

§ 431.106

10 CFR Ch. II (1–1–24 Edition)

(1) ANSI Z21.10.3–2015 * CSA 4.3–2015 (“ANSI Z21.10.3–2015”), “Gas-fired water heaters, volume III, storage water heaters with input ratings above 75,000 Btu per hour, circulating and instantaneous,” approved by ANSI on October 5, 2015, IBR approved for appendices A, B, and C to this subpart, as follows:

- (i) Annex E (normative) Efficiency test procedures—E.1—Method of test for measuring thermal efficiency, paragraph c—Vent requirements; and
- (ii) Annex E (normative) Efficiency test procedures—E.1—Method of test for measuring thermal efficiency, paragraph f—Installation of temperature sensing means.

(2) [Reserved]

[77 FR 28996, May 16, 2012, as amended at 81 FR 79322, Nov. 10, 2016; 88 FR 69821, Oct. 6, 2023]

§ 431.106 Uniform test method for the measurement of energy efficiency of commercial water heating equipment.

(a) *Scope.* This section contains test procedures for measuring, pursuant to EPCA, the energy efficiency of commercial water heating equipment.

(b) *Testing and calculations.* Determine the energy efficiency of commercial water heating equipment by conducting the applicable test procedure(s):

(1) *Residential-duty commercial water heaters.* Test in accordance with appendix E to subpart B of part 430 of this chapter.

(2) *Commercial water heating equipment other than residential-duty commercial water heaters.* Test in accordance with

the appropriate test procedures in appendices to subpart G of this part.

(i) *Gas-fired and oil-fired storage water heaters and storage-type instantaneous water heaters.* Test according to appendix A to subpart G of this part.

(ii) *Electric storage water heaters and storage-type instantaneous water heaters.* Test according to appendix B to subpart G of this part.

(iii) *Gas-fired and oil-fired instantaneous water heaters and hot water supply boilers (other than storage-type instantaneous water heaters).* Test according to appendix C to subpart G of this part.

(iv) *Electric instantaneous water heaters (other than storage-type instantaneous water heaters).* Test according to appendix D to subpart G of this part.

(v) *Commercial heat pump water heaters.* Test according to appendix E to subpart G of this part.

[81 FR 79322, Nov. 10, 2016]

ENERGY CONSERVATION STANDARDS

§ 431.110 Energy conservation standards and their effective dates.

(a) Each commercial storage water heater, instantaneous water heater, and hot water supply boiler (excluding residential-duty commercial water heaters) must meet the applicable energy conservation standard level(s) as specified in the table to this paragraph. Any packaged boiler that provides service water that meets the definition of “commercial packaged boiler” in subpart E of this part, but does not meet the definition of “hot water supply boiler” in subpart G of this part, must meet the requirements that apply to it under subpart E of this part.

TABLE 1 TO § 431.110(a)—COMMERCIAL WATER HEATER ENERGY CONSERVATION STANDARDS

Equipment	Size	Energy conservation standards ^a			
		Minimum thermal efficiency (equipment manufactured on and after October 9, 2015) (%)	Minimum thermal efficiency (equipment manufactured on and after October 6, 2026) (%)	Maximum standby loss (equipment manufactured on and after October 29, 2003) ^b	Maximum standby loss (equipment manufactured on and after October 6, 2026) ^b
Electric storage water heaters.	All	N/A	N/A	0.30 + 27/V _m (%/h).	0.30 + 27/V _m (%/h)