

## Department of Energy

## § 429.14

(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.

(i) *Compliance dates.* For any product subject to an applicable energy conservation standard for which the compliance date has not yet occurred, a certification report must be submitted not later than the compliance date for the applicable energy conservation standard. The covered products enumerated below are subject to the stated compliance dates for initial certification:

(1) Commercial warm air furnaces, packaged terminal air conditioners, and packaged terminal heat pumps, July 1, 2014;

(2) Commercial gas-fired and oil-fired instantaneous water heaters less than 10 gallons and commercial gas-fired and oil-fired hot water supply boilers less than 10 gallons, October 1, 2014;

(3) All other types of covered commercial water heaters except those specified in paragraph (i)(2) of this section, commercial packaged boilers with input capacities less than or equal to 2.5 million Btu/h, and self-contained commercial refrigeration equipment with solid or transparent doors, December 31, 2014;

(4) Variable refrigerant flow air conditioners and heat pumps, March 31, 2015;

(5) Small, large, or very large air-cooled, water-cooled, evaporatively-cooled, and water-source commercial air conditioning and heating equipment, single package vertical units, computer room air conditioners, commercial packaged boilers with input capacities greater than 2.5 million Btu/h, and all other types of commercial refrigeration equipment except those

specified in paragraph (i)(3) of this section, July 1, 2015.

[76 FR 12451, Mar. 7, 2011; 76 FR 24762, May 2, 2011, as amended at 76 FR 38292, June 30, 2011; 76 FR 65365, Oct. 21, 2011; 77 FR 76830, Dec. 31, 2012; 78 FR 79593, Dec. 31, 2013; 79 FR 25500, May 5, 2014; 79 FR 38208, July 3, 2014; 81 FR 4430, Jan. 26, 2016; 81 FR 37049, June 8, 2016; 81 FR 43425, July 1, 2016; 81 FR 46789, July 18, 2016; 81 FR 59415, Aug. 29, 2016; 81 FR 95798, Dec. 28, 2016; 85 FR 1446, 1591, Jan. 10, 2020]

### § 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 Consumer 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  $i^{\text{th}}$  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 A).

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  $i^{\text{th}}$  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 A).

(3) The value of total refrigerated volume of a basic model reported in accordance with paragraph (b)(2) of this section shall be the mean of the total refrigerated volumes measured for each tested unit of the basic model or the

total refrigerated volume of the basic model as calculated in accordance with § 429.72(c). The value of adjusted total volume of a basic model reported in accordance with paragraph (b)(2) of this

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section shall be the mean of the adjusted total volumes measured for each tested unit of the basic model or the adjusted total volume of the basic model as calculated in accordance with § 429.72(c).

(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); the total refrigerated volume in cubic feet (ft<sup>3</sup>); and the adjusted total volume in cubic feet (ft<sup>3</sup>).

(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<sub>L</sub> and CT<sub>M</sub> (For an example, see section 5.2.1.3 in appendix A to subpart B of 10 CFR 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%, 25%, 35%, 45%, 55%, 65%, 75%, 85%, and 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 10 CFR part 430.

(c) *Rounding requirements for representative values, including certified and rated values.* (1) The represented value of annual energy use must be rounded to the nearest kilowatt hour per year.

(2) The represented value of total refrigerated volume must be rounded to the nearest 0.1 cubic foot.

(3) The represented value of adjusted total volume must be rounded to the nearest 0.1 cubic foot.

(d) *Product category determination.* Each basic model shall be certified ac-

ording to the appropriate product category as defined in § 430.2 based on compartment volumes and compartment temperatures.

(1) Compartment volumes used to determine product category shall be the mean of the measured compartment volumes for each tested unit of the basic model according to the provisions in section 5.3 of appendix A of subpart B of part 430 of this chapter for refrigerators and refrigerator-freezers and section 5.3 of appendix B of subpart B of part 430 of this chapter for freezers, or the compartment volumes of the basic model as calculated in accordance with § 429.72(d); and

(2) Compartment temperatures used to determine product category shall be the mean of the measured compartment temperatures at the coldest setting for each tested unit of the basic model according to the provisions section 5.1 of appendix A of subpart B of part 430 of this chapter for refrigerators and refrigerator-freezers and section 5.1 of appendix B of subpart B of part 430 of this chapter for freezers.

[76 FR 12451, Mar. 7, 2011; 76 FR 24762, May 2, 2011, as amended at 79 FR 22348, Apr. 21, 2014; 81 FR 46789, July 18, 2016]

EFFECTIVE DATE NOTE: At 81 FR 46789, July 18, 2016, § 429.14(c)(2) and (c)(3) were stayed indefinitely.

### § 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: