

§ 431.86

10 CFR Ch. II (1–1–21 Edition)

§ 431.86 Uniform test method for the measurement of energy efficiency of commercial packaged boilers.

(a) *Scope.* This section provides test procedures, pursuant to the Energy Policy and Conservation Act (EPCA), as amended, which must be followed for measuring the combustion efficiency

and/or thermal efficiency of a gas- or oil-fired commercial packaged boiler.

(b) *Testing and Calculations.* Determine the thermal efficiency or combustion efficiency of commercial packaged boilers by conducting the appropriate test procedure(s) indicated in Table 1 of this section.

TABLE 1—TEST REQUIREMENTS FOR COMMERCIAL PACKAGED BOILER EQUIPMENT CLASSES

Equipment category	Subcategory	Certified rated input Btu/h	Standards efficiency metric (§ 431.87)	Test procedure (corresponding to standards efficiency metric required by § 431.87)
Hot Water	Gas-fired	≥300,000 and ≤2,500,000 ...	Thermal Efficiency	Appendix A, Section 2.
Hot Water	Gas-fired	>2,500,000	Combustion Efficiency	Appendix A, Section 3.
Hot Water	Oil-fired	≥300,000 and ≤2,500,000 ...	Thermal Efficiency	Appendix A, Section 2.
Hot Water	Oil-fired	>2,500,000	Combustion Efficiency	Appendix A, Section 3.
Steam	Gas-fired (all*)	≥300,000 and ≤2,500,000 ...	Thermal Efficiency	Appendix A, Section 2.
Steam	Gas-fired (all*)	>2,500,000 and ≤5,000,000 ...	Thermal Efficiency	Appendix A, Section 2.
		>5,000,000	Thermal Efficiency	Appendix A, Section 2. OR Appendix A, Section 3 with Section 2.4.3.2.
Steam	Oil-fired	≥300,000 and ≤2,500,000 ...	Thermal Efficiency	Appendix A, Section 2.
Steam	Oil-fired	>2,500,000 and ≤5,000,000 ...	Thermal Efficiency	Appendix A, Section 2.
		>5,000,000	Thermal Efficiency	Appendix A, Section 2. OR Appendix A, Section 3. with Section 2.4.3.2.

* Equipment classes for commercial packaged boilers as of July 22, 2009 (74 FR 36355) distinguish between gas-fired natural draft and all other gas-fired (except natural draft).

(c) *Field Tests.* The field test provisions of appendix A may be used only to test a unit of commercial packaged boiler with rated input greater than 5,000,000 Btu/h.

[81 FR 89305, Dec. 9, 2016]

ENERGY EFFICIENCY STANDARDS

§ 431.87 Energy and water conservation standards and their effective dates.

(a) Each commercial packaged boiler listed in Table 1 to § 431.87 and manufactured on or after March 2, 2012 and prior to January 10, 2023, must meet the applicable energy conservation standard levels as follows:

TABLE 1 TO § 431.87—COMMERCIAL PACKAGED BOILER ENERGY CONSERVATIONS STANDARDS

Equipment	Subcategory	Size category (input)	Efficiency level—effective date: March 2, 2012 *
Hot Water Commercial Packaged Boilers.	Gas-fired	≥300,000 Btu/h and ≤2,500,000 Btu/h.	80.0% E _T .
Hot Water Commercial Packaged Boilers.	Gas-fired	>2,500,000 Btu/h	82.0% E _C .
Hot Water Commercial Packaged Boilers.	Oil-fired	≥300,000 Btu/h and ≤2,500,000 Btu/h.	82.0% E _T .
Hot Water Commercial Packaged Boilers.	Oil-fired	>2,500,000 Btu/h	84.0% E _C .
Steam Commercial Packaged Boilers.	Gas-fired—all, except natural draft.	≥300,000 Btu/h and ≤2,500,000 Btu/h.	79.0% E _T .
Steam Commercial Packaged Boilers.	Gas-fired—all, except natural draft.	>2,500,000 Btu/h	79.0% E _T .