

[6450-01-P]

DEPARTMENT OF ENERGY

10 CFR Parts 433

[Docket No.: EERE-2011-BT-STD-0055]

RIN 1904-AC60

Energy Efficiency Design Standards for New Federal Commercial and Multi-Family High-Rise Residential Buildings (Final Rule)

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

ACTION: Finding of No Significant Impact.

SUMMARY: Section 305(a) of the Energy Conservation and Production Act (ECPA) requires that DOE establish by rule Federal building energy efficiency standards for all Federal commercial and multi-family high-rise residential buildings. EPCA requires the U.S. Department of Energy (DOE) to establish by rule revised Federal building energy efficiency performance standards. (42 U.S.C. 6834(a)(3)(A)) The Final Rule updates the current rule for commercial and multi-family high-rise residential buildings, 10 CFR Part 433 “Energy Efficiency Standards for New Federal Commercial and High-Rise Multi-Family Residential Buildings,” to replace ASHRAE Standard 90.1-2007 with the more stringent ASHRAE Standard 90.1-2010. Based on the Environmental Assessment (EA) for the Final Rule (DOE/EA-1918), DOE has determined that revising the Federal

building energy efficiency standards to ASHRAE 90.1-2010 would not be a major Federal action significantly affecting the quality of the human environment within the meaning of the National Environmental Policy Act (NEPA). Therefore, an environmental impact statement (EIS) is not required, and DOE is issuing this Finding of No Significant Impact (FONSI).

ADDRESSES: Public Availability: Copies of the EA and the Final Rule are available on the EERE website at http://www1.eere.energy.gov/femp/regulations/notices_rules.html.

FOR FURTHER INFORMATION CONTACT: Mr. Mohammed Khan, U.S.

Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Program, Mailstop EE-2J, 1000 Independence Avenue, SW, Washington, DC 20585, (202) 586-7892, e-mail: Mohammed.Khan@ee.doe.gov, or Ms. Ami Grace-Tardy Esq., U.S. Department of Energy, Office of the General Counsel, Forrestal Building, GC-71, 1000 Independence Avenue, SW, Washington, DC 20585, (202) 586-5709, e-mail: Ami.Grace-Tardy@hq.doe.gov.

For further information regarding the DOE NEPA process contact: Carol M. Borgstrom, Director, Office of NEPA Policy and Compliance (GC-20), U.S. Department of Energy, 1000 Independence Avenue, SW., Washington, DC 20585, (202) 586-4600, or leave a message at (800) 472-2756. Additional information regarding DOE NEPA activities and access to many DOE NEPA documents are available on the Internet through the DOE NEPA website at: <http://www.gc.energy.gov/nepa/>.

SUPPLEMENTARY INFORMATION:

Description of the Proposed Action: The U.S. Department of Energy (DOE) is publishing the Final Rule to implement provisions in the Energy Conservation and Production Act (ECPA) that require DOE to update the baseline Federal energy efficiency performance standards for the construction of new Federal buildings, including commercial and multi-family high-rise residential buildings. The Final Rule updates the baseline Federal commercial standard to the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Standard 90.1-2010.

Environmental Impacts:

Building Habitability (Indoor Air) Impacts

The Final Rule does not change mechanical ventilation rates or affect sources of indoor air pollutants from the no-action alternative. For commercial and high-rise multi-family residential buildings, ASHRAE Standard 90.1-2010 does not require specific mechanical ventilation rates, and the Final Rule does not require any changes in mechanical ventilation rates. The rule contains essentially the same requirements for sealing of the building envelope that have been in all previous versions of ASHRAE Standard 90.1. Accordingly, indoor air pollutant levels are not expected to increase under the Final Rule.

Outdoor Air Environmental Impacts

For all new Federal buildings, the Final Rule is expected to reduce outdoor emissions primarily by reducing consumption of fossil fuels. Table 1 summarizes the

estimated emissions impacts for each of the alternatives for the Federal building energy efficiency standard.¹ It shows cumulative changes in emissions for CO₂, NO_x, and Hg for a thirty year period for each of the alternatives. Cumulative CO₂, NO_x, and Hg emissions are reduced compared to the reference case for all alternatives. For comparison, the cumulative power sector emissions in the 2011 AEO reference case, over the period 2014 through 2043, are 74,571 Million metric tons for CO₂, 61,625 thousand metric tons for NO_x, and 917 metric tons for Hg.

Table 1 Air Emissions Reductions in Metric Tons (30-Years of Commercial Construction)

Baseline (no-action alternative)	Final Rule- Code or Standard	Carbon Dioxide	Nitrogen Oxides	Mercury
ASHRAE 90.1-2007	90.1-2010	89,888,200	91,851	1.2795
	10% below 90.1-2010	126,091,100	128,857	1.7950
	20% below 90.1-2010	162,293,900	165,864	2.3105
	30% below 90.1-2010	198,496,800	202,870	2.8260
	40% below 90.1-2010	234,699,600	239,876	3.3415
	50% below 90.1-2010	270,902,400	276,882	3.8570
30% Below ASHRAE 90.1-2007	30% below 90.1-2010	62,921,800	64,296	0.8957
	40% below 90.1-2010	99,124,600	101,302	1.4112
	50% below 90.1-2010	135,327,500	138,308	1.9267

¹ The alternatives and the methodology used to determine these emissions impacts may be found in the Environmental Assessment (EA) (DOE/EA-1918) entitled, “Environmental Assessment for Final Rule, 10 CFR part 433, ‘Energy Efficiency Standards for New Federal Commercial and Multi-Family High-Rise Residential Buildings,’ Baseline Standards Update”.

Other Impacts

The Final Rule would not result in any adverse health effects and therefore does not have the potential for disproportionately high and adverse health effects on minorities and low income population. The Final Rule is not expected to impact any sensitive environmental resources such as wetlands, endangered species, or historic or archaeological sites. There are no aspects of the Final Rule that would be affected by a terrorist act.

Determination

Based upon the EA, DOE has determined that revising the Federal building energy efficiency standards for commercial and multi-family high-rise residential buildings to ASHRAE 90.1-2010 would not be a major Federal action significantly affecting the quality of the human environment within the meaning of NEPA. Therefore, an environmental impact statement EIS is not required, and DOE is issuing this FONSI.

Issued in Washington, DC, on June 28, 2013.



David T. Danielson
Acting Assistant Secretary
Energy Efficiency and Renewable Energy