

for construction began before January 3, 2007. The performance standards are designed to achieve the maximum practicable improvements in energy efficiency and increases in the use of non-depletable sources of energy. This rule is based upon the ASHRAE/IESNA Standard 90.1–1989 and addenda b, c, d, e, f, g, and i. (This document is available from the American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc., 1791 Tullie Circle NE, Atlanta, GA.) It is not incorporated by reference in this document, but is mentioned for informational purposes only.

[71 FR 70283, Dec. 4, 2006]

§ 434.101 Scope.

101.1 This part provides design requirements for the building envelope, electrical distribution systems and equipment for electric power, lighting, heating, ventilating, air conditioning, service water heating and energy management. It applies to new Federal multi-family high rise residential buildings and new Federal commercial buildings, for which design for construction began before January 3, 2007.

101.1.1 (a) Except as provided by section 101.2, the provisions of this part apply if an agency is constructing:

(1) A building that has never been in service;

(2) An addition for which design for construction began before January 3, 2007, that adds new space with provision for a heating or cooling system, or both, or for a hot water system; or

(3) A substantial renovation of a building for which design for construction began before January 3, 2007, involving replacement of a heating or cooling system, or both, or hot water system, that is either in service or has been in service.

101.2 The provisions of this part do not apply to:

101.2.1 Buildings, or portions thereof separated from the remainder of the building, that have a peak energy usage for space conditioning, service water heating, and lighting of less than 3.5 Btu/(h•ft² of gross floor area.

101.2.2 Buildings of less than 100 square feet of gross floor area.

101.2.3 Heating, cooling, ventilating, or service hot water requirements for

those spaces where processes occur for purposes other than occupant comfort and sanitation, and which impose thermal loads in excess of 5% of the loads that would otherwise be required for occupant comfort and sanitation without the process;

101.2.4 Envelope requirements for those spaces where heating or cooling requirements are excepted in subsection 101.2.3 of this section.

101.2.5 Lighting for tasks not listed or encompassed by areas or activities listed in Tables 401.3.2b, 401.3.2c and 401.3.2d.

101.2.6 Buildings that are composed entirely of spaces listed in subsections 101.2.4 and 101.2.5.

101.2.7 Individual components of a building under renovation, if the building components are not in the scope of a renovation as defined by the agency.

[65 FR 60012, Oct. 6, 2000, as amended at 71 FR 70283, Dec. 4, 2006; 72 FR 72571, Dec. 21, 2007]

§ 434.102 Compliance.

102.1 A covered building must be designed and constructed consistent with the provisions of subpart D of this part.

102.2 Buildings designed and constructed to meet the alternative requirements of subparts E or F of this part shall be deemed to satisfy the requirements of this part. Such designs shall be certified by a registered architect or engineer stating that the estimated energy cost or energy use for the building as designed is no greater than the energy cost or energy use of a prototype building or reference building as determined pursuant to subparts E or F of this part.

§ 434.103 Referenced standards (RS).

103.1 The standards, technical handbooks, papers and regulations listed in § 434.701, shall be considered part of this part to the prescribed extent of such reference. Where differences occur between the provisions of this part and referenced standards, the provisions of this part shall apply. Whenever a reference is made in this part to an RS standard it refers to the standards listed in § 434.701.

§ 434.105 Materials and equipment.

105.1 Building materials and equipment shall be identified in designs in a

manner that will allow for a determination of their compliance with the applicable provisions of this part.

Subpart B—Definitions

§ 434.201 Definitions.

For the purposes of this part, the following terms, phrases, and words shall be defined as provided:

Accessible (as applied to equipment): admitting close approach; not guarded by locked doors, elevations, or other effective means. (See also “readily accessible”)

Annual Fuel Utilization Efficiency (AFUE): the ratio of annual output energy to annual input energy that includes any non-heating season pilot input loss.

Area of the space (A): the horizontal lighted area of a given space measured from the inside of the perimeter walls or partitions, at the height of the working surface.

Automatic: self-acting, operating by its own mechanism when actuated by some impersonal influence, such as a change in current strength, pressure, temperature, or mechanical configuration. (See also “manual”)

Automatic flue damper device: an electrically operated device, in the flue outlet or in the inlet of or upstream of the draft hood of an individual automatically operated gas-fired appliance, which is designed to automatically open the flue outlet during appliance operation and to automatically close off the flue outlet when the appliance is in a standby condition.

Automatic vent damper device: a device intended for installation in the venting system, in the outlet of or downstream of the appliance draft hood, of an individual automatically operated gas-fired appliance, which is designed to automatically open the venting system when the appliance is in operation and to automatically close off the venting system when the appliance is in a standby or shutdown condition.

(1) *Electrically operated*: an automatic vent damper device that employs electrical energy to control the device.

(2) *Thermally actuated*: an automatic vent damper device dependent for operation exclusively upon the direct con-

version of the thermal energy of the vent gases into mechanical energy.

Boiler capacity: the rated heat output of the boiler, in Btu/h, at the design inlet and outlet conditions and rated fuel or energy input.

Building: means any structure to be constructed which includes provision for a heating or cooling system, or both, or for a hot water system.

Building code: means a legal instrument which is in effect in a State or unit of general purpose local government, the provisions of which must be adhered to if a building is to be considered to be in conformance with law and suitable for occupancy and use.

Building envelope: the elements of a building that enclose conditioned spaces through which thermal energy may be transferred to or from the exterior or to or from unconditioned spaces.

Check metering: measurement instrumentation for the supplementary monitoring of energy consumption (electric, gas, oil, etc) to isolate the various categories of energy use to permit conservation and control, in addition to the revenue metering furnished by the utility.

Coefficient of performance (COP)—Cooling: the ratio of the rate of heat removal to the rate of energy input, in consistent units, for a complete cooling system or factory assembled equipment, as tested under a nationally recognized standard or designated operating conditions.

Coefficient of performance (COP) heat pump—Heating: the ratio of the rate of heat delivered to the rate of energy input, in consistent units, for a complete heat pump system under designated operating conditions.

Commercial building: a building other than a residential building, including any building developed for industrial or public purposes. Including but not limited to occupancies for assembly, business, education, institutions, food sales and service, merchants, and storage.

Conditioned floor area: the area of the conditioned space measured at floor level from the interior surfaces of the walls.

Conditioned space: a cooled space, heated space, or indirectly conditioned space.