

* * * * *

§ 431.65 [Removed]

■ 14. Section 431.65 is removed.

■ 15. In § 431.72 add in alphabetical order the definition of "Basic model" to read as follows:

§ 431.72 Definitions concerning commercial warm air furnaces.

* * * * *

Basic model means all units of a given type of covered product (or class thereof) manufactured by one manufacturer, having the same primary energy source, and which have essentially identical electrical, physical, and functional (or hydraulic) characteristics that affect energy consumption, energy efficiency, water consumption, or water efficiency.

* * * * *

■ 16. In § 431.82 add in alphabetical order the definition of "Basic model" to read as follows:

§ 431.82 Definitions commercial packaged boilers.

* * * * *

Basic model means all units of a given type of covered product (or class thereof) manufactured by one manufacturer, having the same primary energy source, and which have essentially identical electrical, physical, and functional (or hydraulic) characteristics that affect energy consumption, energy efficiency, water consumption, or water efficiency.

* * * * *

■ 17. In § 431.92 add in alphabetical order the definition of "Basic model" to read as follows:

§ 431.92 Definitions concerning commercial air conditioners and heat pumps.

* * * * *

Basic model means all units of a given type of covered product (or class thereof) manufactured by one manufacturer, having the same primary energy source, and which have essentially identical electrical, physical, and functional (or hydraulic) characteristics that affect energy consumption, energy efficiency, water consumption, or water efficiency.

* * * * *

■ 18. In § 431.102 add in alphabetical order the definition of "Basic model" to read as follows:

§ 431.102 Definitions concerning commercial water heaters, hot water supply boilers, and unfired hot water storage tanks.

* * * * *

Basic model means all units of a given type of covered product (or class thereof) manufactured by one manufacturer, having the same primary energy source, and which have essentially identical electrical, physical, and functional (or hydraulic) characteristics that affect energy consumption, energy efficiency, water consumption, or water efficiency.

* * * * *

■ 19. In § 431.132 revise the definition of "Basic model" to read as follows:

§ 431.132 Definitions concerning automatic commercial ice makers.

* * * * *

Basic model means all units of a given type of covered product (or class thereof) manufactured by one manufacturer, having the same primary energy source, and which have essentially identical electrical, physical, and functional (or hydraulic) characteristics that affect energy consumption, energy efficiency, water consumption, or water efficiency.

* * * * *

§ 431.135 [Removed]

■ 20. Section 431.135 is removed.

■ 21. In § 431.152 add the definition of "Basic model" in alphabetical order to read as follows:

§ 431.152 Definitions concerning commercial clothes washers.

Basic model means all units of a given type of covered product (or class thereof) manufactured by one manufacturer, having the same primary energy source, and which have essentially identical electrical, physical, and functional (or hydraulic) characteristics that affect energy consumption, energy efficiency, water consumption, or water efficiency.

* * * * *

Subpart J [Removed and Reserved]

■ 22. Remove and reserve Subpart J of Part 431, consisting of §§ 431.171 through 431.176.

§§ 431.197 and 431.198 [Removed]

■ 23. Sections 431.197 and 431.198 are removed.

Appendix B to Subpart K of Part 431 [Removed]

■ 23a. Appendix B to subpart K of part 431 is removed.

■ 24. In § 431.202 revise the definition of "Basic model" to read as follows:

§ 431.202 Definitions concerning illuminated exit signs.

Basic model means all units of a given type of covered product (or class thereof) manufactured by one manufacturer, having the same primary energy source, and which have essentially identical electrical, physical, and functional (or hydraulic) characteristics that affect energy consumption, energy efficiency, water consumption, or water efficiency.

* * * * *

§ 431.205 [Removed]

■ 25. Section 431.205 is removed.

■ 26. In § 431.222 revise the definition of "Basic model" to read as follows:

§ 431.222 Definitions concerning traffic signal modules and pedestrian modules.

Basic model means all units of a given type of covered product (or class thereof) manufactured by one manufacturer, having the same primary energy source, and which have essentially identical electrical, physical, and functional (or hydraulic) characteristics that affect energy consumption, energy efficiency, water consumption, or water efficiency.

* * * * *

§ 431.225 [Removed]

■ 27. Section 431.225 is removed.

■ 28. In § 431.242 add in alphabetical order the definition of "Basic model" to read as follows:

§ 431.242 Definitions concerning unit heaters.

* * * * *

Basic model means all units of a given type of covered product (or class thereof) manufactured by one manufacturer, having the same primary energy source, and which have essentially identical electrical, physical, and functional (or hydraulic) characteristics that affect energy consumption, energy efficiency, water consumption, or water efficiency.

* * * * *

■ 29. In § 431.262 revise the definition of "Basic model" to read as follows:

§ 431.262 Definitions concerning commercial prerinse spray valves.

Basic model means all units of a given type of covered product (or class thereof) manufactured by one manufacturer, having the same primary energy source, and which have essentially identical electrical, physical, and functional (or hydraulic) characteristics that affect energy consumption, energy efficiency, water consumption, or water efficiency.

* * * * *

§ 431.265 [Removed]

■ 30. Section 431.265 is removed.

■ 31. In § 431.292 revise the definition of "Basic model" to read as follows:

§ 431.292 Definitions concerning refrigerated bottled or canned beverage vending machines.

Basic model means all units of a given type of covered product (or class thereof) manufactured by one manufacturer, having the same primary energy source, and which have essentially identical electrical, physical, and functional (or hydraulic) characteristics that affect energy consumption, energy efficiency, water consumption, or water efficiency.

* * * * *

§ 431.295 [Removed]

■ 32. Section 431.295 is removed.

■ 33. In § 431.302 add the definitions of "Basic model" and "manufacturer of walk-in cooler or walk-in freezer" in alphabetical order to read as follows:

§ 431.302 Definitions concerning walk-in coolers and walk-in freezers.

Basic model means all components of a given type of walk-in cooler or walk-in freezer (or class thereof) manufactured by one manufacturer, having the same primary energy source, and which have essentially identical electrical, physical, and functional (or hydraulic) characteristics that affect energy consumption, energy efficiency, water consumption, or water efficiency; and

(1) With respect to panels, which do not have any differing features or characteristics that affect U-factor.

(2) [Reserved]

Manufacturer of a walk-in cooler or walk-in freezer means any person who:

(1) Manufactures a component of a walk-in cooler or walk-in freezer that affects energy consumption, including, but not limited to, refrigeration, doors, lights, windows, or walls; or

(2) Manufactures or assembles the complete walk-in cooler or walk-in freezer.

* * * * *

■ 34. In § 431.322 revise the definition of "Basic model" to read as follows:

§ 431.322 Definitions concerning metal halide lamp ballasts and fixtures.

* * * * *

Basic model means all units of a given type of covered product (or class thereof) manufactured by one manufacturer, having the same primary energy source, and which have essentially identical electrical, physical, and functional (or hydraulic) characteristics that affect energy consumption, energy efficiency, water consumption, or water efficiency, and are rated to operate a given lamp type and wattage.

* * * * *

§ 431.325 [Removed]

■ 35. Section 431.325 is removed.

§§ 431.327 through 431.329 [Removed]

■ 36. Remove §§ 431.327 through 431.329.

Appendices A Through C to Subpart S of Part 431 [Removed]

■ 37. Remove Appendices A through C to subpart S of part 431.

Subpart T [Removed]

■ 38. Remove Subpart T to part 431, consisting of §§ 431.370 through 431.373, and Appendices A through D to subpart T of part 431 is removed.

■ 39. Revise the heading to Subpart U to read as follows:

Subpart U—Enforcement for Electric Motors

* * * * *

■ 40. Revise § 431.381 to read as follows:

§ 431.381 Purpose and scope for electric motors.

This subpart describes violations of EPCA's energy conservation requirements, specific procedures we will follow in pursuing alleged non-compliance of an electric motor with an applicable energy conservation standard or labeling requirement, and general procedures for enforcement action, largely drawn directly from EPCA, that apply to electric motors.

■ 41. In § 431.401 revise paragraph (b)(1) introductory text to read as follows:

§ 431.401 Petitions for waiver, and applications for interim waiver, of test procedure.

* * * * *

(b) *Submission, content, and publication.* (1) A Petition for Waiver shall be submitted either electronically to *AS_Waiver_Requests@ee.doe.gov* or by mail, in triplicate, to U.S. Department of Energy, Building Technologies Program, Test Procedure Waiver, 1000 Independence Avenue, SW., Mailstop EE–2J, Washington, DC 20585–0121. Each Petition for Waiver shall:

* * * * *

■ 42. Revise § 431.403 to read as follows:

§ 431.403 Maintenance of records for electric motors.

(a) Manufacturers of electric motors must establish, maintain and retain records of the following:

(1) The test data for all testing conducted pursuant to this part;

(2) The development, substantiation, application, and subsequent verification of any AEDM used under this part;

(3) Any written certification received from a certification program, including a certificate or conformity, relied on under the provisions of this part;

(b) You must organize such records and index them so that they are readily accessible for review. The records must include the supporting test data associated with tests performed on any test units to satisfy the requirements of this part (except tests performed by DOE).

(c) For each basic model, you must retain all such records for a period of two years from the date that production of all units of that basic model has ceased. You must retain records in a form allowing ready access to DOE, upon request.

■ 43. Revise § 431.404 to read as follows:

§ 431.404 Imported electric motors.

(a) Under sections 331 and 345 of the Act, any person importing an electric motor into the United States must comply with the provisions of the Act and of this part, and is subject to the remedies of this part.

(b) Any electric motor offered for importation in violation of the Act and of this part will be refused admission into the customs territory of the United States under rules issued by the Secretary of the Treasury, except that the Secretary of the Treasury may, by such rules, authorize the importation of such electric motor upon such terms and conditions (including the furnishing of a bond) as may appear to the Secretary of the Treasury appropriate to ensure that such electric motor will not violate the Act and this part, or will be exported or abandoned to the United States.

■ 44. Revise § 431.405 to read as follows:

§ 431.405 Exported electric motors.

Under Sections 330 and 345 of the Act, this Part does not apply to any electric motor if:

(a) Such electric motor is manufactured, sold, or held for sale for export from the United States (or such electric motor was imported for export), unless such electric motor is, in fact, distributed in commerce for use in the United States; and,

(b) Such electric motor, when distributed in commerce, or any container in which it is enclosed when so distributed, bears a stamp or label stating that such electric motor is intended for export.

■ 45. Revise § 431.406 to read as follows:

§ 431.406 Subpoena—Electric Motors.

Pursuant to sections 329(a) and 345 of the Act, for purposes of carrying out this part, the Secretary or the Secretary's designee, may sign and issue subpoenas for the attendance and testimony of witnesses and the production of relevant books, records, papers, and other documents, and administer the oaths. Witnesses summoned under the provisions of this section shall be paid the same fees and mileage as are paid to witnesses in the courts of the United States. In case of contumacy by, or refusal to obey a subpoena served upon any persons subject to this part, the Secretary may seek an order from the District Court of the United States for any District in which such person is found or resides or transacts business requiring such person to appear and give testimony, or to appear and produce documents. Failure to obey such order is punishable by such court as a contempt thereof.

■ 46. Revise § 431.407 to read as follows:

§ 431.407 Confidentiality—Electric Motors.

Pursuant to the provisions of 10 CFR 1004.11, any manufacturer or private labeler of electric motors submitting information or data which they believe to be confidential and exempt from public disclosure should submit one complete copy, and 15 copies from which the information believed to be confidential has been deleted. In accordance with the procedures established at 10 CFR 1004.11, the Department shall make its own determination with regard to any claim that information submitted be exempt from public disclosure.

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