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February 19, 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: Energy Conservation Standards for 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 Pumps” (RIN: 1904-AC54). We received the rule on February 4, 2016. It was published in the *Federal Register* as a final rule on January 26, 2016. 81 Fed. Reg. 4368.

The final rule adopts new energy conservation standards for pumps. DOE determined that new energy conservation standards for pumps would result in significant conservation of energy and are technologically feasible and economically justified. The new standards are expressed as a Pump Energy Index (PEI) and vary by equipment class. Under the adopted standards, a pump model would be compliant if its PEI rating is less than or equal to the adopted standard. DOE states that a PEI is defined as the pump efficiency rating (PER) for a given pump model (at full impeller diameter), divided by a calculated minimally compliant PER for the given pump model. PER is defined as a weighted average of the electric input power supplied to the pump over a specified load profile, represented in units of horsepower. A value of PEI greater than 1.00 would indicate that the pump does not comply with DOE’s energy conservation standard, while a value less than 1.00 would indicate that the pump is more efficient than the standard requires. According to DOE, the minimally compliant PER is unique to each pump model and is a function of specific speed (a dimensionless quantity describing the geometry of the pump); flow at best efficiency point (BEP); and a specified C-value. A C-value is the translational component of a three-dimensional polynomial equation that describes the attainable hydraulic efficiency of pumps as a function of flow at BEP, specific speed, and C-value.

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 PUMPS”  
(RIN: 1904-AC54)

(i) Cost-benefit analysis

The Department of Energy (DOE) analyzed the benefits and costs to consumers, the impact on manufacturers, and the national benefits of this final rule. In evaluating the economic impact of this rule on consumers of pumps, DOE found that the average life-cycle cost savings are positive for all equipment classes for which consumers would be impacted and the simple payback period is less than the average lifetime of pumps (estimated to range between 11 and 23 years depending on equipment class, with an average of 15 years). DOE estimates that the industry net present value (INPV) for manufacturers of pumps in the case without new standards is \$120.0 million in 2014 dollars. Under the standards adopted in this final rule, DOE expects INPV impacts to be between a loss of 32.9 percent to an increase of 7.0 percent of INPV, which is between approximately \$39.5 million and \$8.4 million. Additionally, based on DOE’s interviews with pump manufacturers, DOE does not expect significant impacts on manufacturing capacity or loss of employment for the industry as a whole to result from the standards for pumps. DOE expects the industry to incur \$81.2 million in conversion costs.

DOE calculated the national benefits in terms of annualized values. Using a 7 percent discount rate for benefits and costs other than carbon dioxide reduction, (for which DOE used a 3 percent discount rate along with the social cost of carbon series that has a value of \$40.0 per ton in 2015), DOE estimated the cost of the standards in this rule to be \$17 million per year in increased equipment costs, while the annual benefits to be \$58 million in reduced equipment operating costs, \$30 million in carbon dioxide reductions, and \$3.7 million in reduced nitrogen oxides emissions. In this case, DOE estimates the net benefit to be \$74 million per year. Using a 3 percent discount rate for all benefits and costs, DOE estimated the cost of the standards to be \$17 million per year in increased equipment costs, while the annual benefits to be \$78 million in reduced operating costs, \$30 million in carbon dioxide reductions, and \$5.4 million in reduced nitrogen oxides emissions. In this case, DEO estimates the net benefit to be \$96 million per year.

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

DOE prepared a Final Regulatory Flexibility Analysis for this final rule. The analysis included descriptions of (1) the estimated number of small entities regulated, (2) the compliance requirements including estimates, (3) any duplication, overlap, or conflict with other rules and regulations, and (4) significant alternatives to the rule.

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

DOE determined that this final rule does not contain a federal intergovernmental mandate, nor is it expected to require expenditures of \$100 million or more in any one year on the private sector.

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

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

On April 2, 2015, DOE published a proposed rule. 80 Fed. Reg. 17,826. DOE received multiple comments from interested parties and responded to comments in the final rule.

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

DOE determined that this final rule contains an information collection requirement under the Act. This requirement has been approved by the Office of Management and Budget (OMB) for pumps under OMB Control Number 1910–1400. DOE estimates the public reporting burden for the requirement 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 final rule under the authority of sections 6291 to 6317 of title 42, United States Code.

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

DOE determined that this is an economically significant rule under the Order. The rule has been provided to OMB for review.

Executive Order No. 13,132 (Federalism)

DOE determined that this final rule will 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.