[6450-01-P]

DEPARTMENT OF ENERGY

10 CFR Parts 429 and 431

[Docket Number EERE-2014-BT-STD-0027]

RIN 1904-AD31

Energy Conservation Standards for Commercial Prerinse Spray Valves: Availability of Provisional Analysis Tools

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

ACTION: Notice of data availability (NODA).

SUMMARY: The U.S. Department of Energy (DOE) published a notice of proposed rulemaking (NOPR) for the commercial prerinse spray valve (CPSV) energy conservation standards rulemaking on July 9, 2015. 80 FR 39486. In response to comments on the NOPR, DOE has revised its analyses. This NODA announces the availability of those updated analyses and results, and give interested parties an opportunity to comment and submit additional data to support DOE's CPSV rulemaking. At this time, DOE is not proposing any energy conservation standard for commercial prerinse spray valves. The NODA analysis is publically available at: https://www1.eere.energy.gov/buildings/appliance_standards/rulemaking.aspx?ruleid=100.

DATES: DOE will accept comments, data, and information regarding this NODA submitted no later than [**INSERT DATE 14 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**].

ADDRESSES: 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, such as those containing information that is exempt from public disclosure, may not be publicly available.

A link to the docket web page can be found at: http://www.regulations.gov/#!docketDetail;D=EERE-2014-BT-STD-0027. The regulations.gov web page contains instructions on how to access all documents in the docket, including public comments.

For further information on how to review the docket, contact Ms. Brenda Edwards at (202) 586-2945 or by email at Brenda.Edwards@ee.doe.gov.

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SUPPLEMENTARY INFORMATION:

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I. History of Energy Conservation Standards Rulemaking for Commercial Prerinse Spray Valves

Title III, Part B[1] of the Energy Policy and Conservation Act of 1975 (EPCA), Public Law 941–163 (42 U.S.C. 6291–6309, as codified) established the Energy

[1] For editorial reasons, upon codification in the U.S. Code, Part B was redesignated Part A.

Conservation Program for Consumer Products Other Than Automobiles.[2] These products include commercial prerinse spray valves (CPSVs), the subject of this rulemaking.[3] EPCA, as amended, prescribes energy conservation standards for commercial prerinse spray valves (42 U.S.C. 6295(dd)), and requires DOE to conduct rulemakings to determine whether to amend CPSV standards no later than 6 years after issuance of any final rule establishing or amending a standard. (42 U.S.C. 6295(m)(1))

DOE published a notice of proposed rulemaking (NOPR) proposing amended energy conservation standards for commercial prerinse spray valves on July 9, 2015 (herein known as "the CPSV NOPR"). 80 FR 39486. DOE posted the CPSV NOPR, as well as the complete CPSV NOPR technical support document (TSD), on its website.[4] The NOPR and associated TSD proposed new CPSV product classes based on spray force, and presented results for the engineering analysis, economic analyses, and proposed standard levels. DOE held a public meeting on July 28, 2015 to present the CPSV NOPR. At the public meeting, and during the comment period, DOE received comments that addressed issues raised in the CPSV NOPR.

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[2] All references to EPCA in this document refer to the statute as amended through the Energy Efficiency Improvement Act of 2015, Pub. L. 114-11 (Apr. 30, 2015).

[3] Because Congress included commercial prerinse spray valves in Part A of Title III of EPCA, the consumer product provisions of Part A (not the industrial equipment provisions of Part A–1) apply to commercial prerinse spray valves. However, because commercial prerinse spray valves are commonly considered to be commercial equipment, as a matter of administrative convenience and to minimize confusion among interested parties, DOE placed the requirements for commercial prerinse spray valves into subpart O of 10 CFR part 431. [71 FR 71340, 71374 (Dec. 8, 2006)]. Part 431 contains DOE regulations for commercial and industrial equipment.

[4] The CPSV NOPR notice, CPSV NOPR TSD, and CPSV NOPR analysis public meeting information are available at regulations.gov under docket number EERE-2014-BT-STD-0027.

II. Current Status

In response to comments DOE received in response to the CPSV NOPR, DOE has revised the analyses presented in the CPSV NOPR. This NODA announces the availability of those updated analyses and results and invites interested parties to submit comments or additional data to support DOE's ongoing CPSV rulemaking.

The analysis tools described in this notice were developed to support a potential energy conservation standard for commercial prerinse spray valves. At this time, DOE intends to move forward with its traditional regulatory rulemaking activities to develop an energy conservation standard for commercial prerinse spray valves. The provisional analysis presented in today's notice is a step in this process. The final rule will include a TSD, which will contain a detailed written account of the analyses performed in support of the final rule, which will include updates to the analyses made available in this NODA.

In this NODA, DOE is not proposing any energy conservation standards for commercial prerinse spray valves. DOE may revise the analysis presented in the NODA based on any new or updated information or data it obtains between now and the publication of the final rule for commercial prerinse spray valves. DOE encourages stakeholders to provide any additional data or information that may improve the analysis.

III. Summary of the Analyses Performed by the Department of Energy

DOE conducted analyses of commercial prerinse spray valves in the following areas: (1) engineering, (2) manufacturer impacts, (3) life-cycle cost and payback period, and (4) national impacts. The tools used in preparing these analyses (engineering, life-cycle cost, national impacts, and manufacturer impacts spreadsheets) and their respective results are available at: http://www.regulations.gov/#!docketDetail;D=EERE-2014-BT-STD-0027. Each individual spreadsheet includes an introduction describing the various inputs and outputs for the analysis, as well as operation instructions. A brief description of each of these analysis tools is provided below. The key aspects of the present analyses and DOE's updates to the CPSV NOPR analyses are described in the following sections.

A. Engineering Analysis

The engineering analysis establishes the relationship between the manufacturer production cost (MPC) and efficiency levels for each product class of commercial prerinse spray valves. This relationship serves as the basis for cost-benefit calculations performed in the other three analysis tools for individual consumers, manufacturers, and the nation.

In the CPSV NOPR, DOE proposed three product classes that were delineated by spray force. DOE analyzed several efficiency levels of specific flow rates for each product class. DOE received feedback from interested parties opposing the three product class structure and recommending a single product class. (Chicago Faucets, No. 26 at pp.

1-2; PMI, No. 27 at p. 1; Fisher, No. 30 at p. 1; ASAP, NEEA, NRDC, No. 32 at p. 1; PG&E, SCE, SCGC, SDG&E, No. 34 at p. 1-2; AWE, No. 28 at p. 7; and T&S Brass, No. 33 at p. 2)

DOE is required by EPCA to consider performance-related features that justify different standard levels, such as features affecting customer utility, when establishing or amending energy conservation standards. 42 U.S.C. 6295(q)) In response to comments from interested parties, DOE reviewed the market for commercial prerinse spray valves and available data regarding their typical performance and usage characteristics in different applications.

DOE market research shows that commercial prerinse spray valves have a range of flow rates, spray forces, and spray shapes. For example, manufacturers market commercial prerinse spray valves at lower flow rates with specific terminology such as "ultra-low-flow" or "low-flow" spray valves, indicating that there are diverse products available to satisfy different consumer needs when selecting commercial prerinse spray valves. Conversely, for commercial prerinse spray valves at higher flow rates, DOE has predominately observed shower-type units. Shower-type units contain multiple orifices, as opposed to more traditional, single-orifice CPSV unit. In the CPSV NOPR public meeting, T&S Brass stated that consumer satisfaction is very high at the upper range of the market flow rate distribution, and that the showerhead-type commercial prerinse spray valves in the upper range of the market flow rate distribution represent the majority of the market and highest level of customer satisfaction because these units prevent splash-back. (T&S, Public Meeting Transcript, No. 23 at pp. 42-43) T&S Brass also commented that there are several applications of commercial prerinse spray valves, and all may require different spray forces. (T&S Brass, Public Meeting Transcript, No. 6 at p. 39) Based on the above information, DOE believes that the CPSV market offers a variety of prerinse spray valves that have different design features and different end-user applications that affect consumer utility.

Additionally, DOE found a strong linear relationship between spray force and flow rate, indicating that spray force is an important performance related feature that affects consumer utility. The relationship between spray force and flow rate is presented in the accompanying engineering spreadsheet. DOE constructed the flow rate-spray force relationship using data primarily from DOE testing, and supplementary data from DOE's Compliance Certification Management System (CCMS), the U.S. Environmental Protection Agency's (EPA) WaterSense® program, and Food Service Technology Center (FSTC) reports.[5,6,7] Additionally, DOE's research shows that spray force relates to user satisfaction; a WaterSense field study found that low water pressure, or spray force, is a source of user dissatisfaction. WaterSense evaluated 14 commercial prerinse spray valve models and collected 56 consumer satisfaction reviews, of which 9 indicated unsatisfactory performance. Seven of the nine unsatisfactory reviews were attributed,

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[5] DOE compliance certification data for commercial prerinse spray valves available at www.regulations.doe.gov/certification-data/

[6] EPA WaterSense program, September 19, 2013. WaterSense Specification for Commercial Pre-Rinse Spray Valves Supporting Statement. Version 1.0. http://www.epa.gov/watersense/partners/prsv_final.html

[7] Food Service Technology Center test data for prerinse spray valves available at www.fishnick.com/equipment/sprayvalves/

among other factors, to the water pressure, or the user-perceived force of the spray.[8] Therefore, DOE concludes that separating commercial prerinse spray valves into product classes based on spray force is justified, because spray force is a performance-related feature that affects consumer utility, and spray force is strongly correlated with flow rate.

To determine the number of product classes, DOE tested and analyzed a wide range of CPSV units on the market, spanning multiple manufacturers, flow rates, and spray shapes. Based on DOE's test data and additional market research, DOE found that available CPSV models could be differentiated into three distinct spray force ranges. DOE believes that each spray force range represents a specific CPSV application. This conclusion is supported by comments submitted by T&S Brass to the Framework document, suggesting three product classes: (1) an ultra low-flow commercial prerinse spray valve with a maximum flow rate of 0.8 gallons per minute (gpm), (2) a low-flow commercial prerinse spray valve with flow rates of 0.8 to 1.28 gpm, and (3) a standard commercial prerinse spray valve with flow rates of 1.28 to 1.6 gpm. (T&S Brass, No. 12 at p. 3) Therefore, in this NODA, DOE maintains the three product classes presented in the CPSV NOPR. However, based on feedback from interested parties, DOE renames the product classes as product class 1, 2, and 3 instead of using the terminology "light-duty", "standard-duty", and "heavy-duty," respectively. As defined, product class 1 provides distinct utility for cleaning delicate glassware and removing loose food particles from dishware, product class 2 provides distinct utility for cleaning wet foods, and product

[8] EPA WaterSense, Prerinse Spray Valves Field Study Report, at 24-25(Mar. 31, 2011) (Available at: www.epa.gov/watersense/docs/final_epa_prsv_study_report_033111v2_508.pdf).

class 3 provides distinct utility for cleaning baked-on foods and preserving shower-type units, which prevent splash-back.

For each of the product classes, DOE determined the spray force ranges based on the CPSV flow rate-spray force linear relationship. DOE's product class 1 includes units less than or equal to 5 ounce-force (ozf), product class 2 includes units greater than 5 ozf but less than or equal to 8 ozf, and product class 3 includes units greater than 8 ozf. DOE selected 8.0 ozf as the spray force cut-off between product class 2 and product class 3 based on test results of commercial prerinse spray valves with shower-type spray shapes. DOE testing showed that the upper range of the market, in terms of flow rate, predominantly includes shower-type units. DOE found that the lowest tested spray force of any shower-type unit was 8.1 ozf. Therefore, to maintain the consumer utility provided by shower-type units, DOE selected 8.0 ozf to differentiate product class 3 units from other commercial prerinse spray valves available on the market. Additionally, this spray force threshold is corroborated by T&S Brass's comments to the Framework document suggesting three product classes. T&S Brass suggested a flow rate cut-off of 1.28 gpm between the "low-flow" and "standard" commercial prerinse spray valves. (T&S Brass, No. 12 at p. 3) Converting this flow rate into spray force using the flow rate-spray force linear relationship equates 1.28 gpm to 8.5 ozf. This spray force can be conservatively rounded to 8.0 ozf.

DOE selected 5.0 ozf as the spray force cut-off between product class 1 and product class 2 based on DOE's test data and market research, which clearly showed a cluster of CPSV units above and below that threshold. One cluster of CPSV units had spray force ranges between 4.1 and 4.8 ozf, and the other cluster was between 5.5 and 7.7 ozf. Therefore, DOE established the threshold between the two classes at 5.0 ozf. This spray force threshold is corroborated by T&S Brass's comment to the Framework document suggesting a flow rate cut-off of 0.80 gpm between the "ultra-low-flow" and "low-flow" commercial prerinse spray valves, which equates to 5.3 ozf using the flow rate-spray force linear relationship. This spray force can be conservatively rounded to 5.0 ozf.

While DOE acknowledges the comments from interested parties regarding DOE's CPSV product class structure, DOE maintains that all available data and information from manufacturers suggests that: (1) flow rate and spray force are strongly correlated, and (2) CPSV units with different flow rates or spray forces are available in the market, and provide distinct consumer utility in the different applications those units are designed to serve. Therefore, in this NODA, DOE has maintained the product class structure presented in the NOPR, with three product classes differentiated by spray force.

1. Summary of Engineering Updates for the NODA

In addition to the product class structure, DOE received comment on, and updated a number of other assumptions in its engineering analysis presented in this NODA. In addition, DOE conducted additional testing of CPSV units to gather more data on the range of CPSV products available in the market. Specifically, DOE's revised updates include the following:

- Based on new test data, DOE updated the flow rate-spray force relationship, which is presented in the accompanying engineering spreadsheet.

- Based on new test data, DOE updated the approach to define baseline levels for product class 1 and product class 2 to be the higher flow rate of either (1) the tested least-efficient unit or (2) the theoretical least-efficient unit at the intersection of the flow rate-spray force linear relationship and the spray force bounds. In product class 1, DOE revised the baseline to 1.00 gpm, which is a tested unit with a flow rate of 0.97 gpm, rounded-up to a whole number. This is greater than the theoretical flow rate at the intersection of the flow rate-spray force linear relationship and the spray force bound of 5.0 ozf, which is 0.75 gpm. In product class 2, DOE revised the baseline level to 1.20 gpm, which is the intersection of the flow rate-spray force linear relationship and the 8.0 ozf spray force bound. The baseline for product class 3 is the current DOE standard of 1.6 gpm.
- Based on new test data, DOE revised the max-tech levels from 0.65, 0.97, and 1.24 gpm to 0.62, 0.73, and 1.13 gpm for product class 1, product class 2 and product class 3, respectively.
- Based on the updates to the baseline and max-tech levels, DOE updated the EL 1 and EL 2 flow rates in product class 1 and product class 2 to reflect a 15 percent and 25 percent improvement, respectively, over the baseline efficiency. Table III.1 through Table III.3 provide the updated efficiency levels for all product classes.

Table III.1 Efficiency Levels for CPSV Product Class 1 (Spray Force ≤ 5 ozf)

Efficiency Level	Description	Flow Rate gpm
Level 0	Baseline	1.00

Level 1	15% improvement over baseline	0.85
Level 2	25% improvement over baseline	0.75
Level 3	Maximum available ("max tech")	0.62

Table III.2 Efficiency Levels for CPSV Product Class 2 (5 ozf < Spray Force ≤ 8 ozf)

Efficiency Level	Description	Flow Rate gpm
Level 0	Baseline	1.20
Level 1	15% improvement over baseline	1.02
Level 2	25% improvement over baseline	0.90
Level 3	Maximum available ("max tech")	0.73

Table III.3 Efficiency Levels for CPSV Product Class 3 (Spray force > 8 ozf)

Efficiency Level	Description	Flow Rate gpm
Level 0	Baseline	1.60
Level 1	10% improvement over baseline	1.44
Level 2	WaterSense Level; 20% improvement over baseline	1.28
Level 3	Maximum available (max-tech)	1.13

B. Life-Cycle Cost and Payback Period Analysis

The life-cycle cost (LCC) and payback period (PBP) analysis determines the economic impact of potential standards on individual consumers. The LCC is the total cost of purchasing, installing and operating a commercial prerinse spray valve over the course of its lifetime. The LCC analysis compares the LCC of a commercial prerinse spray valve designed to meet possible energy conservation standards with the LCC of a commercial prerinse spray valve likely to be installed in the absence of standards. DOE determines LCCs by considering (1) total installed cost to the consumer (which consists of manufacturer selling price, distribution chain markups, and sales taxes), (2) the range of annual energy consumption of commercial prerinse spray valves that meet each of the efficiency levels considered as they are used in the field, (3) the operating cost of commercial prerinse spray valves (e.g., energy cost), (4) CPSV lifetime, and (5) a discount rate that reflects the real consumer cost of capital and puts the LCC in present-value terms. The PBP represents the number of years needed to recover the typically increased purchase price of higher-efficiency commercial prerinse spray valves through savings in operating costs. PBP is calculated by dividing the incremental increase in installed cost of the higher efficiency product, compared to the baseline product, by the annual savings in operating costs. In this analysis, because more efficient products do not cost more than baseline efficiency products, the PBP is zero, meaning that consumers do not have any incremental product costs to recover via lower operating costs.

For commercial prerinse spray valves, DOE performed an energy and water use analysis that calculated energy and water use of commercial prerinse spray valves at each efficiency level within each product class identified in the engineering analysis. DOE determined the range of annual energy consumption and annual water consumption using the flow rate of each EL within each product class from the engineering analysis, the average annual operating time, and the energy required to heat a gallon of water used at the commercial prerinse spray valve. Recognizing that several inputs to the determination of consumer LCC and PBP are either variable or uncertain (e.g., annual energy consumption, product lifetime, electricity price, discount rate), DOE conducts the LCC and PBP analysis by modeling both the uncertainty and variability in the inputs using a Monte Carlo simulation and probability distributions.

The primary outputs of the LCC and PBP analysis are (1) average LCCs, (2) median PBPs, and (3) the percentage of consumers that experience a net cost for each product class and efficiency level. The average annual energy consumption derived in the LCC analysis is used as an input to the National Impact Analysis (NIA).

C. National Impact Analysis

The NIA estimates the national energy savings (NES), national water savings (NWS), and the net present value (NPV) of total consumer costs and savings expected to result from potential new standards at each trial standard level (TSL). DOE defined four TSLs in the CPSV NOPR, and in this NODA provides three additional TSLs. The new TSLs analyzed in this NODA are shown in Table III.4. DOE defined these three TSLs based on flow rates for each product class that would not induce consumers to switch product classes (as discussed in the CPSV NOPR) as a result of a standard at those TSLs. That is, DOE selected flow rates that would allow consumers to maintain provided utility without purchasing units from a different product class.

Table III.4 Efficiency Levels by Product Class and TSL

TSL	Product Class 1	Product Class 2	Product Class 3
A	0	0	1
B	0	0	2
C	0	0	3

DOE calculated NES, NWS, and NPV for each TSL as the difference between a no-new-standards case scenario (without new standards) and the standards-case scenario (with standards). Cumulative energy savings are the sum of the annual NES determined over the lifetime of commercial prerinse spray valves shipped during the analysis period. Energy savings reported include the full-fuel cycle energy savings (i.e., inclusive of the energy needed to extract, process, and deliver primary fuel sources such as coal and natural gas, and the conversion and distribution losses of generating electricity from those fuel sources). Similarly, cumulative water savings are the sum of the annual NWS determined over the lifetime of commercial prerinse spray valves shipped during the analysis period. The NPV is the sum over time of the discounted net savings each year, which consists of the difference between total operating cost savings and any changes in total installed costs. NPV results are reported for discount rates of 3 percent and 7 percent.

To calculate the NES, NWS, and NPV, DOE projected future shipments and efficiency distributions (for each TSL) for each CPSV product class. After further research and consideration of public comments regarding product shipments (T&S, Public Meeting Transcript, No. 23 at pp. 81), DOE updated its shipments projections from the NOPR to more accurately characterize the CPSV market. The most significant update was allocating more of the overall market share to product class 3 products relative to product classes 1 and 2. Other inputs to the NIA include the estimated CPSV lifetime, final installed costs, and average annual energy and water consumption per unit from the LCC. For detailed NIA results for the newly-added TSLs, see Table IV.4 and Table IV.5.

The purpose of this NODA is to notify industry, manufacturers, consumer groups, efficiency advocates, government agencies, and other stakeholders on issues related to the provisional analysis of potential energy conservation standards for commercial prerinse spray valves. Stakeholders should contact DOE for any additional information pertaining to the analyses performed for this NODA.

D. Manufacturer Impact Analysis

For the manufacturer impact analysis (MIA), DOE used the Government Regulatory Impact Model (GRIM) to assess the economic impact of potential standards on CPSV manufacturers. DOE developed key industry average financial parameters for the GRIM using publicly available data from corporate annual reports. Additionally, DOE used this and other publicly available information to estimate and account for the aggregate industry investment in capital expenditures and research and development required to produce compliant products at each efficiency level.

The GRIM uses this information in conjunction with inputs from other analyses including manufacturer production costs from the engineering analysis; shipments from the shipments analysis; and price trends from the national impact analysis (NIA) to model industry annual cash flows from the base year through the end of the analysis period. The primary quantitative output of this model is the industry net present value (INPV), which DOE calculates as the sum of industry cash flows discounted to the present day using industry specific weighted average costs of capital.

Standards affect INPV by requiring manufacturers to make investments in manufacturing capital and product development. Under potential standards, DOE expects that manufacturers may lose a portion of their INPV, which is calculated as the difference between INPV in the no-new-standards case (absent new energy conservation standards) and in the standards case (with new energy conservation standards in effect). DOE examines a range of possible impacts on industry by modeling scenarios with various levels of investment.

IV. Results of the Economic Analyses

A. Economic Impacts on Consumers

Table IV.1 through Table IV.3 provide LCC and PBP results for the newly added TSLs discussed in section III.C.

Table IV.1 Product Class 1 LCC and PBP Results

Product Class 1 (Spray Force ≤ 5 ozf)						
TSL	Efficiency Level	Average Costs 2014$				Simple Payback Period years
		Installed Cost	First Year's Operating Cost	Lifetime Operating Cost	LCC*	
A,B,C	0	76	487	2,229	2,305	0.0
-	1	76	414	1,895	1,971	0.0
-	2	76	366	1,672	1,748	0.0
-	3	76	302	1,382	1,458	0.0

Product Class 1 (Spray Force ≤ 5 ozf)			
TSL	Efficiency Level	Life-Cycle Cost Savings**	
		% of Customers that Experience Net Cost	Average Savings 2014$
A,B,C	0	0	0
-	1	0	334
-	2	0	557
-	3	0	352

Table IV.2. Product Class 2 LCC and PBP Results

Product Class 2 (Spray Force > 5 ozf and ≤ 8 ozf)						
TSL	Efficiency Level	Average Costs 2014$				Simple Payback Period years
		Installed Cost	First Year's Operating Cost	Lifetime Operating Cost	LCC*	

A,B,C	0	76	585	2,675	2,751	0.0
-	1	76	497	2,274	2,350	0.0
-	2	76	439	2,006	2,082	0.0
-	3	76	356	1,627	1,704	0.0

Product Class 2 (Spray Force > 5 ozf and < 8 ozf)			
TSL	**Efficiency Level**	**Life-Cycle Cost Savings****	
		% of Customers that Experience Net Cost	**Average Savings <u>2014$</u>**
A,B,C	0	0	0
-	1	0	401
-	2	0	446
-	3	0	825

Table IV.3. Product Class 3 LCC and PBP Results

Product Class 3 (Spray Force > 8 ozf)						
TSL	**Efficiency Level**	**Average Costs 2014$**				**Simple Payback Period years**
		Installed Cost	**First Year's Operating Cost**	**Lifetime Operating Cost**	**LCC***	
-	0	76	780	3,566	3,643	0.0
A	1	76	702	3,210	3,286	0.0
B	2	76	624	2,853	2,929	0.0
C	3	76	551	2,519	2,595	0.0

Product Class 3 (Spray Force > 8 ozf)			
TSL	**Efficiency Level**	**Life-Cycle Cost Savings****	
		% of Customers that Experience Net Cost	**Average Savings 2014$**
-	0	0	0
A	1	0	357
B	2	0	547
C	3	0	766

B. Economic Impacts on the Nation

Table IV.4 provides energy and water impacts associated with the newly-added TSLs. Table IV.5, also for these selected TSLs, provides NPV results.

Table IV.4 Commercial Prerinse Spray Valves: Cumulative National Energy and Water Savings for Products Shipped in 2019-2048

TSL	Product Class	National Energy Savings (quads)*		National Water Savings billion gallons
		Primary	Full-Fuel Cycle	
A	1 (≤5 ozf)	0.000	0.000	0.000
	2 (>5 ozf and ≤8 ozf)	0.000	0.000	0.000
	3 (>8 ozf)	0.032	0.035	41.590
	TOTAL TSL 1	**0.032**	**0.035**	**41.590**
B	1 (≤5 ozf)	0.000	0.000	0.000
	2 (>5 ozf and ≤8 ozf)	0.000	0.000	0.000
	3 (>8 ozf)	0.093	0.101	119.572
	TOTAL TSL 4	**0.093**	**0.101**	**119.572**
C	1 (≤5 ozf)	0.000	0.000	0.000
	2 (>5 ozf and ≤8 ozf)	0.000	0.000	0.000
	3 (>8 ozf)	0.166	0.180	212.175
	TOTAL TSL 5	**0.166**	**0.180**	**212.175**

* "quad" = one quadrillion British thermal units.

Table IV.5 Commercial Prerinse Spray Valves: Cumulative Net Present Value of Consumer Benefits for Products Shipped in 2019-2048

TSL	Product Class	Net Present Value billion $2014	
		7-Percent Discount Rate	3-Percent Discount Rate
A	1 (≤5 ozf)	0.000	0.000
	2 (>5 ozf and ≤8 ozf)	0.000	0.000
	3 (>8 ozf)	0.250	0.513
	TOTAL TSL 1	**0.250**	**0.513**
B	1	0.000	0.000

TSL	Product Class	Net Present Value billion $2014	
		7-Percent Discount Rate	3-Percent Discount Rate
	(≤5 ozf)		
	2 (>5 ozf and ≤8 ozf)	0.000	0.000
	3 (>8 ozf)	0.718	1.476
	TOTAL TSL 4	**0.718**	**1.476**
C	1 (≤5 ozf)	0.000	0.000
	2 (>5 ozf and ≤8 ozf)	0.000	0.000
	3 (>8 ozf)	1.274	2.619
	TOTAL TSL 4	**1.274**	**2.619**

C. Economic Impacts on Manufacturers

Table IV.6 provides manufacturer impacts associated with the newly added TSLs under the sourced materials conversion cost scenario. Table IV.7, also for these selected TSLs, provides manufacturer impacts under the fabricated materials conversion cost scenario.

Table IV.6 Manufacturer Impact Analysis for Commercial Prerinse Spray Valves under the Sourced Materials Conversion Cost Scenario

	Units	No-Standards Case	Trial Standard Level		
			A	B	C
INPV	2014$ MM	8.6	8.4	8.1	8.1
Change in INPV $	2014$ MM	-	(0.2)	(0.5)	(0.5)
Change in INPV %	%	-	(2.5)	(5.5)	(6.0)
Product Conversion Costs	2014$ MM	-	0.4	0.8	0.8
Capital Conversion Costs	2014$ MM	-	-	0.1	0.1
Total Investment Required	2014$ MM	-	0.4	0.9	0.9

Table IV.7 Manufacturer Impact Analysis for Commercial Prerinse Spray Valves under the Fabricated Materials Conversion Cost Scenario

	Units	No-Standards Case	Trial Standard Level		
			A	B	C
INPV	2014$ MM	8.6	8.0	7.6	7.5
Change in INPV $	2014$ MM	-	(0.6)	(0.9)	(1.1)
Change in INPV %	%	-	(6.5)	(11.1)	(12.6)
Product Conversion Costs	2014$ MM	-	0.4	0.8	0.8
Capital Conversion Costs	2014$ MM	-	0.4	0.6	0.8
Total Investment Required	2014$ MM	-	0.8	1.4	1.6

V. Public Participation

DOE is interested in receiving comments on all aspects of the data and analysis presented in the NODA and supporting documentation that can be found at: https://www1.eere.energy.gov/buildings/appliance_standards/product.aspx/productid/54.

A. Submission of Comments

DOE will accept comments, data, and information regarding this notice no later than the date provided in the **DATES** section at the beginning of this notice. Interested parties may submit comments, data, and other information using any of the methods described in the **ADDRESSES** section at the beginning of this notice.

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 only be viewable to DOE Building Technologies staff. 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 below.

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, or mail will also 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 facsimiles (faxes) will be accepted.

Comments, data, and other information submitted to DOE electronically should be provided in portable document format (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 and 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 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. 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 which 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).

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Energy Efficiency and Renewable Energy

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