

FINDING OF NO SIGNIFICANT IMPACT

[6450-01-P]

DEPARTMENT OF ENERGY

10 CFR Part 435

[Docket No.: EERE-2016-BT-STD-0003]

RIN 1904-AD56

DOE/EA 2020

Energy Efficiency Standards for New Federal Low-Rise Residential Buildings' Baseline Standards Update (Final Rule)

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

ACTION: Finding of No Significant Impact

SUMMARY:

The Department of Energy (DOE) proposes to update the regulations governing energy efficiency standards for Federal low-rise residential buildings.

DOE is required to establish the building energy efficiency standards for all new Federal buildings pursuant to section 305 of the Energy Conservation and Production Act (ECPA), as amended. (42 U.S.C. 6834 (a)(1)). In turn, each Federal agency and the Architect of the Capitol must adopt procedures to ensure that new Federal buildings will meet or exceed these Federal building energy efficiency standards. (42 U.S.C. 6835(a)). The head of a Federal agency is barred from expending Federal funds for the construction of a new Federal building unless the building meets or exceeds the applicable baseline Federal building energy standards established under section 305. (42 U.S.C. 6835(b)).

The standards established under section 305(a)(1) of ECPA must contain energy efficiency measures that are technologically feasible and economically justified, and that meet the energy saving and renewable energy specifications in the applicable voluntary consensus energy code specified in section 305(a)(2) (42 U.S.C. 6834(a)(1) - (3)). Under section 305 of ECPA, the referenced voluntary consensus code for low-rise residential buildings is the International Code Council (ICC) International Energy Conservation Code (IECC), hereafter "IECC". DOE

codified the referenced code as the baseline Federal building standard in its existing energy efficiency standards found at 10 CFR Part 435.

DOE must also establish, by rule, revised Federal building energy efficiency performance standards for new Federal buildings that require such buildings be designed to achieve energy consumption levels that are at least 30 percent below the levels established in the referenced code (baseline Federal building standard), if life-cycle cost-effective. (42 U.S.C. 6834(a)(3)(A)(i)(I)).

The current 10 CFR 435 baseline standard is based on the 2009 version of the IECC. ICC has updated the IECC from the version currently referenced in DOE's regulations at 10 CFR Part 435. Under section 305 of ECPA, not later than one year after the date of approval of each subsequent revision of the ASHRAE Standard or the International Energy Conservation Code (IECC), DOE must determine whether to amend the baseline Federal building standards with the revised voluntary standard based on the cost-effectiveness of the revised voluntary standard. (42 U.S.C. 6834(a)(3)(B)). It is this requirement that the Proposed Action seeks to address.

DOE determined that the 2015 IECC would achieve greater energy efficiency than the 2012 version of the IECC (See 80 FR 33250; June 11, 2015). DOE also determined that the 2012 version of the IECC would achieve greater energy efficiency than the prior version (the 2009 version that is currently referenced in 10 CFR Part 435) (See 77 FR 29322; May 17, 2012). Both of these determinations were subject to notice and comment. DOE also determined that the 2015 IECC would be cost effective if applied to new Federal low-rise residential buildings. Since the amended 2015 IECC meets the statutory criteria for DOE to incorporate it as the baseline standard for low-rise residential Federal buildings, DOE is issuing a Final Rule (the Proposed Action) to update the baseline standard to the 2015 IECC.¹ Specifically, the Proposed Action would require that Federal agencies design new Federal low-rise residential buildings to (i) meet the 2015 IECC; and (ii) if life-cycle cost-effective, achieve energy consumption levels that are at least 30 percent below the levels of the 2015 IECC.

Based on the Environmental Assessment (EA) for the Final Rule (DOE/EA-2020), DOE has determined that revising the Federal building energy efficiency standards to the 2015 IECC 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

¹ Although ICC published two versions of the IECC since 10 CFR Part 435 was last updated, the 2012 IECC and the 2015 IECC, the Proposed Action would update 10 CFR Part 435 to the 2015 IECC directly, without requiring agencies to comply with the 2012 IECC.

environmental impact statement (EIS) is not required, and DOE is issuing this Finding of No Significant Impact (FONSI).

SUPPLEMENTARY INFORMATION

Description of the Proposed Action²

Under the Proposed Action, DOE would revise the Federal energy efficiency baseline standard for all new Federal low-rise residential buildings. The Proposed Action would update 10 CFR 435, “Energy Efficiency Standards for New Federal Low-Rise Residential Buildings,” by replacing the 2009 IECC with the more energy efficient 2015 IECC as the baseline standard.³ The Proposed Action would require that Federal agencies design new Federal low-rise residential buildings to (i) meet the 2015 IECC; and (ii) if life-cycle cost-effective, achieve energy consumption levels that are at least 30 percent below the levels of the 2015 IECC. The Proposed Action would make no other changes to the Federal building energy efficiency standards.

Context of Potential Impacts (40 CFR 1508.27(a))

DOE must evaluate the significance of an action in several different contexts, such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the Proposed Action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant.

It is impossible from a programmatic level to adequately determine which specific areas of the Nation would be most affected under the Proposed Action. Each construction of new Federal low-rise residential housing would be considered a site-specific action, and a site specific environmental review would be undertaken for each to determine impacts at the local level.

The Proposed Action by itself would not cause any significant adverse effects nationally, regionally, or at the statewide level.

Intensity of Potential Impacts (40 CFR 1508.27(b))

The following discussion is organized around the ten (10) intensity factors, described in the Council for Environmental Quality NEPA Implementing Regulations, 40 CFR 1508.27, which refer to severity of impact. The intensity of effects considered is in terms of the following:

² The term "Proposed Action" is a term of art under the National Environment Policy Act. The term refers to: a proposal that contains sufficient details about the intended actions to be taken, or that will result, to allow alternatives to be developed and its environmental impacts meaningfully analyzed. (40 CFR 1508.23).

³ Although the ICC published the 2012 version of the IECC, DOE did not update 10 CFR 435 to incorporate that standard.

1. ***Impacts that may be both beneficial and adverse:*** The EA analyzed the impacts of the Proposed Action that may be beneficial and adverse. The beneficial impacts of the Proposed Action will be to reduce outdoor emissions primarily by reducing consumption of fossil fuels. The EA evaluated adverse effects of the Proposed Action separately from beneficial effects, to determine whether such adverse effects would have been significant in their own right, and no such effects were found to be significant. In no cases did the analysis in the EA use beneficial effects to offset the potential significance of any adverse effect. In addition, the EA did not use any long term beneficial effects to offset the potential significance of any short term adverse effects.

The EA analyzed potential adverse impacts to indoor air and determined impacts would be minimal. The Proposed Action will not result in significant irreversible resource commitments or irretrievable losses of resources. Accordingly, DOE concludes the Proposed Action will not have any significant adverse impacts and that the Proposed Action would have beneficial impacts.

2. ***The degree to which the proposed action affects public health or safety:*** The EA analyzed the degree to which the Proposed Action affects the public health or safety. The EA analyzed impacts of the Proposed Action on indoor air and outdoor air, two resource areas which could potentially affect public health or safety. For the reasons discussed below, DOE has concluded that the Proposed Action will not cause any significant effects on public health or safety.

The Proposed Action is expected to reduce outdoor emissions primarily by reducing consumption of fossil fuels. Cumulative emission reductions for 30 years of construction (2016 through 2045) and 30 years of energy reduction for each building built during that period can be estimated at up to 1,667,200 metric tons of carbon dioxide, up to 1,275 metric tons of nitrogen oxides, up to 0.0137 metric tons of mercury, and up to 13,934 metric tons of methane. Emission reductions for sulphur dioxide, nitrogen dioxide, halocarbons, carbon dioxide, particulate matter, and lead are negligible. Under no scenario would emissions for any of the listed compounds increase.

The Proposed Action could influence the concentration levels of indoor air emissions by decreasing the leakage of air through the building envelope (known as infiltration). The Proposed Action potentially changes infiltration relative to the 2009 IECC. DOE expects the testing added in the 2015 IECC to result in reduced infiltration in many Federal low-rise residential buildings because the testing will detect small leaks in the building envelope that a visual inspection could not.

The 2015 IECC incorporates the 2015 International Residential Code (IRC) or International Mechanical Code (IMC), or other approved mechanical ventilation requirement, by reference which, in tandem with the 2015 IECC, requires that a mechanical ventilation system be installed in new Federal low-rise residential buildings. Accordingly, DOE's Proposed Action mandates mechanical ventilation, which ensures

that impacts to indoor air quality will be minimal.

The Proposed Action also contains a number of provisions intended to reduce sources of indoor air pollutants. Specifically, the 2015 IECC contains a number of provisions focused on minimizing emissions from fireplaces and other fuel-burning appliances that are not found in the 2009 IECC.

The Proposed Action would not be a likely target for intentional destructive acts that could further affect public safety.

3. ***Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas:*** DOE has concluded that the Proposed Action would not cause any adverse effects on unique characteristics of a geographic area. The intended outcome of the Proposed Action is to update the baseline Federal energy efficiency performance standards for the construction of new Federal low-rise residential buildings, and Proposed Action is not a site-specific action. All potential impacts within a local geographic area will be analyzed by a completion of a site-specific environmental review prior to initiating construction of new Federal low-rise residential buildings that would be subject to the Final Rule.
4. ***The degree to which the effects on the quality of the human environment are likely to be highly controversial:*** DOE has concluded that the effects on the human environment of the Proposed Action are not uncertain; they do not involve unique or unknown risks. DOE published the EA for public comment and received no comments.
5. ***The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks:*** DOE has concluded that the effects on the quality of the human environment are not likely to be highly controversial. There is no known credible scientific controversy over the impacts of the Proposed Action. Impacts from the Proposed Action are well known and fully analyzed in the EA. DOE published the EA for public comment and received no comments.
6. ***The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration:*** DOE has concluded that the Proposed Action is not likely to establish a precedent for future actions with significant effects. The Proposed Action is limited to Federal buildings and mandated by specific regulation.
7. ***Whether the action is related to other actions with individually insignificant but cumulatively significant impacts:*** DOE has concluded that the Proposed Action, when evaluated together with other past, present, or reasonably foreseeable land disturbing activities in the area, would not result in other cumulatively significant impacts at the local or regional scale. The Proposed Action is not site specific, and established rules are

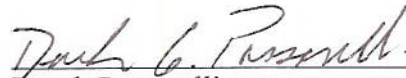
limited to Federal buildings. All potential impacts within a local geographic area will be analyzed by a completion of a site-specific environmental review prior to initiating construction of new Federal low-rise residential buildings that would be subject to the Final Rule.

8. ***The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places (NRHP) or may cause loss or destruction of significant scientific, cultural, or historical resources:*** DOE has concluded that the Proposed Action will have no adverse effect on districts, sites, highways, structures, or objects listed or eligible for listing in the National Register of Historic Places, and there is no loss of significant scientific, cultural, or historical resources. The Proposed Action is not site specific, and established rules are limited to Federal buildings. All potential impacts within a local geographic area will be analyzed by a completion of a site-specific environmental review prior to initiating construction of new Federal low-rise residential buildings that would be subject to the Final Rule.
9. ***The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act (ESA) of 1973:*** DOE has concluded that the Proposed Action will not adversely affect an endangered or threatened species or any critical habitat. The Proposed Action is not site specific, and established rules are limited to Federal buildings. All potential impacts within a local geographic area will be analyzed by a completion of a site-specific environmental review prior to initiating construction of new Federal low-rise residential buildings that would be subject to the Final Rule.
10. ***Whether the action threatens a violation of federal, state, or local law or requirements imposed for the protection of the human environment:*** DOE has concluded that the Proposed Action does not violate any federal, state, or local law or requirement imposed for the protection of the environment. The Proposed Action is not site specific, and established rules are limited to Federal buildings. All potential impacts within a local geographic area will be analyzed by a completion of a site-specific environmental review prior to initiating construction of new Federal low-rise residential buildings that would be subject to the Final Rule.

Determination:

Based on the EA and the above considerations, DOE finds that the Proposed Action is not a major action that constitutes a significant effect on the human environment. This finding and decision is based on the consideration of DOE's NEPA implementing regulations (10 CFR Part 1021) and the Council on Environmental Quality's (CEQ) criteria for significance (40 CFR 1508.27), both with regard to the context and the intensity of impacts analyzed in the EA. Accordingly, the Proposed Action does not require the preparation of an environmental impact statement

Issued on December 21, 2016



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Copies of the EA and the Final Rule are available on the EERE website at www.energy.gov/node/1539341 and www.energy.gov/eere/femp/notices-and-rules; or from the U.S. Department of Energy, Resource Room of the Building Technologies Program, 950 L'Enfant Plaza, SW., 6th Floor, Washington, DC 20024, (202) 586-2945, between 9 a.m. and 4 p.m., Monday through Friday, except Federal holidays.

For further information regarding the Final Rule contact Mr. Nicolas Baker, U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Federal Energy Management Program, Mailstop EE-5F, 1000 Independence Avenue, SW, Washington, DC 20585, (202) 287-6033, e-mail: Nicolas.Baker@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 EA contact Ms. Lisa Jorgensen, NEPA Compliance Officer, U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, 15013 Denver West Parkway, Golden, CO 80401, (240) 562-1569, e-mail: lisa.jorgensen@ee.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.