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February 8, 2017

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

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

Subject: *Department of Energy: Energy Conservation Program: Energy Conservation Standards for Dedicated-Purpose Pool Pumps*

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: Energy Conservation Standards for Dedicated-Purpose Pool Pumps” (RIN: 1904-AD52). We received the rule on January 24, 2017. It was published in the *Federal Register* as a direct final rule on January 18, 2017, with an effective date of May 18, 2017. 82 Fed. Reg. 5650.

The final rule adopts new energy conservation standards for dedicated-purpose pool pumps. DOE determined that the energy conservation standards for these products would result in significant conservation of energy and are technologically feasible and economically justified.

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:  
ENERGY CONSERVATION STANDARDS FOR  
DEDICATED-PURPOSE POOL PUMPS”  
(RIN: 1904-AD52)

(i) Cost-benefit analysis

The Department of Energy (DOE) analyzed the costs and benefits of this direct final rule. DOE estimated that the cumulative net present value (NPV) of total consumer benefits of the standards for dedicated-purpose pool pumps ranges from \$11 billion (at a 7 percent discount rate) to \$24 billion (at a 3 percent discount rate). This NPV expresses the estimated total value of future operating-cost savings minus the estimated increased equipment costs for dedicated-purpose pool pumps purchased in 2021-2050. In addition, DOE projects that the standards for dedicated-purpose pool pumps will yield significant environmental benefits. DOE estimates that the standards would result in cumulative greenhouse gas emission reductions (over the same period as for energy savings) of 202 million metric tons (Mt) of carbon dioxide (CO<sub>2</sub>), 147 thousand tons of sulfur dioxide (SO<sub>2</sub>), 257 thousand tons of nitrogen oxides (NO<sub>x</sub>), 968 thousand tons of methane (CH<sub>4</sub>), 3.0 thousand tons of nitrous oxide (N<sub>2</sub>O), and 0.50 tons of mercury (Hg). Using discount rates appropriate for each set of social cost of carbon dioxide (SC-CO<sub>2</sub>) values, DOE estimates that the present value of the CO<sub>2</sub> emissions reduction is between \$1.5 billion and \$21 billion. Using the central SCC case represented by \$40.6/metric ton (t) in 2015 and a discount rate of 3 percent produces a value of \$6.8 billion.

DOE also calculated the value of the reduction in emissions of the non-CO<sub>2</sub> greenhouse gases, methane and nitrous oxide, using values for the social cost of methane (SC-CH<sub>4</sub>) and the social cost of nitrous oxide (SC-N<sub>2</sub>O) recently developed by the interagency working group. DOE's estimated present value of the methane emissions reduction is between \$0.32 billion and \$2.6 billion, with a value of \$0.99 billion using the central SC-CH<sub>4</sub> case, and the estimated present value of the N<sub>2</sub>O emissions reduction is between \$0.008 billion and \$0.09 billion, with a value of \$0.03 billion using the central SC-N<sub>2</sub>O case. DOE also estimates the present value of the NO<sub>x</sub> emissions reduction to be \$0.21 billion using a 7 percent discount rate, and \$0.48 billion using a 3 percent discount rate. DOE is still investigating appropriate valuation of the reduction in other emissions, and therefore did not include any such values in the analysis of this direct final rule.

DOE also expressed the benefits and costs of the adopted standards for dedicated-purpose pool pumps sold between 2021-2050 in terms of annualized values. Using a 7 percent discount rate for benefits and costs other than GHG reduction (for which DOE used average social costs with a 3 percent discount rate), DOE's estimated cost of the standards in this rule is \$138 million per year in increased equipment costs, while DOE's estimated annual benefits are \$1.3 billion in reduced equipment operating costs, \$449 million in GHG reductions, and \$22 million in reduced NO<sub>x</sub> emissions. In this case, DOE's net benefit amounts to \$1.7 billion per year. Using a 3 percent discount rate for all benefits and costs, DOE's estimated cost of the standards is \$149 million per year in increased equipment costs, while DOE's estimated annual benefits are

\$1.5 billion in reduced operating costs, \$449 million in GHG reductions, and \$27 million in reduced NO<sub>x</sub> emissions. In this case, DOE's net benefit amounts to \$1.8 billion per year.

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

DOE prepared an analysis of this direct final rule which included (1) a description of reasons why action is being considered; (2) objectives of, and legal basis for, the rule; (3) a description and estimate of the number of small entities affected; (4) a description of compliance requirements; (5) any duplication, overlap, and conflict with other rules and regulations; and (6) significant alternatives considered and steps taken to minimize significant economic impacts on small entities.

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

This direct final rule establishes energy conservation standards for pumps that are designed to achieve the maximum improvement in energy efficiency that DOE has determined to be both technologically feasible and economically justified. The rule also included a discussion of the alternatives considered by DOE.

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

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

DOE published a notice of proposed rulemaking (NPR) proposing that the identical standard levels contained in this direct final rule be adopted simultaneously with this direct final rule. 82 Fed. Reg. 5446 (Jan. 18, 2017). DOE is providing a 110-day public comment period on the direct final rule. While DOE typically provides a comment period of 60 days on proposed standards, DOE is providing a 110-day comment period for this NPR, which is the same length as the comment period for the direct final rule. Based on the comments received during this period, the direct final rule will either become effective or DOE will withdraw it if one or more adverse comments are received and if DOE determines that those comments, when viewed in light of the rulemaking record related to the direct final rule, provide a reasonable basis for withdrawal of the direct final rule and for DOE to continue this rulemaking under the NPR. Receipt of an alternative joint recommendation may also trigger a DOE withdrawal of the direct final rule in the same manner. 42 U.S.C. § 6295(p)(4).

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

Manufacturers of dedicated-purpose pool pumps must certify to DOE that their products comply with any applicable energy conservation standards. In certifying compliance, manufacturers must test their products according to the DOE test procedures for dedicated-purpose pool pumps, including any amendments adopted for those test procedures. The collection-of-information requirement for the certification and recordkeeping is subject to review and approval by the Office of Management and Budget (OMB) under the Act. This requirement has been approved by OMB under OMB control number 1910-1400. DOE estimates that public reporting burden for the certification averages 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

DOE promulgated this direct final rule under the authority of sections 6291 to 6317 of title 42 and section 2461 note of title 28, United States Code.

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

OMB determined that the regulatory action is an economically significant regulatory action under the Order. The rule was submitted to OMB for review.

Executive Order No. 13,132 (Federalism)

DOE understands that publication of this direct final rule will preempt certain California Energy Commission regulations governing energy efficiency requirements for pool pumps. DOE determined that the rule would not have a substantial direct effect on any states, including California, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.