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February 2, 2016

The Honorable Lisa Murkowski
Chairman
The Honorable Maria Cantwell
Ranking Member
Committee on Energy and Natural Resources
United States Senate

The Honorable Fred Upton
Chairman
The Honorable Frank Pallone, Jr.
Ranking Member
Committee on Energy and Commerce
House of Representatives

Subject: *Department of Energy: Energy Conservation Program for Certain Industrial Equipment: Energy Conservation Standards for Small, Large, and Very Large Air-Cooled Commercial Package Air Conditioning and Heating Equipment and Commercial Warm Air Furnaces*

Pursuant to section 801(a)(2)(A) of title 5, United States Code, this is our report on a major rule promulgated by the Department of Energy (DOE) entitled "Energy Conservation Program for Certain Industrial Equipment: Energy Conservation Standards for Small, Large, and Very Large Air-Cooled Commercial Package Air Conditioning and Heating Equipment and Commercial Warm Air Furnaces" (RINs: 1904-AC95, 1904-AD11). We received the rule on January 19, 2016. It was published in the *Federal Register* as a direct final rule on January 15, 2016. 81 Fed. Reg. 2420.

The direct final rule amends the energy conservation standards for both small, large, and very large air-cooled commercial package air conditioning and heating equipment and commercial warm air furnaces after DOE determined that the amended energy conservation standards being adopted for these equipment would result in the significant conservation of energy and be technologically feasible and economically justified. The Energy Policy and Conservation Act of 1975, as amended (EPCA), prescribes energy conservation standards for various consumer products and certain commercial and industrial equipment, including small, large, and very large air-cooled commercial package air conditioning and heating equipment and commercial warm air furnaces. EPCA also requires that DOE periodically review and consider amending its standards for specified categories of industrial equipment, including commercial heating and air conditioning equipment, in order to determine whether more stringent, amended standards would be technologically feasible and economically justified and save a significant additional amount of energy. According to DOE, the direct final rule is consistent with those requirements.

Enclosed is our assessment of DOE's compliance with the procedural steps required by section 801(a)(1)(B)(i) through (iv) of title 5 with respect to the rule. Our review of the procedural steps taken indicates that DOE complied with the applicable requirements.

If you have any questions about this report or wish to contact GAO officials responsible for the evaluation work relating to the subject matter of the rule, please contact Shirley A. Jones, Assistant General Counsel, at (202) 512-8156.

signed

Robert J. Cramer
Managing Associate General Counsel

Enclosure

cc: Daniel Cohen
Assistant General Counsel for Legislation,
Regulation and Energy Efficiency
Department of Energy

REPORT UNDER 5 U.S.C. § 801(a)(2)(A) ON A MAJOR RULE
ISSUED BY THE
DEPARTMENT OF ENERGY
ENTITLED
“ENERGY CONSERVATION PROGRAM FOR
CERTAIN INDUSTRIAL EQUIPMENT:
ENERGY CONSERVATION STANDARDS FOR SMALL, LARGE,
AND VERY LARGE AIR-COOLED COMMERCIAL PACKAGE
AIR CONDITIONING AND HEATING EQUIPMENT
AND COMMERCIAL WARM AIR FURNACES”
(RINs: 1904-AC95, 1904-AD11)

(i) Cost-benefit analysis

The Department of Energy (DOE) evaluated the benefits and costs to commercial consumers, the impact on manufacturers, and the national benefits and costs of this final rule. For commercial consumers, DOE found that the average life-cycle cost savings were positive for all equipment classes and the payback period is less than the average lifetime of the equipment, which is estimated to be 22 years.

For manufacturers of Commercial Unitary Air Conditioners and Commercial Unitary Heat Pumps (CUAC/CUHP) the industry net present value (INPV) is the sum of the discounted cash flows to the industry from the base year through the end of the analysis period (2015 to 2048). Using a real discount rate of 6.2 percent, DOE estimates that the INPV for CUAC/CUHP manufacturers is \$1,638.2 million in 2014 dollars. Under the standards adopted in the direct final rule, DOE expects the INPV may change approximately 26.8 percent to 2.3 percent, which corresponds to approximately \$440.4 million and \$38.5 million in 2014 dollars. In order to bring equipment into compliance with the standards adopted in this direct final rule, DOE expects the industry to incur \$520.8 million in total conversion costs. For manufacturers of Commercial Warm Air Furnaces (CWAFFs) using a real discount rate of 8.9 percent, DOE estimates that the INPV for CWAFF manufacturers is \$96.3 million in 2014 dollars. Under the standards adopted in the direct final rule, DOE expects the INPV may be reduced by approximately 13.9 percent to 6.1 percent, which corresponds to \$13.4 million and \$5.9 million in 2014 dollars. In order to bring products into compliance with the standards in the direct final rule, DOE expects the industry to incur \$22.2 million in conversion costs.

DOE states that the National Benefits and Costs indicate that energy conservation standards being adopted in the direct final rule for CUAC and CUHP equipment would save a significant amount of energy representing a savings of 24 percent relative to the energy use of the products in the no-new-standards case. The cumulative net present value (NPV) of total consumer costs and savings of the standards for CUACs and CUHPs ranges from \$15.2 billion (at a 7 percent discount rate) to \$50 billion (at a 3 percent discount rate). This NPV, according to DOE, expresses the estimated total value of future operating-cost savings minus the estimated increased product and installation costs for CUACs and CUHPs purchased in 2018–2048. In addition, the CUAC and CUHP equipment standards that are being adopted in this direct final rule, as stated in the rule, are projected to yield significant environmental benefits as a result of the improvement in the conservation of energy. DOE estimates that the standards would result in significant cumulative greenhouse gas emission reductions and provided net present monetary value information that was also summarized in tables in the direct final rule.

(ii) Agency actions relevant to the Regulatory Flexibility Act (RFA), 5 U.S.C. §§ 603-605, 607, and 609

In the category of CUAC/CUHP, DOE identified 12 CUAC/CUHP manufacturers that sell covered equipment in the U.S market. DOE determined three met the Small Business Administration's (SBA) small business definition, but only one of these would be covered by the rule. Before issuing this final rule, DOE contacted this small business manufacturer. However, the business chose not to participate in a manufacturer impact analysis interview. Based on DOE's research, this small manufacturer has three platforms with 11 models covered by the CUAC/CUHP rulemaking. However, it is difficult for DOE to

discern the potential conversion costs required to comply with the direct final rule's standard since no integrated energy efficiency ratio ratings were provided for these units.

DOE conducted a market survey using available public information to identify potential small manufacturers in the category of Commercial Warm Air Furnaces (CWAFFs). DOE in turn identified 14 manufacturers of CWAFFs sold in the U.S. market. DOE determined that three manufacturers met the SBA's definition of a small business. DOE contacted each small business CWAFF equipment manufacturer it had identified. DOE stated that none of them, however, consented to formal interviews. DOE also attempted to obtain information about small business impacts while interviewing large manufacturers. DOE believes that, since CWAFFs have relatively low sales volumes and because the industry as a whole generally produces equipment at the baseline, the average impacts will be similar for large and small business manufacturers. DOE was unable to identify any publicly available information that would lead to a conclusion that small manufacturers would be differentially impacted by this direct final rule. Therefore, DOE assumed that small business manufacturers would face similar conversion costs as larger businesses.

(iii) Agency actions relevant to sections 202-205 of the Unfunded Mandates Reform Act of 1995 (UMRA), 2 U.S.C. §§ 1532-1535

DOE has concluded that this direct final rule may require expenditures of \$100 million or more in any one year on the private sector. Such expenditures may include: (1) investment in research and development and in capital expenditures by CUAC/CUHP and CWAFF manufacturers in the years between the direct final rule and the compliance date for the new standards, and (2) incremental additional expenditures by consumers to purchase higher-efficiency CUACs/CUHPs and CWAFFs. Section 202 of UMRA authorizes a federal agency to respond to the content requirements of UMRA in any other statement or analysis that accompanies the direct final rule. (2 U.S.C. 1532(c)). According to DOE, the content requirements of section 202(b) of UMRA relevant to a private sector mandate substantially overlap the economic analysis requirements that apply under section 325(o) of EPCA and Executive Order 12,866; and, according to DOE, the supplementary information section of the direct final rule and the Regulatory Impact Analysis section of the Technical Support Documents for this direct final rule respond to those requirements.

Under section 205 of UMRA, the Department is obligated to identify and consider a reasonable number of regulatory alternatives before promulgating a rule for which a written statement under section 202 is required. (2 U.S.C. 1535(a)). DOE is required to select from those alternatives the most cost-effective and least burdensome alternative that achieves the objectives of the rule unless DOE publishes an explanation for doing otherwise, or the selection of such an alternative is inconsistent with law. This direct final rule would establish amended energy conservation standards for CUACs/CUHPs and CWAFFs that are designed to achieve the maximum improvement in energy efficiency that DOE has determined to be both technologically feasible and economically justified. A full discussion of the alternatives considered by DOE was included in the direct final rule.

(iv) Other relevant information or requirements under acts and executive orders

Administrative Procedure Act, 5 U.S.C. §§ 551 *et seq.*

On September 30, 2014, DOE published a Notice of Proposed Rulemaking (NPR) for small, large, and very large CUACs and CUHPs. 79 Fed. Reg. 58,948. The document solicited information from the public to help DOE determine whether more stringent energy conservation standards for small, large, and very large CUACs and CUHPs would result in a significant additional amount of energy savings and whether those standards would be technologically feasible and economically justified. The September 2014 document also announced that a public meeting would be held on November 6, 2014, at DOE headquarters in Washington, D.C. DOE states that at this meeting, it presented the methodologies and results of the analyses set forth in the NPR, and interested parties that participated in the public meeting discussed a variety of topics. DOE also states that it received a number of written comments from interested parties in response to the NPR. DOE states that it considered these comments, as well as comments from the public meeting, in preparing the direct final rule. The commenters are summarized in a table in the direct final rule and included mechanical contractors, component suppliers, equipment

distributors, engineering consulting firms, efficiency/environmental advocates, educational institutions, individuals, manufacturers, public policy research organizations, trade associations, utilities, and utility representatives. Relevant comments, and DOE's responses, were provided in the appropriate sections of the direct final rule. Further, comments on the direct final rule will be accepted until May 4, 2016.

Paperwork Reduction Act (PRA), 44 U.S.C. §§ 3501-3520

DOE states that manufacturers of CUACs/CUHPs and CWAFs must certify to DOE that their equipment complies with any applicable energy conservation standards. In certifying compliance, manufacturers must test their equipment according to DOE test procedures for CUACs/CUHPs and CWAFs, including any amendments adopted for those test procedures. DOE has established regulations for the certification and recordkeeping requirements for all covered consumer products and commercial equipment, including CUACs/CUHPs and CWAFs. 76 Fed. Reg. 12,422 (March 7, 2011); 80 Fed. Reg. 5099 (Jan. 30, 2015). The collection-of-information requirement for certification and recordkeeping is subject to review and approval by the Office of Management and Budget (OMB) under PRA. This requirement has been approved by OMB under OMB control number 1910-1400. The public reporting burden for the certification is estimated to average 30 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

Statutory authorization for the rule

The rule was promulgated under the authority of the Energy Policy and Conservation Act of 1975 (EPCA), Pub. L. No. 94-163 (Dec. 22, 1975), as amended by the Energy Efficiency Improvement Act of 2015, Pub. L. No. 114-11 (Apr. 30, 2015), coupled with section 441(a) title IV of the National Energy Conservation Policy Act, Pub. L. No. 95-619 (Nov. 9, 1978), (collectively codified at 42 U.S.C. 6311-6317).

Executive Order No. 12,866 (Regulatory Planning and Review)

DOE states that that the proposed regulatory action is a significant regulatory action under section (3)(f) of Executive Order 12,866. Accordingly, pursuant to section 6(a)(3)(B) of the Order, DOE has provided to OMB: (1) the text of the draft regulatory action, together with a reasonably detailed description of the need for the regulatory action and an explanation of how the regulatory action will meet that need; and (2) an assessment of the potential costs and benefits of the regulatory action, including an explanation of the manner in which the regulatory action is consistent with a statutory mandate. DOE has included these documents in the rulemaking record. In addition, OMB has determined that the proposed regulatory action is an "economically" significant regulatory action under section (3)(f)(1) of Executive Order 12,866. Accordingly, pursuant to section 6(a)(3)(C) of the Order, DOE states that it has provided to OMB an assessment, including the underlying analysis, of benefits and costs anticipated from the regulatory action, together with, to the extent feasible, a quantification of those costs; and an assessment, including the underlying analysis, of costs and benefits of potentially effective and reasonably feasible alternatives to the planned regulation; and an explanation why the planned regulatory action is preferable to the identified potential alternatives. These assessments can be found in the technical support documents for the rulemaking.

Executive Order No. 13,132 (Federalism)

DOE has determined that the direct final rule would not have a substantial direct effect on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government. EPCA governs and prescribes federal preemption of state regulations as to energy conservation for the equipment subject to this direct final rule. States can petition DOE for exemption from such preemption to the extent, and based on criteria, set forth in EPCA. (42 U.S.C. 6297). Therefore, according to DOE, no further action is required by Executive Order 13,132.