



California Energy Commission

**DOCKETED**

**14-AAER-1**

**TN 73157**

**JUN 06 2014**

June 6, 2014

California Energy Commission  
Dockets Office, MS-4  
Re: Docket No. 14-AAER-1  
1516 Ninth Street  
Sacramento, CA 95814-5512  
*Email: docket@energy.ca.gov*

**RE: CEC DOCKET NO. 14-AAER-1, APPLIANCE EFFICIENCY PRE-RULEMAKING**

Dear Commissioners,

Sloan Valve Company appreciates the opportunity to provide comments regarding this Rulemaking. We have participated in each phase of this pre-rulemaking, including the "Invitation to Participate" and the "Invitation to Submit Proposals" both held in 2013. We also attended the May 6, 2014 public workshop where the recommendations of staff (as contained in their April 2014 Staff Report) were presented and public comments were also provided. We have reviewed thoroughly both the California Energy Commission (CEC) April 2014 staff report and the CASE team recommendations from the California Investor Owned Utilities (IOU's) related to the subject docket. **We support the CEC staff recommendation for the proposed faucet, toilet and urinal rulemaking and we urge the Commission to adopt the staff recommendations with some minor changes noted in our attachment "A".**

CEC staff has engaged in an extensive process with stakeholders, and it has developed significant new recommendations for toilets, urinals, and faucets. The CEC staff recommendations would:

- Require that toilets use no more than 1.28 gallons per flush, replacing the current limit of 1.6 gallons per flush.
- Permit a 2:1 ratio for dual flush toilets and flushometer valves.
- Limit urinals to 0.5 gallons per flush, replacing the current standard of 1.0 gallons per flush.
- Limit lavatory faucets to 1.5 gallons per limit maximum, replacing the current limit of 2.2 gallons per minute.

CEC staff has developed its recommendations for toilets, urinals, and faucets that would save about 8.2 billion gallons of water, 24.6 million therms (Mtherm) of natural gas, and 169 gigawatt hours (GWh) per year the first year the standard is in effect. By the year that the toilet stock turns over (2039), the proposed standards would have a combined annual savings of about 86.6 billion gallons of water, 223 Mtherm of natural gas, and 1,660 GWh. This equates to roughly \$1.12 billion in savings to California businesses and individuals. In addition, the proposed standards would reduce greenhouse gas emissions by 1.9 million tons of carbon dioxide equivalents (CO<sub>2</sub>e) annually.

We are greatly concerned with proposals that the CEC go further and enact four unprecedented new statewide standards for toilets, urinals and faucets that would present a potential danger to public health and would cause significant consumer concerns.

These four proposals do not take into account the behavior of the typical consumer when using a plumbing fixture, and they fail to acknowledge the realities on the structure and operation of plumbing systems. In some cases, the proposals would also increase water usage.

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**Dual Flush Toilets** – The proposed change from average flush volumes to maximum flush volumes would only work to ban innovation from the marketplace. Current California law established by AB 715 [Chapter 499, Statutes of 2007] establishes a weighted average approach for dual flush toilets and is the model that should be followed.

**Toilets** – The proposal to increase the minimum toilet extraction requirement threshold to 600 grams would neither help the consumer nor decrease double flushing, would encourage manufacturers to focus unduly on solids and not sufficiently on other attributes like cleaning and scouring the bowl, and would result in products that are less effective in meeting consumer needs, not more effective.

**Urinals** – The proposed 87.5% reduction in maximum urinal flush volume would restrict fixture compatibility with plumbing systems. 0.125 gallons per flush urinals are not proven to be effective in all installation situations leading to clogged drainlines.

**Lavatory Faucets** – The proposed decrease in maximum flow rates would cause an increased wait time for hot water and hand washing time - increasing water usage. Furthermore, reduced flows can also lead to a reduction in scouring the trap to remove sediment leading to clogged lavatories.

While the intent of these four proposals may have been to save water and as a result energy, it has been demonstrated here and by other commentators that these proposals ignore systemic aspects of plumbing and that they may result in serious unintended consequences. As a manufacturer of plumbing products in each of the categories under review, we find these four proposals to be ill-advised as each of them has a high likelihood of plumbing system issues, water waste, customer dissatisfaction, and public health concerns.

Therefore, we again ask the Commission to adopt the recommendations of staff with the minor changes identified in Attachment "A".

Thank you for your consideration of these comments. If you have any questions or need further information, please contact me.

Sincerely,

*Daniel Gleiberman*

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## ATTACHMENT "A"

### CEC DOCKET NO. 14-AAER-1, APPLIANCE EFFICIENCY PRE-RULEMAKING

#### SLOAN VALVE COMPANY RECOMMENDED PROPOSED CHANGES TO TITLE 20

##### KEY

CEC Staff underlines and ~~strike-outs~~

**SLOAN** underlines and ~~strike-outs~~

**Sloan substantiations**

#### **Section 1601. Scope.**

(h) Plumbing fittings, which are showerheads, lavatory faucets, kitchen faucets, metering faucets, replacement accessories aerators, ~~wash fountains~~, wash fountains tub spout diverters, and commercial pre-rinse spray valves.

Wash fountains use water only as it relates to the fitting that is used and therefore they should continue to be included in this scope.

(i) Plumbing fixtures, which are water closets, ~~and~~ and urinals, ~~and wash fountains, and replacement valves for water closets and urinals.~~

**Flush valves are not considered "plumbing fixtures" in accordance with ASME A112.18.1/CSA B125.1 and ASME A112.19.5/CSA B45.15. What are wash fountains? There is no definition. They are not regulated by EPAct or AB 715 but they are currently in Title 20 and therefore we propose to keep this reference in the "plumbing fittings" section above.**

#### **Section 1602. Definitions.**

##### **(a) General.**

~~"MaP" means maximum flushing performance.~~

**Why? Water closet testing is addressed in Section 7 of ASME A112.19.2/CSA B45.1-2013.**

##### **(h) Plumbing Fittings.**

~~"Replacement accessory" means a component that can, at the discretion of the user, be readily added, removed, or replaced at that, when removed, will not prevent the fitting from fulfilling its primary function. Examples include, but not limited to, aerators, hand-held shower assemblies, showerheads, and in-line flow controls, device designed to regulate water flow, including but not limited to pressure-compensating device, restricting device, aerator, laminar device, or spray device that is sold separately from the lavatory or kitchen faucet to which it is intended to be attached.~~

**Why? The revision will correlate with the definition for "accessory" found in ASME A112.18.1/CSA B125.1-2012.**

“Plumbing fitting” means a fitting that controls and guides the flow of water in a supply system. ~~showerhead, lavatory faucet, kitchen faucet, metering faucet, replacement accessory, commercial pre-rinse spray valves, or tub spout diverter.~~

**Why? The revision will correlate with the definition for “supply fitting” found in ASME A112.18.1/CSA B125.1-2012.**

“Public lavatory faucet” means a fitting intended to be installed in non-residential bathrooms that are exposed to walk-in traffic. ~~lavatory faucet that is designed and marketed expressly for use at a restroom available to the public.~~

**Why? The revision will correlate with the definition for “public lavatory fitting” found in ASME A112.18.1/CSA B125.1-2012.**

#### **(i) Plumbing Fixtures.**

“Blowout type bowl” means a nonsiphonic type water closet bowl with that is designed for a blowout action, and that has an integral flushing rim, a trapway at the rear of the bowl, and a visible or concealed jet that operates with a blowout action. ~~, a wall outlet, and, if wall mounted, a three bolt hole configuration.~~ **Why? The revision will correlate with the definition for “blowout bowl” found in ASME A112.19.2/CSA B45.1-2013.**

“Blowout urinal” means a urinal designed for heavy-duty commercial applications that work on a powerful nonsiphonic principle.

**Why? This definition correlates with the same definition referenced in AB 715, and is consistent with SLOAN’s revision to Table A-2.**

“Dual-flush average effective flush volume” ~~means the average of two small flushes and one large flush of a dual-flush water closet.~~ is defined as the composite, average flush volume of two reduced flushes and one full flush.

**Why? The revision will correlate with the definition for “effective flush volume” found in AB 715.**

“Dual-flush water closet” is a water closet incorporating a feature that allows the user to flush the water closet with either a reduced or a full volume of water. ~~that allows a user to choose between two amounts of water to flush.~~

**Why? The revision will correlate with the definition for “dual-flush water closet” found in ASME A112.19.2/CSA B45.1-2013.**

“Electromechanical hydraulic water closet” means a water closet with a non-mechanical trap seal incorporating an electric motor and controller to facilitate flushing. ~~that uses electrically operated devices, such as, but not limited to, air compressors, pumps, solenoids, motors, or macerators in place of or to aid gravity in evacuating waste from the toilet bowl.~~

**Why? The revision will correlate with the definition for “electro-hydraulic water closet” found in ASME A112.19.2/CSA B45.1-2013.**

“Flushometer valve” means a flushing device valve that is attached to a pressurized water supply pipe and that, is designed so that when actuated, it opens the line pipe for direct flow into the fixture at a rate and in a predetermined quantity that enables to properly operation of operate the fixture, and The valve then gradually closes in order to provide trap reseal in the fixture and to avoid water hammer. ~~The pipe to which the device is connected is, in itself, of sufficient size that when open shall allow the device to deliver water at a sufficient rate of flow for flushing.~~

**Why? The revision will correlate with the definition for “flushometer valve” found in ASME A112.19.2/CSA B45.1-2013.**

~~“Institutional water closet” means any water closet fixture with a design not typically found in residential or commercial applications or that is designed for a specialized application, including, but not limited to, wall-mounted floor-outlet water closets, water closets used in jails or prisons, water closets used in bariatric applications, and child water closets used in day care facilities.~~

**Why? This definition correlates with the same definition referenced in AB 715, and is consistent with SLOAN’s change in Section 1605.1(i)(1).**

~~“Plumbing fixture” means a device that receives water or waste matter, or both, and directs these substances into a drainage system. an exchangeable device, which is connected to an existing plumbing system to deliver and drain away water and/or waste. For this section, plumbing fixture includes a water closet, or a urinal, wash fountain, or replacement valve.~~

**Why? The revision will correlate with the definition for “fixture” found in ASME A112.18.1/CSA B125.1-2012 and ASME A112.19.2/CSA B45.1-2013.**

~~“Replacement valve” means a valve that is clearly labeled for use to replace the existing flushing valve of an existing toilet or urinal in buildings built on or before 1994.~~

**Why? There is no such term as “replacement valve.” Marking them as “replacement” could be problematic, as they are not currently marked as such throughout the industry.**

“Urinal” means a **plumbing** fixture that receives only liquid body waste and, ~~on demand,~~ conveys the waste through a trap **seal** into a **gravity** drainage system.

**Why? The revision will correlate with the definition for “urinal” found in ASME A112.19.2/CSA B45.1-2013.**

“Water closet” means a **plumbing** fixture **with having** a water-containing receptor that receives liquid and solid body waste **and on actuation conveys the waste** through an exposed integral trap into a **gravity** drainage system.

**Why? The revision will correlate with the definition for “water closet” found in ASME A112.19.2/CSA B45.1-2013.**

“Water use” means the quantity of water flowing through a water closet or urinal at point of use, determined in accordance with test procedures under Appendix T of subpart B of 10 C.F.R. part 430.

~~“Waterless urinal” means a urinal designed to be used without the application of water for flushing.~~

**“Nonwater-supplied urinal” means a urinal that conveys liquid body waste through a trap seal into a gravity drainage system without the use of water.**

**Why? The change from “waterless urinal” to “nonwater-supplied urinal” is consistent with terminology used in AB 715. Furthermore, the revision will correlate with the definition for a “non-water-consuming urinal” found in ASME A112.19.2/CSA B45.1-2013.**

## **Section 1604. Test Methods for Specific Appliances.**

### **(i) Plumbing Fixtures.**

The test methods for plumbing fixtures are:

(1) 10 C.F.R. section 430.23(t) (Appendix T to Subpart B of part 430).

(2) ~~Waste Extraction Test (Section 7.10) of ASME A112.19.2/CSA B45.1-2013. MaP Testing Toilet Fixture Performance Testing Protocol Version 5 March 2013.~~

**Why? Water closet extraction testing is addressed in Section 7.10 of ASME A112.19.2/CSA B45.1-2013. Also, it is more appropriate to reference industry consensus standards.**

The following documents are incorporated by reference in Section 1604.

~~**MAXIMUM PERFORMANCE (MaP) TESTING**~~

~~Waste Extraction Test (Section 7.10) of ASME A112.19.2/CSA B45.1-2013 MaP Testing Toilet Fixture Performance Testing Protocol Version 5—March 2013~~

**Why? Water closet extraction testing is addressed in Section 7.10 of ASME A112.19.2/CSA B45.1-2013. Also, it is more appropriate to reference industry consensus standards.**

**Section 1605.1. Federal and State Standards for Federally Regulated Appliances.**

**(h) Plumbing Fittings.**

(1) Showerheads, Faucets, Aerators, and Wash Fountains. The flow rate of showerheads, lavatory faucets, kitchen faucets, lavatory replacement aerators, kitchen replacement aerators, wash fountains, and metering faucets shall be not greater than the applicable values shown in Table ~~A-1 H-1~~. Showerheads shall also meet the requirements of ASME ~~A112.18.1/CSA B125.1-2012, 4.11.1 /ANSI Standard A112.18.1M-1996, 7.4.4(a)~~. **Why? The latest version of the standard should be referenced.**

**(i) Plumbing Fixtures.**

(1) The water consumption of water closets, ~~and~~ urinals, ~~and replacement valves~~, other than those designed and marketed exclusively for use at ~~stadiums prisons or mental care~~ or institutional facilities shall be no greater than the values shown in Table A-2.

**Why? Flush valves are not considered “plumbing fixtures” in accordance with ASME A112.18.1/CSA B45.1 and ASME A112.19.5/CSA B45.15. There is no such term as “replacement valve.” Marking them as “replacement” could be problematic, as they are not currently marked as such throughout the industry. Additionally, “stadiums” is consistent with terminology used throughout the staff analysis. Furthermore, “prisons or mental care facilities” should be referenced as “institutional facilities” to be consistent with terminology used throughout California Law including AB 715.**

**Table A-2:  
Standards for Plumbing Fixtures**

<i>Appliance</i>	<i>Maximum Gallons per Flush or <del>Average Effective Flush for Dual Flush</del>*</i>
<del>Electromechanical hydraulic water closets</del> <del>Replacement valve for urinal</del> <u>Blowout urinal</u> in building built on or before 1994	<u>1.0</u> <del>1-6</del>
<u>Blowout water closets</u>	<u>3.5</u>

~~\*A dual flush water closet with an effective flush volume that does not exceed 1.28 gallons, where effective flush volume is defined as the composite, average flush volume of two reduced flushes and one full flush.~~

**(PORTIONS OF TABLE NOT SHOWN REMAIN UNCHANGED)**

Why? The term “blow-out urinal,” and the new footnote, is consistent with AB 715. Additionally, “blow-out water closets” are permitted in stadiums and institutional facilities.

(2) Water closets shall comply with the Waste Extraction Test (Section 7.10) of ASME A112.19.2/CSA B45.1-2013 as pass or fail. ~~achieve a MaP score of no less than 350 grams.~~

Why? Water closet extraction testing is addressed in Section 7.10 of ASME A112.19.2/CSA B45.1-2013. Also, it is more appropriate to reference industry consensus standards.

**Section 1606. Filing by Manufacturers; Listing of Appliances in Database.**

**Table A-3:  
Data Submittal Requirements**

	<b>Appliance</b>	<b>Required Information</b>	<b>Permissible</b>
I	Plumbing Fixtures	*Type	Blowout water closet, gravity tank type water closet, dual-flush water closet, electromechanical hydraulic water closet, flushometer tank water closet, urinal, prison-type urinal, prison-type water closet, flushometer valve water closet, trough-type urinal, <u>non-water supplied urinal</u> <del>waterless urinal</del> , vacuum type urinal, vacuum type water closet, <del>replacement urinal valve,</del> <del>replacement water closet valve,</del> <del>wash fountain.</del>
		Water Consumption ( <u>for dual-flush water closets use the effective flush volume as defined in Section 1602</u> closet)	
		<del>MaP Score (for water closet only)</del> <u>Water closets shall comply with the Waste Extraction Test (Section 7.10) of ASME A112.19.2/CSA B45.1-2013 as pass or fail</u>	

**(PORTIONS OF TABLE NOT SHOWN REMAIN UNCHANGED)**

Why? The revision to “dual-flush average flush volume” will correlate with the definition for “effective flush volume” found in AB 715. Water closet extraction testing is addressed in Section 7.10 of ASME A112.19.2/CSA B45.1-2013. Also, it is more appropriate to reference industry consensus standards. The other changes are consistent with other recommendations made throughout the document. There are no such terms as “replacement urinal valve” and “replacement water closet valve.” Marking them as “replacement” could be problematic, as they are not currently marked as such throughout the industry.

