6450-01-P

DEPARTMENT OF ENERGY

10 CFR Part 431

Docket Number EERE-2015-BT-STD-0008

RIN 1904-AD52

Energy Conservation Program: Energy Conservation Standards for Dedicated-Purpose Pool Pumps

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

ACTION: Notice of proposed rulemaking (NOPR).

SUMMARY: The Energy Policy and Conservation Act of 1975 (EPCA), as amended, sets forth a variety of provisions designed to improve energy efficiency. Part C of Title III establishes the "Energy Conservation Program for Certain Industrial Equipment." The covered equipment includes pumps. In this document, DOE proposes amended energy conservation standards for dedicated-purpose pool pumps identical to those set forth in a direct final rule published elsewhere in the Federal Register. If DOE receives an adverse comment and determines that such comment may provide a reasonable basis for withdrawing the direct final rule, DOE will publish a notice withdrawing the direct final rule and will proceed with this proposed rule.

DATES: DOE will accept comments, data, and information regarding the proposed standards no later than **[INSERT DATE 110 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

Comments regarding the likely competitive impact of the proposed standard should be sent to the Department of Justice contact listed in the **ADDRESSES** section before [**INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**].

ADDRESSES: If DOE withdraws the direct final rule published elsewhere in the Federal Register, DOE will hold a public meeting to allow for additional comment on this proposed rule. DOE will publish notice of any public meeting in the Federal Register.

Instructions: Any comments submitted must identify the NOPR on Energy Conservation Standards for Dedicated-Purpose Pool Pumps, and provide docket number EERE-2015-BT-STD-0008 and/or regulatory information number (RIN) 1904-AD52. Comments may be submitted using any of the following methods:

1) Federal eRulemaking Portal: www.regulations.gov. Follow the instructions for submitting comments.
2) Email: PoolPumps2015STD0008@ee.doe.gov. Include the docket number and/or RIN in the subject line of the message. Submit electronic comments in WordPerfect, Microsoft Word, PDF, or ASCII file format, and avoid the use of special characters or any form of encryption.

3) Postal Mail: Appliance and Equipment Standards Program, U.S. Department of Energy, Building Technologies Office, Mailstop EE-5B, 1000 Independence Avenue, SW., Washington, DC, 20585-0121. If possible, please submit all items on a compact disc (CD), in which case it is not necessary to include printed copies.

4) Hand Delivery/Courier: Appliance and Equipment Standards Program, U.S. Department of Energy, Building Technologies Office, 950 L'Enfant Plaza, SW., 6th Floor, Washington, DC, 20024. Telephone: (202) 586-6636. If possible, please submit all items on a CD, in which case it is not necessary to include printed copies.

No telefacsimilies (faxes) will be accepted. For detailed instructions on submitting comments and additional information on the rulemaking process, see section III of this document ("Public Participation").

Written comments regarding the burden-hour estimates or other aspects of the collection-of-information requirements contained in this proposed rule may be submitted to Office of Energy Efficiency and Renewable Energy through the methods listed above and by email to Chad_S_Whiteman@omb.eop.gov.

EPCA requires the Attorney General to provide DOE a written determination of whether the proposed standard is likely to lessen competition. The U.S. Department of Justice Antitrust Division invites input from market participants and other interested persons with views on the likely competitive impact of the proposed standard. Interested

persons may contact the Division at energy.standards@usdoj.gov before [**INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. Please indicate in the "Subject" line of your email the title and Docket Number of this rulemaking notice.

Docket: The docket, which includes Federal Register notices, public meeting attendee lists and transcripts, comments, and other supporting documents/materials, is available for review at www.regulations.gov. All documents in the docket are listed in the www.regulations.gov index. However, some documents listed in the index may not be publicly available, such as those containing information that is exempt from public disclosure.

The docket web page can be found at https://www.regulations.gov/docket?D=EERE-2015-BT-STD-0008. The docket web page contains simple instructions on how to access all documents, including public comments, in the docket. See section III, "Public Participation," for further information on how to submit comments through www.regulations.gov.

FOR FURTHER INFORMATION CONTACT:

Mr. John Cymbalsky, U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Office, EE-5B, 1000 Independence Avenue, SW, Washington, DC, 20585-0121. Telephone: (202) 586-9507. Email: ApplianceStandardsQuestions@ee.doe.gov.

Ms. Johanna Jochum, U.S. Department of Energy, Office of the General Counsel, GC-33, 1000 Independence Avenue, SW., Washington, DC, 20585-0121. Telephone: (202) 287-6307. Email: Johanna.Jochum@hq.doe.gov.

For further information on how to submit a comment, review other public comments and the docket, or participate in the public meeting, contact the Appliance and Equipment Standards Program staff at (202) 586-6636 or by email: ApplianceStandardsQuestions@ee.doe.gov.

SUPPLEMENTARY INFORMATION:

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I. Introduction

A. Authority

Title III, Part C[1] of the Energy Policy and Conservation Act of 1975 (EPCA), (42 U.S.C. 6311–6317, as codified) established the Energy Conservation Program for Certain Industrial Equipment, a program covering certain industrial equipment.[2] "Pumps" are listed as a type of covered industrial equipment. (42 U.S.C. 6311(1)(A))

While pumps are listed as a type of covered equipment, EPCA does not define the term "pump." To address this, in January 2016, DOE published a test procedure final rule (January 2016 general pumps test procedure final rule) that established a definition for the term "pump." 81 FR 4086, 4147 (January 25, 2016). In the December, 2016 test procedure final rule ("test procedure final rule"),[3] DOE noted the applicability of the definition of "pump" and associated terms to dedicated-purpose pool pumps.

Pursuant to EPCA, DOE's energy conservation program for covered equipment consists essentially of four parts: (1) testing, (2) labeling, (3) the establishment of Federal energy conservation standards, and (4) certification and enforcement procedures. Subject to certain criteria and conditions, DOE is required to develop test procedures to measure the energy efficiency, energy use, or estimated annual operating cost of covered equipment. (42 U.S.C. 6295(o)(3)(A) and 6316(a)) Manufacturers of covered equipment must use the prescribed DOE test procedure as the basis for certifying to DOE that their

[1] For editorial reasons, upon codification in the U.S. Code, Part C was re-designated Part A-1.
[2] All references to EPCA refer to the statute as amended through the Energy Efficiency Improvement Act of 2015, Public Law 114-11 (April 30, 2015).
[3] See https://www1.eere.energy.gov/buildings/appliance_standards/standards.aspx?productid=41

equipment complies with the applicable energy conservation standards adopted under EPCA, and when making representations to the public regarding their energy use or efficiency. (42 U.S.C. 6314(d)) Similarly, DOE must use these test procedures to determine whether the equipment complies with standards adopted pursuant to EPCA. Id. The DOE test procedures for dedicated-purpose pool pumps appear at title 10 of the Code of Federal Regulations (CFR) part 431, subpart Y, appendix B.

DOE must follow specific statutory criteria for prescribing new or amended standards for covered equipment, including dedicated-purpose pool pumps. Any new or amended standard for covered equipment must be designed to achieve the maximum improvement in energy efficiency that is technologically feasible and economically justified. (42 U.S.C. 6313(a)(6)(C), 6295(o), and 6316(a)) Furthermore, DOE may not adopt any standard that would not result in the significant conservation of energy. (42 U.S.C. 6295(o)(3)) and 6316(a)) Moreover, DOE may not prescribe a standard (1) for certain equipment, including dedicated-purpose pool pumps, if no test procedure has been established for the product, or (2) if DOE determines by rule that the standard is not technologically feasible or economically justified. (42 U.S.C. 6295(o) and 6316(a)) In deciding whether a proposed standard is economically justified, DOE must determine whether the benefits of the standard exceed its burdens. DOE must make this determination after receiving comments on the proposed standard, and by considering, to the greatest extent practicable, the following seven statutory factors:

1. The economic impact of the standard on manufacturers and consumers of the equipment subject to the standard;

2. The savings in operating costs throughout the estimated average life of the covered equipment in the type (or class) compared to any increase in the price, initial charges, or maintenance expenses for the covered equipment that are likely to result from the standard;
3. The total projected amount of energy (or as applicable, water) savings likely to result directly from the standard;
4. Any lessening of the utility or the performance of the covered equipment likely to result from the standard;
5. The impact of any lessening of competition, as determined in writing by the Attorney General, that is likely to result from the standard;
6. The need for national energy and water conservation; and
7. Other factors the Secretary of Energy (Secretary) considers relevant.

(42 U.S.C. 6295(o)(2)(B)(i)(I)–(VII)) and 6316(a))

Further, EPCA establishes a rebuttable presumption that a standard is economically justified if the Secretary finds that the additional cost to the consumer of purchasing a product complying with an energy conservation standard level will be less than three times the value of the energy savings during the first year that the consumer will receive as a result of the standard, as calculated under the applicable test procedure. (42 U.S.C. 6295(o)(2)(B)(iii)) and 6316(a))

EPCA also contains what is known as an "anti-backsliding" provision, which prevents the Secretary from prescribing any amended standard that either increases the

maximum allowable energy use or decreases the minimum required energy efficiency of a covered product. (42 U.S.C. 6295(o)(1)) and 6316(a)) Also, the Secretary may not prescribe an amended or new standard if interested persons have established by a preponderance of the evidence that the standard is likely to result in the unavailability in the United States in any covered product type (or class) of performance characteristics (including reliability), features, sizes, capacities, and volumes that are substantially the same as those generally available in the United States. (42 U.S.C. 6295(o)(4) and 6316(a))

Additionally, EPCA specifies requirements when promulgating an energy conservation standard for a covered product that has two or more subcategories. DOE must specify a different standard level for a type or class of products that has the same function or intended use if DOE determines that equipment within such group (a) consumes a different kind of energy from that consumed by other covered equipment within such type (or class); or (b) has a capacity or other performance-related feature that other equipment within such type (or class) do not have and such feature justifies a higher or lower standard. (42 U.S.C. 6295(q)(1) and 6316(a)) In determining whether a performance-related feature justifies a different standard for a group of equipment, DOE must consider such factors as the utility to the consumer of such a feature and other factors DOE deems appropriate. Id. Any rule prescribing such a standard must include an explanation of the basis on which such higher or lower level was established. (42 U.S.C. 6295(q)(2) and 6316(a))

Federal energy conservation requirements generally supersede State laws or regulations concerning energy conservation testing, labeling, and standards. (42 U.S.C. 6297(a)–(c) and 6316(a)) DOE may, however, grant waivers of Federal preemption for particular State laws or regulations, in accordance with the procedures and other provisions set forth under 42 U.S.C. 6297(d).

With particular regard to direct final rules, the Energy Independence and Security Act of 2007 (EISA 2007), Pub. Law 110-140 (December 19, 2007), amended EPCA, in relevant part, to grant DOE authority to issue a type of final rule (i.e., a "direct final rule") establishing an energy conservation standard for a product or equipment (including dedicated-purpose pool pumps) on receipt of a statement submitted jointly by interested persons that are fairly representative of relevant points of view (including representatives of manufacturers of covered equipment, States, and efficiency advocates), as determined by the Secretary. (42 U.S.C. 6295(p)(4)(A)) and 6316(a)) That statement must contain recommendations with respect to an energy or water conservation standard that are in accordance with the provisions of 42 U.S.C. 6295(o). (42 U.S.C. 6295(p)(4)(A)(i)) A notice of proposed rulemaking (NOPR) that proposes an identical energy efficiency standard must be published simultaneously with the direct final rule and a public comment period of at least 110 days provided. (42 U.S.C. 6295(p)(4)(A)-(B)) Not later than 120 days after issuance of the direct final rule, if DOE receives one or more adverse comments or an alternative joint recommendation relating to the direct final rule, the Secretary must determine whether the comments or alternative joint recommendation may provide a reasonable basis for withdrawal under 42 U.S.C. 6295(o) or other applicable law. (42 U.S.C. 6295(p)(4)(C)(i)) If the Secretary makes such a determination,

DOE must withdraw the direct final rule and proceed with the simultaneously published NOPR, and publish in the Federal Register the reason why the direct final rule was withdrawn. (42 U.S.C. 6295(p)(4)(C)(ii))

B. Background

DOE began the separate rulemaking for dedicated-purpose pool pumps on May 8, 2015, when it issued a Request for Information (RFI) (May 2015 DPPP RFI). 80 FR 26475. Consistent with feedback from these interested parties, DOE began a process through the ASRAC to charter a working group to recommend energy conservation standards and a test procedure for dedicated-purpose pool pumps rather than continuing down the traditional notice and comment route that DOE had already begun. (Docket No. EERE-2015-BT-STD-0008) On August 25, 2015, DOE published a notice of intent to establish a working group for dedicated-purpose pool pumps (the DPPP Working Group). 80 FR 51483. DOE selected the members of the DPPP Working Group to ensure a broad and balanced array of interested parties and expertise, including representatives from efficiency advocacy organizations and manufacturers, as well as one representative from a state government organization. Additionally, one member from ASRAC and one DOE representative were part of the group.

The DPPP Working Group completed its initial charter on December 8, 2015, with a consensus vote to approve a term sheet containing recommendations to DOE on scope, metric, and the basis of test procedure ("December 2015 DPPP Working Group recommendations"). ASRAC subsequently voted unanimously to approve the December

2015 DPPP Working Group recommendations during its January 20, 2016 meeting. (Docket No. EERE-2015-BT-STD-0008, No. 0052) At the January 20, 2016 ASRAC meeting, the DPPP Working Group also requested more time to discuss potential energy conservation standards for dedicated-purpose pool pumps. In response, ASRAC recommended that the DPPP Working Group continue its work in a second phase of negotiations to recommend potential energy conservation standards for dedicated-purpose pool pumps. (Docket No. EERE-2013-BT-NOC-0005, No. 71 at pp. 20–52)

The second phase of meetings commenced on March 21, 2016 and concluded on June 23, 2016, with approval of a second term sheet (June 2016 DPPP Working Group recommendations). This term sheet contained DPPP Working Group recommendations on performance-based energy conservation standard levels, scope of such standards, certain prescriptive requirements, certain labeling requirements, certain definitions, and certain amendments to its previous test procedure recommendations. (Docket No. EERE-2015-BT-STD-0008, No. 82) ASRAC subsequently voted unanimously to approve the June 2016 DPPP Working Group recommendations during the July 29, 2016 meeting.

After carefully considering the consensus recommendations submitted by the DPPP Working Group and adopted by ASRAC, DOE has determined that these recommendations comprised a statement submitted by interested persons who are fairly representative of relevant points of view on this matter. In reaching this determination, DOE took into consideration the fact that the Working Group, in conjunction with ASRAC members who approved the recommendations, consisted of representatives of

manufacturers of covered products, States, and efficiency advocates -- all of which are groups specifically identified by Congress as relevant parties to any consensus recommendation. (42 U.S.C. 6295(p)(4)(A)

DOE has considered the recommended energy conservation standards and believes that they meet the EPCA requirements for issuance of a direct final rule. As a result, DOE published a direct final rule establishing energy conservation standards for pool pumps elsewhere in Federal Register. If DOE receives adverse comments that may provide a reasonable basis for withdrawal and withdraws the direct final rule, DOE will consider those comments and any other comments received in determining how to proceed with this proposed rule.

For further background information on these proposed standards and the supporting analyses, please see the direct final rule published elsewhere in Federal Register. That document includes additional discussion of the EPCA requirements for promulgation of energy conservation standards; the history of the standards rulemaking for pool pumps; and information on the test procedures used to measure the energy efficiency of pool pumps. The document also contains an in-depth discussion of the analyses conducted in support of this rulemaking, the methodologies DOE used in conducting those analyses, and the analytical results.

II. Proposed Standards

1. Benefits and Burdens of Standards Considered for Dedicated-Purpose Pool Pumps

Table II.1 and Table II.2 summarize the quantitative impacts estimated for each trial standard level (TSL) for pool pumps. The national impacts are measured over the lifetime of dedicated-purpose pool pumps purchased in the 30-year period that begins in the anticipated year of compliance with new standards (2021-2050). The energy savings, emissions reductions, and value of emissions reductions refer to full-fuel-cycle results. The efficiency levels contained in each TSL are described in section V.A of the direct final rule.

Table II.1 Summary of Analytical Results for Pool Pumps TSLs: National Impacts

Category	TSL 1	TSL 2	TSL 3	TSL 4	TSL 5
Cumulative FFC National Energy Savings quads					
	0.79	3.0	3.8	4.1	4.6
NPV of Consumer Costs and Benefits billion 2015$					
3% discount rate	5.1	17	24	21	25
7% discount rate	2.5	8.1	11	10	12
Cumulative FFC Emissions Reduction					
CO_2 million metric tons	42	160	202	216	246
SO_2 thousand tons	31	116	147	156	178
NO_X thousand tons	53	203	257	275	313
Hg tons	0.10	0.39	0.50	0.53	0.60
CH_4 thousand tons	200	765	968	1,035	1,179
N_2O thousand tons	0.62	2.3	3.0	3.2	3.6
Value of Emissions Reduction					
CO_2 billion 2015$*	0.327 to 4.388	1.207 to 16.402	1.524 to 20.724	1.624 to 22.104	1.841 to 25.113
CH_4 billion 2015$	0.069 to 0.549	0.256 to 2.082	0.324 to 2.632	0.346 to 2.812	0.393 to 3.202
N_2O billion 2015$	0.002 to 0.019	0.007 to 0.072	0.008 to 0.091	0.009 to 0.097	0.010 to 0.110
NO_X – 3% discount rate billion 2015$	0.103 to 0.231	0.378 to 0.851	0.477 to 1.075	0.508 to 1.144	0.575 to 1.297
NO_X – 7% discount rate billion 2015$	0.047 to 0.106	0.167 to 0.377	0.210 to 0.475	0.222 to 0.503	0.25 to 0.566

Parentheses indicate negative (-) values.

* Range of the economic value of CO_2 reductions is based on estimates of the global benefit of reduced CO_2 emissions.

Table II.2 Manufacturer and Consumer Impacts for Dedicated-Purpose Pool Pumps TSLs

Category	TSL 1*	TSL 2*	TSL 3*	TSL 4*	TSL 5*
Manufacturer Impacts					
Industry NPV million 2015$ (No-standards case INPV = $212.8)	201.0 – 210.9	178.8 – 200.2	166.5 – 219.8	126.2 – 195.9	36.8 – 110.5
Industry NPV % change	(5.5) – (0.9)	(16.0) – (5.9)	(21.8) – 3.3	(40.7) – (7.9)	(82.7) – (48.1)
Consumer Average LCC Savings 2015$					
Standard-Size Self-Priming Pool Filter Pump	669	1,779	2,140	2,140	2,085
Small-Size Self-Priming Pool Filter Pump	295	322	295	360	414
Standard-Size Non-Self-Priming Pool Filter Pump	191	35	191	10	93
Extra-Small Non-Self-Priming Pool Filter Pump	36	36	36	10	10
Waterfall Pump	(3)	(3)	n/a	(20)	13
Pressure Cleaner Booster Pump	111	111	111	(372)	(313)
Integral Cartridge Filter Pump	n/a	n/a	128	n/a	n/a
Integral Sand Filter Pump	n/a	n/a	73	n/a	n/a
Consumer Simple PBP years					
Standard-Size Self-Priming Pool Filter Pump	0.6	0.7	0.7	0.7	0.6
Small-Size Self-Priming Pool Filter Pump	0.8	2.0	0.8	2.1	1.9
Standard-Size Non-Self-Priming Pool Filter Pump	0.2	2.3	0.2	2.3	2.1
Extra-Small Non-Self-Priming Pool Filter Pump	0.9	0.9	0.9	1.6	1.6
Waterfall Pumps	4.5	4.5	n/a	5.4	3.7
Pressure Cleaner Booster Pumps	0.6	0.6	0.6	6.0	5.1
Integral Cartridge Filter Pump	n/a	n/a	0.4	n/a	n/a
Integral Sand Filter Pump	n/a	n/a	0.5	n/a	n/a
Percent of Consumers that Experience a Net Cost %					
Standard-Size Self-Priming Pool Filter Pump	1	5	10	10	8
Small-Size Self-Priming Pool Filter Pump	4	27	4	29	26
Standard-Size Non-Self-Priming Pool Filter Pump	0	58	0	51	47
Extra-Small Non-Self-Priming Pool Filter Pump	4	4	4	39	39
Waterfall Pumps	50	50	n/a	70	55
Pressure Cleaner Booster Pumps	0	0	0	69	68
Integral Cartridge Filter Pump	n/a	n/a	3	n/a	n/a

Category	TSL 1*	TSL 2*	TSL 3*	TSL 4*	TSL 5*
Integral Sand Filter Pump	n/a	n/a	3	n/a	n/a

* Parentheses indicate negative (-) values.

DOE first considered TSL 5, which represents the max-tech efficiency levels. TSL 5 would save an estimated 4.6quads of energy, an amount DOE considers significant. Under TSL 5, the NPV of consumer benefit would be $12 billion using a discount rate of 7 percent, and $25 billion using a discount rate of 3 percent.

The cumulative emissions reductions at TSL 5 are 246 Mt of CO_2; 178 thousand tons of SO_2; 313 thousand tons of NO_X; 0.60 tons of Hg; 1,179 thousand tons of CH_4; and 3.6 thousand tons of N_2O. The estimated monetary value of the GHG emissions reduction at TSL 5 ranges from $1.8billion to $25 billion for CO_2, from $393 million to 3,202 million for CH_4, and from $10 million to $110 million for N_2O. The estimated monetary value of the NO_X emissions reduction at TSL 5 is $250 million using a 7-percent discount rate and $575 million using a 3-percent discount rate.

At TSL 5, the average LCC impact is a savings that ranges from $10 for extra-small non-self-priming pumps, to $2,085 for standard-size self-priming pump, except for pressure cleaner booster pumps, which have a savings of negative $313. The simple payback period ranges from 0.6 years for standard-size self-priming pumps to 5.1 years for pressure cleaner booster pumps. The fraction of consumers experiencing a net LCC cost ranges from eight percent for standard-size self-priming pumps to 68 percent for pressure cleaner booster pumps.

At TSL 5, the projected change in INPV ranges from a decrease of $176.0 million to a decrease of $102.3 million, which correspond to decreases of 82.7 percent and 48.1 percent, respectively. DOE estimates that industry must invest $199.5 million to comply with standards set at TSL 5. Manufacturers would need to redesign a significant portion of the equipment they offer, including hydraulic redesigns to convert the vast majority of their standard-size self-priming pool filter pumps.

The Secretary tentatively concludes that at TSL 5 for dedicated-purpose pool pumps, the benefits of energy savings, positive NPV of consumer benefits, emission reductions, and the estimated monetary value of the emissions reductions would be outweighed by the economic burden on some consumers, and the significant impacts on manufacturers, including the large conversion costs and profit margin impacts that could result in a large reduction in INPV. Consequently, the Secretary has tentatively concluded that TSL 5 is not economically justified.

DOE then considered TSL 4, which represents efficiency levels based on variable speed technology for most equipment classes. TSL 4 would save an estimated 4.1 quads of energy, an amount DOE considers significant. Under TSL 4, the NPV of consumer benefit would be $10 billion using a discount rate of 7 percent, and $21 billion using a discount rate of 3 percent.

The cumulative emissions reductions at TSL 4 are 216 Mt of CO_2, 156 thousand tons of SO_2, 275 thousand tons of NO_X, 0.53 tons of Hg, 1,035thousand tons of CH_4, and 3.2 thousand tons of N_2O. The estimated monetary value of the GHG emissions reduction

at TSL 4 ranges from $1.6 billion to $22 billion for CO_2, from $346 million to $2,812 million for CH_4, and from $8.8 million to $97 million for N_2O. The estimated monetary value of the NO_X emissions reduction at TSL 4 is $222 million using a 7-percent discount rate and $508 million using a 3-percent discount rate.

At TSL 4, the average LCC impact is a savings that ranges from $10 for extra-small non-self-priming pumps, to $2,140 for standard-size self-priming pumps, except for pressure cleaner booster pumps, which have a savings of negative $372, and waterfall pumps, which have a savings of negative $20. The simple payback period ranges from 0.7 years for standard-size self-priming pumps to 6.0 years for pressure cleaner booster pumps. The fraction of consumers experiencing a net LCC cost ranges from 10 percent for standard-size self-priming pumps to 70 percent for waterfall pumps.

At TSL 4, the projected change in INPV ranges from a decrease of $86.6 million to a decrease of $16.9 million, which correspond to decreases of 40.7 percent and 7.9 percent, respectively. DOE estimates that industry must invest $68.4 million to comply with standards set at TSL 4.

The Secretary tentatively concludes that at TSL 4 for dedicated-purpose pool pumps, the benefits of energy savings, positive NPV of consumer benefits, emission reductions, and the estimated monetary value of the emissions reductions, would be outweighed by the economic burden on some consumers, and the significant impacts on manufacturers, including the large conversion costs and profit margin impacts that could

result in a large reduction in INPV. Consequently, the Secretary has tentatively concluded that TSL 4 is not economically justified.

DOE then considered TSL 3, the recommended TSL, which would save an estimated 3.8 quads of energy, an amount DOE considers significant. Under TSL 3, the NPV of consumer benefit would be $11 billion using a discount rate of 7 percent, and $24 billion using a discount rate of 3 percent.

The cumulative emissions reductions at TSL 3 are 202 Mt of CO_2, 147 thousand tons of SO_2; 257 thousand tons of NO_X, 0.50 tons of Hg, 968thousand tons of CH_4; and 3.0 thousand tons of N_2O. The estimated monetary value of the GHG emissions reduction at TSL 3 ranges from $1.5 billion to $21 billion for CO_2, from $324 million to $2,632 million for CH_4, and from $8.3 million to $91 million for N_2O. The estimated monetary value of the NO_X emissions reduction at TSL 3 is $210 million using a 7-percent discount rate and $477 million using a 3-percent discount rate.

At TSL 3, the average LCC impact is a savings that ranges from $36 for extra-small non-self-priming pool filter pumps to $2,140 for standard-size self-priming pumps. The simple payback period ranges from 0.2 years for standard-size non-self-priming pool filter pumps to 0.8 years for extra-small non-self-priming pool filter pumps. The fraction of consumers experiencing a net LCC cost ranges from zero percent for standard-size non-self-priming pumps and pressure cleaner booster pumps to 10 percent for standard-size self-priming pumps.

At TSL 3, the projected change in INPV ranges from a decrease of $46.3 million to an increase of $7.0 million, which represents a decrease of 21.8 percent to an increase of 3.3 percent, respectively. DOE estimates that industry must invest $35.6 million to comply with standards set at TSL 3.

After considering the analysis and weighing the benefits and burdens, the Secretary has tentatively concluded that, at TSL 3 for dedicated-purpose pool pumps, the benefits of energy savings, positive NPV of consumer benefits, emission reductions, the estimated monetary value of the emissions reductions, and positive average LCC savings, would outweigh the potential negative impacts on manufacturers. Accordingly, the Secretary has tentatively concluded that TSL 3 would offer the maximum improvement in efficiency that is technologically feasible and economically justified, and would result in the significant conservation of energy.

Therefore, based on the above considerations, DOE proposes the energy conservation standards for pool pumps at TSL 3. The proposed performance-based energy conservation standards for pool pumps, which are expressed as kgal/kWh, are shown in Table II.3. The proposed prescriptive energy conservation standards for pool pumps are shown in Table II.4.

Table II.3 Proposed Performance-Based Energy Conservation Standards for Dedicated-Purpose Pool Pumps

Equipment Class			Minimum Allowable WEF Score [kgal/kwh]
Dedicated-Purpose Pool Pump Variety	hhp Applicability *	Motor Phase	
Self-priming pool filter pumps	0.711 hp ≤ hhp < 2.5 hp	Single	- 2.30 * ln (hhp) + 6.59
Self-priming pool filter pumps	hhp < 0.711 hp	Single	5.55, for hhp ≤ 0.13 hp -1.30 * ln (hhp) + 2.90, for hhp > 0.13 hp
Non-self-priming pool filter pumps**	hhp < 2.5 hp	Any	4.60, for hhp ≤ 0.13 hp -0.85 * ln (hhp) + 2.87, for hhp > 0.13 hp
Pressure cleaner booster pumps	Any	Any	0.42

*All instances of hhp refer to rated hydraulic horsepower as determined in accordance with the DOE test procedure at 10 CFR 431.464 and applicable sampling plans.
**Because DOE selected the same efficiency level for both extra-small and standard-size non-self-priming pool filter pumps, the two equipment classes were ultimately merged into one.

Table II.4 Proposed Prescriptive Energy Conservation Standards for Dedicated-Purpose Pool Pumps

Equipment Class			Prescriptive Standard
Dedicated-Purpose Pool Pump Variety	hhp Applicability	Motor Phase	
Integral sand filter pool pump	Any	Any	Must be distributed in commerce with a pool pump timer that is either integral to the pump or a separate component that is shipped with the pump.
Integral cartridge filter pool pump	Any	Any	Must be distributed in commerce with a pool pump timer that is either integral to the pump or a separate component that is shipped with the pump.

2. Summary of Annualized Benefits and Costs of the Proposed Standards

The benefits and costs of the proposed standards can also be expressed in terms of annualized values. The annualized net benefit is (1) the annualized national economic value (expressed in 2015$) of the benefits from operating equipment that meet the adopted standards (consisting primarily of operating cost savings from using less energy,

minus increases in product purchase costs, and (2) the annualized monetary value of the benefits of GHG and NO_X emission reductions.

Table II.5 shows the annualized values for dedicated-purpose pool pumps under TSL 3, expressed in 2015$. The results under the primary estimate are as follows.

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),[4] the estimated cost of the standards in this rule is $138 million per year in increased equipment costs, while the estimated annual benefits are $1.3 billion in reduced equipment operating costs, $449 million in GHG reductions, and $22 million in reduced NO_X emissions. In this case, the net benefit amounts to $1.7 billion per year.

Using a 3-percent discount rate for all benefits and costs, the estimated cost of the adopted standards for dedicated-purpose pool pumps is $149 million per year in increased equipment costs, while the estimated annual benefits are $1.5 billion in reduced operating costs, $449 million in CO_2 reductions, and $27 million in reduced NO_X emissions. In this case, the net benefit amounts to $1.8 billion per year.

[4] DOE used average social costs with a 3-percent discount rate these values are considered as the "central" estimates by the interagency group.

Table II.5 Annualized Benefits and Costs of Proposed Standards (TSL 3) for Dedicated-Purpose Pool Pumps

	Discount Rate %	Primary Estimate	Low-Net-Benefits Estimate	High-Net-Benefits Estimate
		million 2015$/year		
Benefits				
Consumer Operating Cost Savings	7	1,340	1,221	1,467
	3	1,516	1,367	1,678
GHG Reduction (using avg. social costs at 5% discount rate)**	5	147	129	164
GHG Reduction (using avg. social costs at 3% discount rate)**	3	449	392	504
GHG Reduction (using avg. social costs at 2.5% discount rate)**	2.5	642	560	721
GHG Reduction (using 95th percentile social costs at 3% discount rate)**	3	1,346	1,175	1,510
NO_X Reduction†	7%	22	20	55
	3%	27	24	70
Total Benefits‡	7% plus GHG range	1,509 to 2,708	1,369 to 2,416	1,686 to 3,032
	7%	1,811	1,633	2,026
	3% plus GHG range	1,690 to 2,890	1,520 to 2,566	1,912 to 3,258
	3%	1,993	1,783	2,252
Costs				
Consumer Incremental Equipment Costs	7%	138	124	151
	3%	149	133	164
Manufacturer Conversion Costs††	7%	3	3	3
	3%	2	2	2
Net Benefits				
Total‡	7% plus GHG range	1,371 to 2,570	1,245 to 2,292	1,535 to 2,881
	7%	1,673	1,509	1,875
	3% plus GHG range	1,542 to 2,741	1,387 to 2,433	1,748 to 3,094
	3%	1,844	1,651	2,088

*This table presents the annualized costs and benefits associated with pool pumps shipped in 2021–2050. These results include benefits to consumers which accrue after 2050 from the pool pumps purchased from 2021–2050. The incremental equipment costs include incremental equipment cost as well as installation costs. The costs account for the incremental variable and fixed costs incurred by manufacturers due to the proposed standards, some of which may be

incurred in preparation for the rule. The Primary, Low Net Benefits, and High Net Benefits Estimates utilize projections of energy prices and real GDP from the AEO2016 No-CPP case, a Low Economic Growth case, and a High Economic Growth case, respectively. In addition, incremental equipment costs reflect the default price trend in the Primary Estimate, a high price trend in the Low Benefits Estimate, and a low price trend in the High Benefits Estimate. The methods used to derive projected price trends are explained in section IV.F.1 of the DFR. Note that the Benefits and Costs may not sum to the Net Benefits due to rounding.

** The interagency group selected four sets of SC-CO_2 SC-CH_4, and SC-N_2O values for use in regulatory analyses. Three sets of values are based on the average social costs from the integrated assessment models, at discount rates of 5 percent, 3 percent, and 2.5 percent. The fourth set, which represents the 95th percentile of the social cost distributions calculated using a 3-percent discount rate, is included to represent higher-than-expected impacts from climate change further out in the tails of the social cost distributions. The social cost values are emission year specific. The GHG reduction benefits are global benefits due to actions that occur nationally. See section IV.L of the DFR for more details.

† DOE estimated the monetized value of NO_X emissions reductions associated with electricity savings using benefit per ton estimates from the Regulatory Impact Analysis for the Clean Power Plan Final Rule, published in August 2015 by EPA's Office of Air Quality Planning and Standards. (Available at www.epa.gov/cleanpowerplan/clean-power-plan-final-rule-regulatory-impact-analysis.) See section IV.L.3 for further discussion. For the Primary Estimate and Low Net Benefits Estimate, DOE used national benefit-per-ton estimates for NO_X emitted from the Electric Generating Unit sector based on an estimate of premature mortality derived from the ACS study (Krewski et al. 2009). For the High Net Benefits Estimate, the benefit-per-ton estimates were based on the Six Cities study (Lepuele et al. 2011); these are nearly two-and-a-half times larger than those from the ACS study.

‡ Total Benefits for both the 3-percent and 7-percent cases are presented using the average social costs with 3-percent discount rate. In the rows labeled "7% plus GHG range" and "3% plus GHG range," the operating cost and NO_X benefits are calculated using the labeled discount rate, and those values are added to the full range of social cost values.

†† Manufacturers are estimated to incur $35.6 million in conversion costs between 2017 and 2020.

III. Other Prescriptive Requirements

As part of the DPPP Working Group's extended charter, the DPPP Working Group considered requirements for pumps distributed in commerce with freeze protections controls. (Docket No. EERE-2013-BT-NOC-0005, No. 71 at pp. 20–52) Freeze protection controls, as defined in the test procedure final rule, are controls that, at certain ambient temperature, turn on the dedicated-purpose pool pump to circulate water for a period of time to prevent the pool and water in plumbing from freezing. As the control schemes for freeze protection vary widely between manufacturers, the resultant energy consumption associated with such control can also vary depending on control settings and climate. To ensure freeze protection controls on dedicated-purpose pool pumps only operate when necessary and do not result in unnecessary energy use, the DPPP Working Group recommended establishing prescriptive requirements for dedicated-purpose pool pumps that are distributed in commerce with freeze protection

controls. Specifically, the DPPP Working Group made the following recommendation, which it purports to maintain end-user utility while also reducing energy consumption:

All dedicated-purpose pool pumps distributed in commerce with freeze protection controls must be shipped either with freeze protection disabled, or with the following default, user-adjustable settings: (1) The default dry-bulb air temperature setting is no greater than 40 °F; and (2) the default run time setting shall be no greater than 1 hour (before the temperature is rechecked); and (3) the default motor speed shall not be more than half of the maximum available speed. Id. (Docket No. EERE-2015-BT-STD-0008, No. 82, Recommendation #6A at p. 4). DOE agrees with the DPPP Working Group's reasoning, and given the considerations discussed in section III.A of the Direct Final Rule, DOE proposes to adopt the recommended prescriptive standard for dedicated-purpose pool pumps distributed in commerce with freeze protection controls.

IV. Procedural Issues and Regulatory Review

The regulatory reviews conducted for this proposed rule are identical to those conducted for the direct final rule published elsewhere in Federal Register. Please see the direct final rule for further details.

V. Public Participation

A. Submission of Comments

DOE will accept comments, data, and information regarding this proposed rule before or after the public meeting, but no later than the date provided in the **DATES**

section at the beginning of this proposed rule. Interested parties may submit comments, data, and other information using any of the methods described in the **ADDRESSES** section at the beginning of this proposed rule.

Submitting comments via www.regulations.gov. The www.regulations.gov webpage will require you to provide your name and contact information. Your contact information will be viewable to DOE Building Technologies staff only. Your contact information will not be publicly viewable except for your first and last names, organization name (if any), and submitter representative name (if any). If your comment is not processed properly because of technical difficulties, DOE will use this information to contact you. If DOE cannot read your comment due to technical difficulties and cannot contact you for clarification, DOE may not be able to consider your comment.

However, your contact information will be publicly viewable if you include it in the comment itself or in any documents attached to your comment. Any information that you do not want to be publicly viewable should not be included in your comment, nor in any document attached to your comment. Otherwise, persons viewing comments will see only first and last names, organization names, correspondence containing comments, and any documents submitted with the comments.

Do not submit to www.regulations.gov information for which disclosure is restricted by statute, such as trade secrets and commercial or financial information (hereinafter referred to as Confidential Business Information (CBI)). Comments submitted through www.regulations.gov cannot be claimed as CBI. Comments received

through the website will waive any CBI claims for the information submitted. For information on submitting CBI, see the Confidential Business Information section .

DOE processes submissions made through www.regulations.gov before posting. Normally, comments will be posted within a few days of being submitted. However, if large volumes of comments are being processed simultaneously, your comment may not be viewable for up to several weeks. Please keep the comment tracking number that www.regulations.gov provides after you have successfully uploaded your comment.

Submitting comments via email, hand delivery/courier, or mail. Comments and documents submitted via email, hand delivery/courier, or mail also will be posted to www.regulations.gov. If you do not want your personal contact information to be publicly viewable, do not include it in your comment or any accompanying documents. Instead, provide your contact information in a cover letter. Include your first and last names, email address, telephone number, and optional mailing address. The cover letter will not be publicly viewable as long as it does not include any comments

Include contact information each time you submit comments, data, documents, and other information to DOE. If you submit via mail or hand delivery/courier, please provide all items on a CD, if feasible, in which case it is not necessary to submit printed copies. No telefacsimiles (faxes) will be accepted.

Comments, data, and other information submitted to DOE electronically should be provided in PDF (preferred), Microsoft Word or Excel, WordPerfect, or text (ASCII)

file format. Provide documents that are not secured, that are written in English, and that are free of any defects or viruses. Documents should not contain special characters or any form of encryption and, if possible, they should carry the electronic signature of the author.

Campaign form letters. Please submit campaign form letters by the originating organization in batches of between 50 to 500 form letters per PDF or as one form letter with a list of supporters' names compiled into one or more PDFs. This reduces comment processing and posting time.

Confidential Business Information. Pursuant to 10 CFR 1004.11, any person submitting information that he or she believes to be confidential and exempt by law from public disclosure should submit via email, postal mail, or hand delivery/courier two well-marked copies: one copy of the document marked "confidential" including all the information believed to be confidential, and one copy of the document marked "non-confidential" with the information believed to be confidential deleted. Submit these documents via email or on a CD, if feasible. DOE will make its own determination about the confidential status of the information and treat it according to its determination.

Factors of interest to DOE when evaluating requests to treat submitted information as confidential include (1) a description of the items, (2) whether and why such items are customarily treated as confidential within the industry, (3) whether the information is generally known by or available from other sources, (4) whether the information has previously been made available to others without obligation concerning

its confidentiality, (5) an explanation of the competitive injury to the submitting person that would result from public disclosure, (6) when such information might lose its confidential character due to the passage of time, and (7) why disclosure of the information would be contrary to the public interest.

It is DOE's policy that all comments may be included in the public docket, without change and as received, including any personal information provided in the comments (except information deemed to be exempt from public disclosure).

B. Public Meeting

As stated previously, if DOE withdraws the direct final rule published elsewhere inthe Federal Register pursuant to 42 U.S.C. 6295(p)(4)(C), DOE will hold a public meeting to allow for additional comment on this proposed rule. DOE will publish notice of any meeting in the Federal Register.

VI. Approval of the Office of the Secretary

The Secretary of Energy has approved publication of this notice of proposed rulemaking.

List of Subjects

10 CFR Part 431

Administrative practice and procedure, Confidential business information, Energy conservation, Imports, Intergovernmental relations, Small businesses.

Issued in Washington, DC, on December 23, 2016

_____

David J. Friedman
Acting Assistant Secretary
Energy Efficiency and Renewable Energy

For the reasons set forth in the preamble, DOE proposes to amend part 431 of chapter II, subchapter D, of title 10 of the Code of Federal Regulations, as set forth below:

PART 431 - ENERGY EFFICIENCY PROGRAM FOR CERTAIN COMMERCIAL AND INDUSTRIAL EQUIPMENT

1. The authority citation for part 431 continues to read as follows:

Authority: 42 U.S.C. 6291-6317;28 U.S.C. 2461 note.

2. Section 431.462 is amended by adding the definition for "pool pump timer" in alphabetical order to read as follows:

§ 431.462 Definitions.

* * * * *

Pool pump timer means a pool pump control that automatically turns off a dedicated-purpose pool pump after a run-time of no longer than 10 hours.

* * * * *

3. Section 431.465 is amended by adding paragraphs (e), (f), (g) and (h) to read as follows:

§431.465 Pumps energy conservation standards and their compliance dates.

* * * * *

(e) For the purposes of paragraph (f) of this section, "WEF" means the weighted energy factor and "hhp" means the rated hydraulic horsepower, as determined in

accordance with the test procedure in §431.464(b) and applicable sampling plans in §429.59 of this chapter.

(f) Each dedicated-purpose pool pump that is not a submersible pump and is manufactured starting on July 19, 2021 must have a WEF rating that is not less than the value calculated from the following table:

Equipment Class		**Minimum Allowable WEF Score [kgal/kWh]**	**Minimum Allowable WEF Score [kgal/kWh]**
Dedicated-Purpose Pool Pump Variety	**hhp Applicability**	**Motor Phase**	
Self-priming pool filter pumps	0.711 hp ≤ hhp < 2.5 hp	Single	WEF = - 2.30 * ln (hhp) + 6.59
Self-priming pool filter pumps	hhp < 0.711 hp	Single	WEF = 5.55, for hhp ≤ 0.13 hp -1.30 * ln (hhp) + 2.90, for hhp > 0.13 hp
Non-self-priming pool filter pumps	hhp < 2.5 hp	Any	WEF = 4.60, for hhp ≤ 0.13 hp -0.85 * ln (hhp) + 2.87, for hhp > 0.13 hp
Pressure cleaner booster pumps	Any	Any	WEF = 0.42

(g) Each integral cartridge filter pool pump and integral sand filter pool pump that is manufactured starting on July 19, 2021 must be distributed in commerce with a pool pump timer that is either integral to the pump or a separate component that is shipped with the pump.

(h) For all dedicated-purpose pool pumps distributed in commerce with freeze protection controls, the pump must be shipped with freeze protection disabled or with the following default, user-adjustable settings:

(1) The default dry-bulb air temperature setting is no greater than 40 °F;

(2) The default run time setting shall be no greater than 1 hour (before the temperature is rechecked); and

(3) The default motor speed shall not be more than ½ of the maximum available speed.

[FR Doc. 2016-31665 Filed: 1/17/2017 8:45 am; Publication Date: 1/18/2017]