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*Comment Received From: California Investor Owned Utilities  
Submitted On: 5/5/2026  
Docket Number: 22-AAER-05*

## **Water Closets RFI Short-Term Proposal Comments**

This letter comprises the comments of the Pacific Gas and Electric Company (PG&E), San Diego Gas and Electric (SDG&E), and Southern California Edison (SCE), collectively referred to herein as the California Investor-Owned Utilities (CA IOUs), in response to the California Energy Commission (CEC) Request for Information (RFI) on Appliance Efficiency Regulations for Water Closets.

*Additional submitted attachment is included below.*



May 5, 2026

Jessica Lopez  
California Energy Commission  
Docket Unit, MS-4  
Docket No. 22-AAER-05  
715 P Street  
Sacramento, CA 95814

Topic: Comments on Request for Information on Appliance Efficiency Regulations for Water Closets

Dear Ms. Lopez,

This letter comprises the comments of the Pacific Gas and Electric Company (PG&E), San Diego Gas and Electric (SDG&E), and Southern California Edison (SCE), collectively referred to herein as the California Investor-Owned Utilities (CA IOUs), in response to the California Energy Commission (CEC) Request for Information (RFI) on Appliance Efficiency Regulations for Water Closets.

The CA IOUs comprise some of the largest utility companies in the nation, serving over 32 million customers in the Western U.S. We are committed to helping customers reduce energy costs and consumption, while striving to meet their evolving needs and expectations. Therefore, we advocate for standards that accurately reflect the climate and conditions of our respective service areas.

The RFI on Appliance Efficiency Regulations for Water Closets requests feedback on nine topics related to the California Energy Commission's (CEC) near-term plans, along with additional questions regarding the CEC's longer-term plans. We respectfully submit the following comments:

**1. The CA IOUs support replacing effective flush volume with maximum allowable full- and reduced-flush limits for tank-type dual-flush toilets.**

The CA IOUs support using maximum full- and reduced-flush volumes instead of effective flush volume calculations for tank-type dual-flush toilets.

The current standard specifies the effective flush volume for dual-flush toilets, calculated based on the full- and reduced-flush volumes and assumptions about how frequently users select each option. Field studies have shown wide variation in actual flush behavior.<sup>1,2</sup> The following program assumptions reflect

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1 MaP Testing. *Wynkoop Water Use Field Research: Final Report*. December 2012. Available at: [https://map-testing.com/wp-content/uploads/2025/04/Wynkoop-Water-Use-Field-Research-Final\\_Report-Dec\\_2012.pdf](https://map-testing.com/wp-content/uploads/2025/04/Wynkoop-Water-Use-Field-Research-Final_Report-Dec_2012.pdf).

2 Arocha, Jade. *Dual-Flush Toilet User Behavior and Economics*. MaP Testing, 2013. Available at: [https://map-testing.com/wp-content/uploads/2022/11/Dual\\_flush\\_behavior\\_economics\\_paper-Arocha.pdf](https://map-testing.com/wp-content/uploads/2022/11/Dual_flush_behavior_economics_paper-Arocha.pdf).

this variability: WaterSense® uses a 2:1 reduced-to-full flush ratio, while MaP Testing uses a 1:1 ratio.<sup>3,4</sup> The U.S. Department of Energy (DOE) has also declined to adopt the effective flush volume calculation for federally regulated water closets, given the mixed evidence on appropriate ratios. A 2013 DOE final rule further clarified that manufacturers may not use the term “effective flush volume” in marketing materials for dual-flush toilets.<sup>5</sup> To reduce confusion, simplify the compliance process, and support standards that reliably achieve water savings, the CA IOUs recommend eliminating effective flush volume calculations and instead establishing maximum allowable volumes for full and reduced flushes.

## **2. The CA IOUs support the CEC’s proposed maximum flush and reduced flush standards for tank-type dual-flush toilets: 1.28 gpf / 0.90 gpf.**

The CA IOUs support the CEC’s proposal to revise the standard to allow a maximum of 1.28 gallons per full flush and 0.90 gallons per reduced flush for tank-type dual-flush toilets. The CA IOUs recommended these proposed flush volume standards in the 2023 Title 20 Statewide CASE Report as well as in the CA IOUs’ January 2025 comment letter on water closets.<sup>6,7</sup> These flush volumes are also consistent with the WaterSense Draft Version 2.0 specifications for tank-type toilets.<sup>8</sup> The CA IOUs are not aware of any consumer utility or acceptance issues associated with dual-flush toilets that allow a maximum (1.28 gpf), which aligns with the current Title 20 standard for single-flush toilets.

For reduced flush standards, setting the maximum flush volume too low can limit compliance for siphonic dual-flush toilets. Siphonic models typically have a larger water surface area in the bowl when at rest, which reduces the need for bowl brushing compared to wash-down designs; this is an important usability benefit that can also help minimize double flushing. Designing siphonic toilets to operate reliably at very low flush volumes is technically challenging. For these reasons, the CA IOUs support a maximum reduced flush volume of 0.90 gpf, which balances water conservation objectives with the availability of compliant products in the market.

## **3. The CA IOUs support replacing effective flush volume with maximum-volume standards, including full- and reduced-flush limits for non-tank-type dual-flush toilets.**

For the same reasons described above for tank-type toilets, the CA IOUs support the CEC’s proposal to replace effective flush volume calculations with maximum full-flush and reduced-flush volume standards for non-tank-type dual-flush toilets, including flushometer valve and blowout models.

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<sup>3</sup> U.S. Environmental Protection Agency. *WaterSense Specification for Tank-Type Toilets*. Available at <https://www.epa.gov/sites/default/files/2017-01/documents/ws-products-spec-toilets.pdf>

<sup>4</sup> Arocha, *Dual-Flush Toilet User Behavior and Economics* (2013).

<sup>5</sup> 78 Fed. Reg. 62970, 62976 (Oct. 23, 2013), <https://www.federalregister.gov/d/2013-24347/p-120>.

<sup>6</sup> Statewide IOU CASE Team. *Final CASE Report: Response to Water Closets ITSP and RFI*. August 30, 2023.

<sup>7</sup> California Investor-Owned Utilities. *Comments on Water Closets Rulemaking*. January 2025.

<sup>8</sup> U.S. Environmental Protection Agency. *WaterSense® Specification for Tank-Type Toilets, Version 2.0 (Draft)*. December 2023. Available at: [https://www.epa.gov/system/files/documents/2023-12/ws-indoor-technical-toilets-draft-revised-watersense-tank-type-toilet-specification\\_v2\\_508.pdf](https://www.epa.gov/system/files/documents/2023-12/ws-indoor-technical-toilets-draft-revised-watersense-tank-type-toilet-specification_v2_508.pdf).

#### **4. The CA IOUs recommend aligning maximum flush volumes for non-tank-type dual-flush toilets with WaterSense specifications.**

The CEC requested feedback on whether to align its maximum flush volume standards for non-tank-type toilets with WaterSense specifications or to establish a different maximum. The CA IOUs recommend aligning the CEC's standards for non-tank-type toilets with WaterSense's requirements.

The WaterSense Specification for Flushometer-Valve Water Closets, Version 1.0, establishes both maximum (1.28 gpf) and minimum (1.0 gpf) flush volume requirements for non-tank-type toilets.<sup>9</sup> The CEC could establish a maximum reduced-flush volume between these WaterSense limits. While such an approach could result in additional water savings, most non-tank-type dual-flush models on the market have a reduced-flush volume of 1.1 gpf, and alternatives are very limited. As a result, establishing a separate maximum reduced-flush volume would likely either be commercially infeasible (if set below 1.1 gpf) or yield little additional savings (if set at or above 1.1 gpf).

Establishing a maximum flush volume below the minimum level required by WaterSense for non-tank-type toilets—such as mirroring the WaterSense Draft Version 2.0 specifications for tank-type toilets—would preclude WaterSense-compliant products from meeting CEC standards and could create market confusion. Because very few non-tank-type models have reduced-flush volumes below the WaterSense minimum, a more stringent requirement would leave consumers with limited dual-flush options. In practice, this could shift some consumers toward more widely available single-flush products, reducing the overall water savings that a stricter standard might appear to achieve on paper.

#### **5. The CA IOUs support updating performance criteria for water closets.**

Updating water closet performance criteria in Title 20 as proposed would largely formalize requirements that are already in effect in the California Plumbing Code. These provisions apply to water closets sold in California because they are incorporated by reference into the ANSI/ASME/CSA national product standards adopted by building and plumbing codes.

#### **6. The CA IOUs support updating reporting requirements to MAEDbS.**

The CA IOUs support updating MAEDbS reporting requirements to better reflect industry terminology and product distinctions. This will improve navigation for plumbing fixtures and fixture fittings and enhance the accuracy and clarity of water closet categorization. We also support MAEDbS providing expanded, more consistent product-level data, including physical characteristics and model names and numbers. A reorganization and expansion of the database would bring meaningful benefits to users.

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<sup>9</sup> U.S. Environmental Protection Agency. *WaterSense® Specification for Flushometer-Valve Toilets*. January 2011. Available at: <https://www.epa.gov/sites/default/files/2017-01/documents/ws-products-spec-fv-toilets.pdf>.

**7. The CA IOUs support consumer education programs and recommend evaluating and updating flush activation controls and marking methods for dual-flush fixtures.**

Dual-flush toilet activation controls should be easy for all users to identify and operate. However, many users report confusion about which control activates each flush option, and field studies have observed that users often rely on established flushing habits when operating dual-flush fixtures.<sup>10,11</sup>

The CA IOUs recommend that the CEC convene a working group of industry stakeholders to examine alternative designs and marking methods that clearly communicate full versus reduced flush functions. A key objective should be ensuring that consumers can easily recognize and operate the controls through evaluation of usability, ergonomic performance, and opportunities for greater standardization across products.

The CA IOUs appreciate the opportunity to provide these comments regarding the RFI on water closets. We thank the California Energy Commission for its consideration and look forward to the next steps in the process.

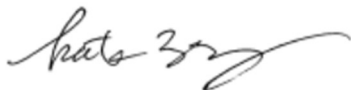
Sincerely,



Rob Bohn  
Manager, Codes & Standards  
Pacific Gas and Electric Company



Scott Higa  
Acting Sr. Manager, Codes and Standards  
Southern California Edison



Kate Zeng  
ETP/C&S/ZNE Manager  
Customer Programs  
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<sup>10</sup> MaP Testing, *Wynkoop Water Use Field Research (2012)*.

<sup>11</sup> Arocha, Jade. *Dual-Flush Toilet User Behavior and Economics*, MaP Testing, 2013.