Surcharge Account Reform for California's Class A Investor-Owned Water Utilities

Water affordability policy to protect customers of California's largest independently owned water utilities

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Abstract

Californians are in a water affordability crisis with water bills increasing at a higher rate than inflation over the last ten years. From 2011 to 2021, water bills for the customers of California's largest investor-owned water utilities increased cumulatively by 57%, while inflation increased by 22%. During the same period, these utilities increased their use of Surcharge Accounts (an alternative ratemaking mechanism), imposing surcharges on customer bills. The increased use of Surcharge Accounts significantly increases customer water bills. Surcharges are often unanticipated, making it more difficult for customers to manage their household budget.

This paper examines Surcharge Account Reform, a proposal that would only allow a utility to recover surcharge amounts from customers only when the utility is earning less than its Authorized Return on Equity. This paper examines current issues regarding recovery of amounts in Surcharge Accounts. Surcharge Account Reform is an important course correction to ensure customer bills are fair and reasonable.

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I. Introduction

Californians are in a water affordability crisis. Nearly 1 in 15 residential customers and businesses in the state are behind on their water bills, as of September 2022.[1] Water affordability also has implications for health and safety. Households rely on water service for basic sanitization and hydration, and as a way to stay safe during heat waves, fires, and droughts. A major factor in this water affordability crisis is rising water bills. Class A Water Utilities, the largest water companies that the California Public Utilities Commission (CPUC) regulates, are increasing customer bills while earning more than authorized.

> A **Class A Water Utility** is an investor-owned water utility company, regulated by the CPUC, with 10,000 or more water service connections. Class A Water Utilities make up 97% of California's investor-owned utility water connections.
>
> The nine Class A Water Utilities are:
> - Liberty Utilities Corp. Park Water (Liberty Park),
> - Liberty Utilities Corp. Apple Valley Ranchos Water (Liberty Apple Valley),
> - California Water Service Company (Cal Water),
> - California-American Water Company (Cal Am),
> - Golden State Water Company (Golden State),
> - San Gabriel Valley Water Company (San Gabriel),
> - San Jose Water Company (San Jose),
> - Suburban Water Systems (Suburban),
> - Great Oaks Water Company (Great Oaks).

This paper examines the use of Surcharge Account Reform as a course correction to protect water customers from unnecessary, excessive bills. Surcharge Account Reform would permit Class A Water Utilities to only recover amounts recorded in memorandum and balancing accounts (referred to in this paper as "Surcharge Accounts"), an alternative ratemaking mechanism,[2] that are necessary for those utilities to earn, but not exceed, their authorized earnings. Surcharge Account Reform uses Return on Equity (RoE) to compare authorized and actual earnings and determine when a utility is earning more than is authorized.

[1] CalMatters, "Help Paying Water Bills May Be on Way for Low-Income Californians," September 2, 2022. (Available at https://www.sfgate.com/news/bayarea/article/Calmatters-Help-Paying-Water-BillsMay-Be-On-Way-17414895.php) The number of customers is not limited to customers of Class A Water Utilities but includes customers of water utilities throughout the state.

[2] Surcharge Accounts are also referred to as "trackers" and "riders".

This paper examines the current affordability challenges faced by customers of Class A Water Utilities, and how Surcharge Account Reform can help to reduce unnecessary customer costs and increase the transparency of Class A Water customers' water bills. We also cover how Surcharge Account Reform can be implemented, and the legal justification for the policy.

Return on Equity (RoE) is a measure of profitability that is authorized by the CPUC and used by investors to understand a utility's actual earnings.

Authorized RoE is the proportion a regulatory body (e.g., the CPUC) determines a utility has the opportunity to earn while ensuring that customers are not paying excessively high rates. Authorized RoE is determined in Cost of Capital proceedings using an average of four different methods, which use a combination of a utility's risk level, the historical or expected earnings in the market, expected dividends for the utility's investors, and earnings of comparable companies.

Actual RoE is the amount of money that the utility has earned compared to the amount shareholders have invested in the utility.
Actual RoE = net income/average shareholder equity

II. Class A Water Utility Affordability Issues

Californians' water bills have increased substantially over the last decade. Class A Water Utility customer bills increased by 35 percentage points more than inflation during the same period (Figure 1). Class A Water Utility customers' water bills are increasing, in part, because Class A Water Utilities can recover amounts in Surcharge Accounts even when the utilities are earning more than authorized. While Class A Water Utilities' customers are paying increasing water bills, the utilities frequently earn more than what the CPUC authorizes.

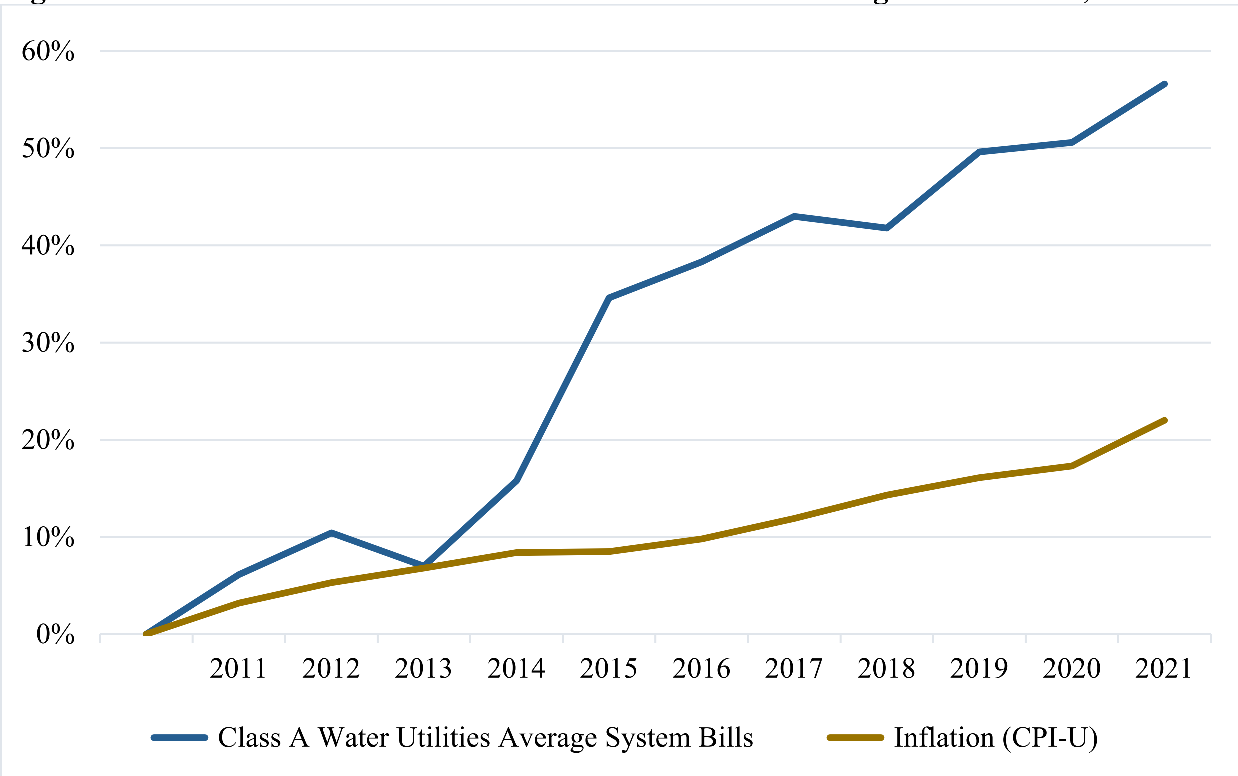
Class A Water Utilities' customers are paying higher water bills while the utilities earn more than authorized.

California is in a water affordability crisis.

Class A Water Utilities' customer bills have increased at nearly triple the rate of inflation in recent years (Figure 1). From 2011 to 2021, water bills increased cumulatively by 57%, while inflation only increased by 22%.[3]

[3] Calculated using Class A Water Utilities' total water production and total water revenue from 2011 to 2021 as reported in Class A Water Utilities' Annual Reports to the CPUC and Consumer Price Index Data from 1913 to 2022, US Inflation Calculator.

Figure 1: Class A Water Utilities' 10-Year Cumulative Percentage Bill Increase, 2011-2021[4]



Low-income households in California disproportionately experience the burden of the rapidly rising costs of water service.[5] This burden has been exacerbated due to the COVID-19 pandemic. On October 26, 2022, the California Department of Justice issued an alert reminding water systems of the Water Shutoff Protection Act, which protects residents from water shutoffs. California Attorney General Rob Bonta issued this alert "partly as a response to an estimated 40% increase in the price of certain types of water transactions so far this year and the fact that roughly 1.6 million Californians have fallen behind on their payments as of January 2021."[6] Improvements in water affordability are urgently needed to mitigate further impacts of this water affordability crisis.

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[4] Utilities' revenue divided by usage is used as a proxy for average system rates (including surcharges).

[5] State Water Resources Control Board (SWRCB), Recommendations for Implementation of a Statewide Low Income Rate Assistance Program (W-LIRA Report), issued February 2020, p. 7. https://www.waterboards.ca.gov/water_issues/programs/conservation_portal/assistance/docs/ab401_report.pdf.

[6] CBS Bay Area, "California warns water agencies over shutoffs amid higher prices, missed payments," October 26, 2022, https://www.cbsnews.com/sanfrancisco/news/california-warns-water-agencies-over-shutoffs-amid-higher-prices-missed-payments/

Customer surcharges are increasing.

Surcharges, amounts recorded in Surcharge Accounts that utilities then recovered from customers, comprise an increasing amount of Class A Water Utility customers' bills. These surcharges are a significant and unanticipated burden for customers and typically undergo reduced scrutiny when they are applied outside of a utility's General Rate Case (GRC) rate setting process.

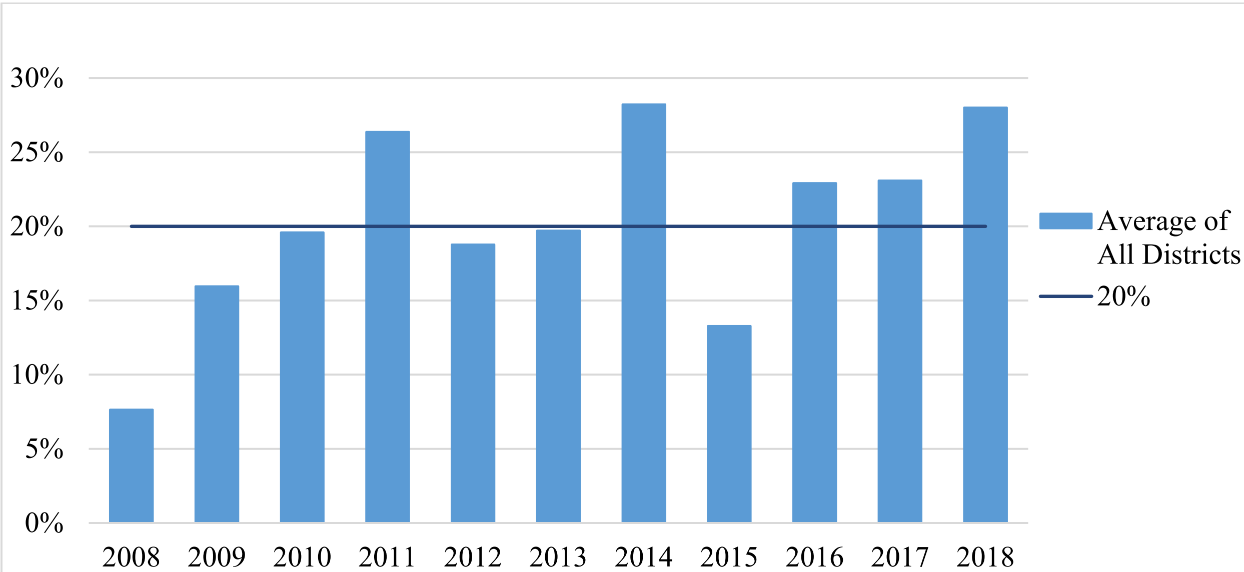
Between 2008 and 2018, one of the nine Class A Water Utilities, California-American Water Company's (Cal Am), customers paid surcharges that averaged 20% of their total bills, reaching as high as 53% for customers living in Cal Am's Monterey District in 2011, 2014 and 2016 (Figure 2).[7] These surcharges were not included in Cal Am's overall revenue increases proposed in GRCs, and the CPUC did not verify whether recovery of these surcharges would result in Cal Am exceeding its Authorized RoE.

A **General Rate Case (GRC)** is a proceeding used to address the costs of operating and maintaining a utility system and determine the allocation of those costs among customer classes, setting service rates. Water GRCs are scheduled to take place every three years. GRCs include an evidentiary record and decisions are made by judges and voted on by Commissioners.

A **Cost of Capital proceeding** is a proceeding used to determine a utility's authorized Rate of Return, Cost of Capital and Return on Equity for a given time period.

[7] Testimony of Jayne Parker, Report and Recommendations on Rates and Surcharges, served in Application (A.) 19-07-004 (Parker Testimony), February 14, 2020, p. 1-2. https://docs.cpuc.ca.gov/PublishedDocs/SupDoc/A1907004/2485/327196351.pdf.

Figure 2: Cal Am Surcharges as a Percentage of Residential Bills Across all Service Territories[8]



Almost all surcharges come from Class A Water Utilities' recovery of amounts held in Surcharge Accounts.

According to the CPUC's standard practice,[9] these Surcharge Accounts are designed to be used by regulated water utilities to track costs that are due to "events of an exceptional nature," including events that:

a) are not under the utility's control,
b) could not have been reasonably foreseen in the utility's last GRC,
c) that will occur before the utility's next scheduled rate case,

Surcharge Accounts refer to the CPUC's memorandum and balancing accounts.

A **memorandum account** is an account where a utility tracks costs related to an unanticipated event. The CPUC has approved the utility to track these amounts but has not determined whether the amounts are reasonable and whether the utility can recover amounts from customers yet.

A **balancing account** is an account where a utility tracks unanticipated costs that the CPUC has approved as reasonable for recovery.

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[8] Parker Testimony, p. 1-2. https://docs.cpuc.ca.gov/PublishedDocs/SupDoc/A1907004/2485/327196351.pdf.

[9] California Public Utilities Commission Division of Water and Audits, *Standard Practice for Processing Rate Offsets and Establishing and Amortizing Memorandum Accounts* (Standard Practice U-27-W), Revised May 2008. https://docs.cpuc.ca.gov/published/REPORT/84069.htm#P286_25623.

d) are of a substantial nature in that the amount of money involved is worth the effort of processing a memorandum account, and

e) have ratepayer benefits.[10]

Surcharge Accounts were intended to "protect utilities from the financial impact of substantial unforeseen expenses beyond the utilities' management and control."[11] In order to create a Surcharge Account, a utility must get approval from the CPUC, and once approved, recovery of these Surcharge Accounts is not guaranteed.[12] Utilities request to recover specific memorandum and balancing account amounts with the CPUC. Once the CPUC approves the recovery of these amounts, the utility recovers these amounts by charging customers surcharges on the customers' monthly water bills.[13]

Surcharge Accounts are intended to be used for events of an exceptional nature.[14] Class A Water Utilities have increasingly used Surcharge Accounts to record and recover amounts from customers over the last 15 years. The average amount held in Surcharge Accounts increased from an average of $2.3 million per utility in 2005 to $71.7 million per utility in 2020 (Table 1). The number of Surcharge Accounts increased from an average of 12 per utility in 2005 to an average of 37 per utility in 2020 (Table 2). As a result, customers' water bills are unnecessarily high.

Table 1: Class A Water Utilities' Surcharge Account Totals, 2005-2020[15]

	Total Values recorded in Surcharge Accounts			
Utility	**2005**	**2010**	**2015**	**2020**
Cal Water	$7,560,144	$1,425,152	$52,273,000	$157,578,000
Cal-American	not reported	$110,987,013	$201,704,117	$320,897,662
Golden State	$4,192,860	not reported	$132,695,585	$37,713,677
Great Oaks	not reported	not reported	$3,845,454	$4,560,164
Liberty - total	$711,859	$7,979,267	$11,548,265	$5,655,093
San Gabriel	$4,338,179	$9,919,723	$28,455,779	$2,111,728

[10] Standard Practice U-27-W, paragraph 25. https://docs.cpuc.ca.gov/published/REPORT/84069.htm#P286_25623.

[11] Final Decision Revising the Procedures for Recovery of Balancing Accounts Existing on or After November 29, 2001 (D.03-06-072), Findings of Fact 3 and 4, p. 7.

[12] Standard Practice U-27-W, paragraph 25. https://docs.cpuc.ca.gov/published/REPORT/84069.htm#P286_25623.

[13] Standard Practice U-27-W, paragraph 29. https://docs.cpuc.ca.gov/published/REPORT/84069.htm#P286_25623.

[14] Resolution W-4294, November 29, 2001; Resolution E-3238, July 24, 1991.

[15] Using information reporting in Schedule E-1 in Class A Water Utilities' 2005, 2010, 2015 and 2020 Annual Reports submitted to the CPUC.

San Jose	$500,227	$8,557,349	$50,338,805	$26,696,409
Suburban	$713,063	$13,263,253	$6,642,974	$18,634,087
TOTAL	**$18,016,332**	**$152,131,757**	**$487,503,979**	**$573,846,820**
AVERAGE	**$2,252,042**	**$19,016,470**	**$60,937,997**	**$71,730,853**

Table 2: The Number of Class A Water Utilities' Surcharge Accounts, 2005-2020[16]

	Total Number of Surcharge Accounts			
Utility	**2005**	**2010**	**2015**	**2020**
Cal Water	not reported	not reported	34	32
Cal-American	not reported	50	100	49
Golden State	45	not reported	24	28
Great Oaks	not reported	not reported	25	22
Liberty - total	19	34	67	76
San Gabriel	8	11	25	24
San Jose	13	23	42	33
Suburban	7	26	26	31
TOTAL	92	144	343	295
AVERAGE	11.5	18	42.9	36.9

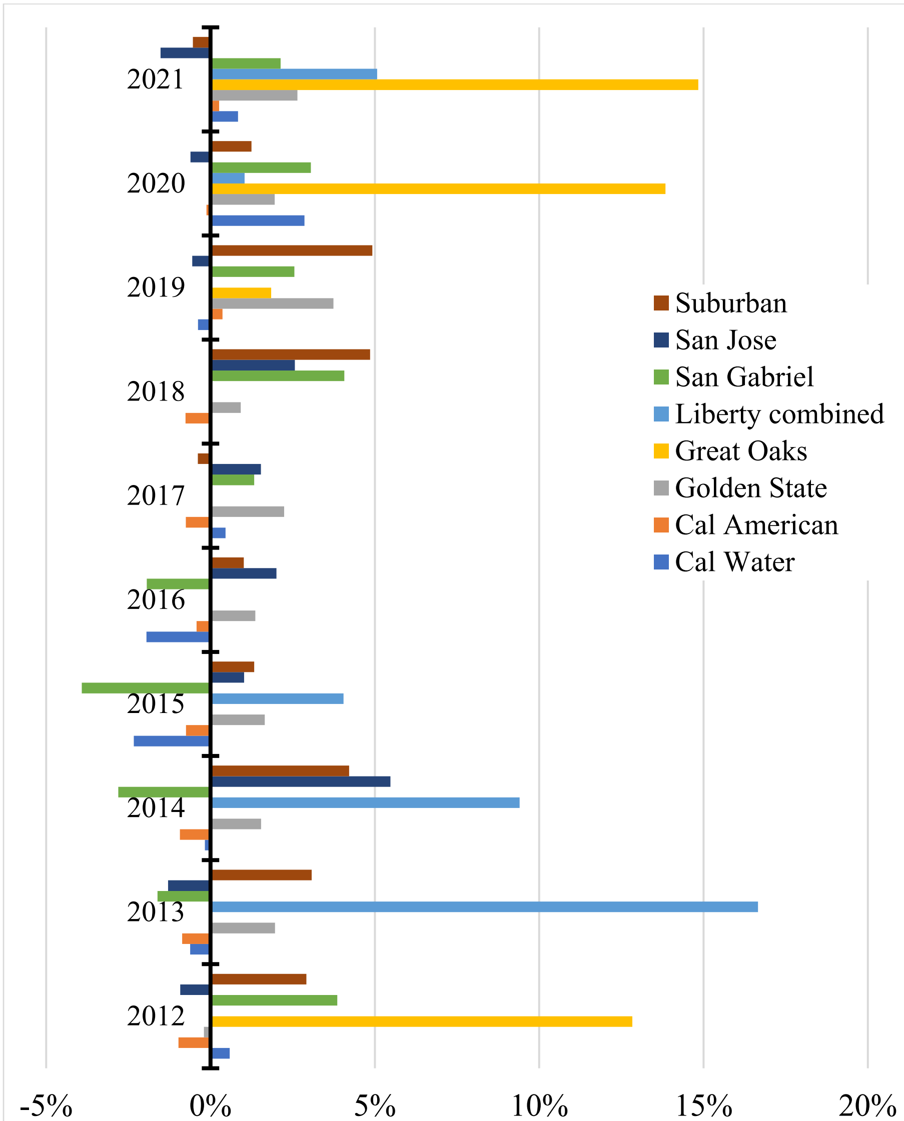
Class A Water Utilities are earning more than authorized.

While increasingly using Surcharge Accounts to recover amounts from customers, Class A Water Utilities' Actual RoEs frequently exceed their Authorized RoEs. Over the last 10 years, the Class A Water Utilities have exceeded their authorized RoE 67% of the time (Figure 3; detailed data is included in Appendix D). For illustrative purposes, Actual RoE is calculated using companies' net income divided by shareholder equity. However, the effective RoEs may be higher than shown, because Surcharge Account amounts, on which utilities cannot and should not earn a profit, have not been discounted from stockholder equity.[17]

[16] Using information reporting in Schedule E-1 in Class A Water Utilities' 2005, 2010, 2015 and 2020 Annual Reports submitted to the CPUC.

[17] Standard Practice U-27-W, paragraph 28 and 31 ("balances earn at the 90-day commercial paper rate"). https://docs.cpuc.ca.gov/published/REPORT/84069.htm#P286_25623.

Figure 3: Class A Water Utilities' Percentage Point Differences Between Actual RoE and Authorized RoE, 2012-2021[18]



As shown above, in 2020, the year the COVID-19 pandemic started, most Class A Water Utilities' Actual RoEs exceeded their Authorized RoEs. In the same year, the CPUC also approved 48 requests of Class A Water Utilities to record and recover amounts in Surcharge Accounts from customers through surcharges (Table 3). Approval of these Surcharge Account

[18] Results are determined from subtracting Actual from Authorized RoE. Actual RoE was calculated using Class A Water Utilities' 2018, 2019 and 2020 audited financial statements submitted in response to Cal Advocates' data requests sent on August 15, 2022. Note that Great Oaks data was not provided for 2013-2018, and Liberty data was not provided for 2012, and 2016-2019.

recovery requests has allowed Class A Water Utilities to add multiple surcharges to customer bills. In aggregate, approval of Surcharge Account recovery requests has produced significant, non-transparent bill increases that contribute to California's water affordability crisis.

Table 3: Class A Water Utilities Approved Requests[19] Regarding Surcharge Accounts and Escalation Year Rate Increases, 2020

Utility	Number of Approved Surcharge Account Requests, 2020
Cal Water	8
Cal American	11
San Jose	2
Liberty	2
Golden State	7
Suburban	1
San Gabriel	2
Great Oaks	4
Total	**37**

III. Surcharge Account Reform

Surcharge Account Reform will ensure more affordable and transparent bills for customers.

Surcharge Account Reform aims to protect customers from bills that are higher than needed to provide Class A Water Utilities with a reasonable return on investments. Surcharge Account Reform is fair to both customers and shareholders. Customers are protected from unnecessarily higher bills, and utilities continue to have an opportunity to meet investor returns authorized by the CPUC and exceed these authorized earnings outside of Surcharge Account recovery. Surcharge Account Reform compares a utility's Actual and Authorized RoE to determine whether the utility is already exceeding its authorized profit. Actual and Authorized RoE are straightforward to determine. The CPUC authorizes a RoE for each Class A Water Utility in Cost of Capital decisions, and utilities use the Actual RoE to demonstrate profitability

[19] Requests made through Advice Letter Filings.

to shareholders.[20] The primary source to calculate a Class A Water Utility's Actual RoE is the utility's audited financial statements, which should be submitted to the CPUC on an annual basis.[21]

How the Surcharge Account Reform works.

Authorized RoE

Authorized RoE is determined in the Class A Water Utilities' Cost of Capital proceedings. The CPUC typically determines Authorized RoE using four methods, Capital Asset Pricing Model (CAPM), Risk Premium Model (RPM), Discounted Cash Flow Model (DCF) and the Comparable Earnings Approach, then takes the average of these numbers in its Cost of Capital proceedings. [22] These methods use a combination of a utility's risk level, the historical or expected earnings in the market, expected dividends for the utility's investors, and earnings of comparable companies. [23] These methods align with the legal standard established for determining fair returns to utility investors.[24]

Actual RoE

[20] Decision Fixing Cost of Capital for Calendar Years 2018, 2019 And 2020 For California Water Service Company, California-American Water Company, Golden State Water Company and San Jose Water Company (D.18-03-035).

[21] Actual RoE is determined by using net income and shareholder equity, which are found in financial statements that Class A Water Utilities file annually with the CPUC's Auditing Branch.

[22] D.18-03-035, pp. 6-9; D.18-12-02, Decision Approving Partial Settlement Agreement and Resolving Remaining Disputed Issue for Great Oaks Water Company, Suburban Water Systems, San Gabriel Valley Water Company, Liberty Utilities--Park Water Corp., Liberty Utilities--Apple Valley Ranchos Water Corp., Fontana Unified School District and the CPUC's Public Advocates Office (D.18-12-02) Appendix, p. 5-10.

[23] "What is the difference between cost equity and cost of capital?" https://www.investopedia.com/ask/answers/013015/what-difference-between-cost-equity-and-cost-capital.asp, accessed on November 19, 2021; "How Do I Use the CAPM to Determine Cost of Equity?" https://www.investopedia.com/ask/answers/022515/how-do-i-use-capm-capital-asset-pricing-model-determine-cost-equity.asp, accessed on November 19, 2021; "Discounted Cash Flow (DCF) Definition" https://www.investopedia.com/terms/d/dcf.asp, accessed on November 19, 2021; "Equity Valuation: The Comparables Approach" https://www.investopedia.com/articles/investing/080913/equity-valuation-comparables-approach.asp, accessed on November 19, 2021.

[24] *The Federal Power Commission v. Hope Natural Gas Company*, 320 U.S. 591 (1944) https://supreme.justia.com/cases/federal/us/320/591/; Bluefield Water Works & Improvement Company v. Public Service Commission of the State of Virginia, 262 U.S. 679 (1923) https://supreme.justia.com/cases/federal/us/262/679/; Duquesne Light Co. v. Barasch, 488 U.S. 299 (1989) https://supreme.justia.com/cases/federal/us/488/299/.

Actual RoE is the income that the utility has earned at the end of a year compared to the amount shareholders have invested in the utility.[25] Actual RoE is calculated by dividing net income by average shareholder equity.[26]

RoE *= Net Income/average shareholder equity*

Net income measures the amount by which a utility's revenue exceeds its expenses and is equal to the total revenue minus a utility's expenses and taxes.[27] Net income can be found on a utility's income statement.

Net income *= Revenues – Expenses - Taxes*

Shareholder equity is the amount that shareholders of a utility have invested but have not received in dividends minus the utility's debt.[28] Shareholder equity is equal to a utility's total assets minus its total liabilities and can be found on a utility's balance sheet as "common stockholder's equity."

Shareholder equity *= total assets – total liabilities*

In the case of utilities, balancing and memorandum accounts are unanticipated expenses that a utility has not yet recovered from customers but plans to recover in the future.[29] Often these accounts are recorded to a utility's balance sheet as Regulatory Assets, representing costs incurred but not yet recovered from ratepayers. To determine Actual RoE, these accounts (to the extent they have been recorded as Regulatory Assets) should be subtracted from shareholder equity because shareholders should have no expectation of profiting from these accounts.[30] It is well established in CPUC Standard Practice that utilities are not authorized to earn a shareholder

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[25] Hempling, Scott. "Are Regulators Allowing Returns on Equity Above the Real Cost of Equity?", Presentation to the NARUC Consumer Affairs Committee, July 13, 2014, p. 3.

[26] Damodaran, Aswath. "Return on Capital (ROC), Return on Invested Capital (ROIC) and Return on Equity (ROE): Measurement and Implications", July 2007, p. 11; Calamar, Adam. "Return on Equity: A Compelling Case for Investors," Jensen Investment Management, 2016, p. 2.

[27] "Net Income" https://www.investopedia.com/terms/n/netincome.asp, accessed on March 29, 2022.

[28] "Shareholder Equity (SE) Definition", https://www.investopedia.com/terms/s/shareholdersequity.asp, accessed on March 29, 2022; Calamar, Adam. "Return on Equity: A Compelling Case for Investors," Jensen Investment Management, 2016, p. 1.

[29] Standard Practice U-27-W, paragraph 30.

[30] Standard Practice U-27-W, paragraphs 3 and 6. *See also* "Nothing in this part shall be construed to prohibit any public utility from profiting to the extent permitted by the commission, from any economies, efficiencies, or improvements which it may make, and from distributing by way of dividends, or otherwise, disposing of, such profits. The commission may make or permit such arrangement with any public utility as it deems wise for the purpose of encouraging economies, efficiencies, or improvements and securing the public utility making them such portion of the profits thereof as the commission determines. (Public Utilities -P.U.- Code, §456.)

return on Surcharge Accounts.[31] Further work should be done to determine the equation for Actual RoE considering that utilities are not able to profit from recovery of amounts in Surcharge Accounts.

Calculating the Surcharge Account Profitability Test

The Surcharge Account Reform calculation, referred to as the Surcharge Account Profitability Test in this paper, compares Authorized and Actual RoE by subtracting Authorized RoE from Actual RoE. When a utility is applying for Surcharge Account recovery, it should submit audited financial statements for the same time period in which it recorded amounts in the Surcharge Accounts that are being requested for recovery and compare Actual RoE to the Authorized RoE during the given time period.

Surcharge Account Profitability Test *= Actual RoE – Authorized RoE*

If the Actual RoE exceeds Authorized RoE (where the Surcharge Account Reform calculation produces a positive number), then the utility is earning more than authorized. It should be denied from recovering from customers surcharge amounts recorded during this same time period.

If actual RoE is less than authorized RoE (where the Surcharge Account Reform calculation produces a negative number), the utility is earning less than the CPUC has authorized. In this case, the CPUC can proceed to review recorded amounts for reasonableness as is the current practice. However, the utility should only be eligible to recover that portion of the recorded amounts that allows it to meet, but not exceed its authorized RoE.

The Surcharge Account Profitability Test is designed to be straightforward to implement. Detailed instructions, examples and additional resources are included in Appendix C.

Surcharge Account Reform will make ratemaking processes more transparent.

Under Surcharge Account Reform, recovery of surcharge amounts would likely be considered with all other costs and revenues in GRCs when determining future rates. Under current practices, utilities can recover amounts tracked in Surcharge Accounts without any consideration of revenue, income, or a utility's overall financial well-being, which constitutes single-issue ratemaking. GRC rate setting is a more comprehensive and transparent way for

[31] Standard Practice U-27-W, paragraphs 30 and 46.

these amounts to be considered. All customers are informed when GRC rate setting is occurring and when final decisions have been made, while they may not be informed of potential surcharges. Considering Surcharge Account amounts in rate setting processes, with all other costs and revenue streams, will increase transparency for commissioners and judges approving rates, as well as for customers when receiving monthly water bills. Including these costs in rate setting will also likely lead to lower customer bills.

Surcharge Account Reform should not reduce utilities' ability to invest in safe and reliable service. The CPUC's Standard Practice states that reasonable costs that are not under the utility's control can be tracked in memorandum accounts, but recovery of these amounts is not guaranteed.[32] If a utility is earning more than is authorized, their customers should not bear the cost of additional charges. If the utility earned above its authorized RoE, it could still retain the excess earnings but would be prevented from collecting additional revenue through surcharges for the same period in which it has already exceeded its authorized RoE.

The Surcharge Account Reform will help ensure customer bills are fair, just, and reasonable.

The Surcharge Account Reform will ensure that customers' water bills are just and reasonable,[33] and will allow water utilities the opportunity to make a fair return on investments.[34] While the CPUC establishes what constitutes a fair return on investment through a Cost of Capital proceeding, it does not currently examine whether Class A Water Utilities' actual returns on investments exceed their authorized RoEs before authorizing utilities to collect additional revenue through surcharges. This can result in unnecessarily high customer bills.

The U.S. Supreme Court has made clear that utility regulators can make the pragmatic adjustments to ratemaking formulae, which may be required under particular circumstances.[35] The unnecessary and excessive cost-shifting to customers from Surcharge Accounts calls for this type of adjustment. So long as the regulators' determinations fall within the "zone of

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[32] Standard Practice U-27-W, paragraph 24.

[33] P.U. Code §451.

[34] The *Federal Power Commission v. Hope Natural Gas Company*, 320 U.S. 591 (1944), *Bluefield Water Works & Improvement Company v. Public Service Commission of the State of Virginia*, 262 U.S. 679 (1923*); Duquesne Light Co. v. Barasch*, 488 U.S. 299 (1989).

[35] *Federal Power Commission et al. v. Hope Natural Gas Pipeline Co.* (1942) 315 U.S. 575, 586); *Duquesne Light Co. v. Barasch* (1989) 488 U.S. 299.

reasonableness," courts must defer to the balancing of consumer and investor interests arrived at by the CPUC.[36] Public utility legal scholar Scott Hempling explains in an article, "the clearer the government promise, the lower the risk for the expenditure subject to that promise; and, the lower expenditure's risk, the lower its associated cost of equity, relative to a situation of no government promise."

Surcharge Account Reform allows a utility to operate successfully, maintain financial integrity, attract capital, and even exceed authorized earnings at times if the CPUC has determined it is a fair investor return.

Since 2023, the smaller water utilities regulated by the CPUC (Class B, C and D Investor-Owned Water Utilities), have been subject to an earnings test when requesting to recover Surcharge Accounts.[37] The Class A Water Utilities should be held to a similar (but not necessarily identical) standard in order to protect Class A Water Utility customers. A further explanation of the CPUC's previous and current role in ensuring regulated water utilities are not earning more than authorized due to Surcharge Account recovery can be found in Appendix A.

IV. Conclusion

Surcharge Account Reform will help protect customers from excessive bills due to Surcharge Account surcharges and increase the transparency of customers' water bills. Surcharge Account Reform will only allow utilities to recover Surcharge Account amounts from customers during periods when the utilities are earning less than authorized without preventing a utility from exceeding its authorized return through prudent management. The Surcharge Account Profitability Test is straightforward to implement and necessary to protect customers and ensure water bills are not unnecessarily high

[36] This "zone of reasonableness" has been described as "bounded at the one end by the investor interest against confiscation and at the other by the consumer interest against exorbitant rates." *Washington Gas Light Co. v. Baker* (D.C. Cir 1950) 188 F.2d 11 ,15.

[37] Standard Practice U-27-W, paragraph 38.

Appendix A: CPUC precedents supporting Surcharge Account Reform.

The CPUC first adopted Surcharge Accounts in the mid-1970s in response to rapidly changing oil and gas prices.[38] The introduction of Surcharge Accounts changed the CPUC's role in reviewing and monitoring utilities' activities, to one in which the CPUC staff needed to "continuously monitor and review utility operations".[39] A 1985 memorandum from the CPUC's Executive Directive noted that the CPUC found it difficult to make disallowances in what utilities were recording in Surcharge Accounts because "the money has been spent," and that the result of Surcharge Accounts was that "review [had] essentially shifted the burden of proof to staff and intervenors to show expenditures were not prudent."[40] The memorandum also observed that:

> "[w]e can expect utilities to continually press for the comfort of more balancing account ratemaking and the green light to file a variety of offset applications between general rate proceedings. Utility management wants the best of all worlds; high earnings and a high rate of return but as little risk as possible; it's the CPUC's task to recognize that desire and pressure, and weigh it against the need to have management incentive working to minimize costs."[41]

In June 2003, the CPUC issued a decision in the Order to Institute a Rulemaking to *Evaluate Existing Practices and Policies for Processing Offset Rate Increases and Balancing Accounts in the Water Industry to Decide Whether New Processes Are Needed*.[42] D.03-06-072 revised existing procedures for recovery from balancing accounts (a type of Surcharge Account) to authorize recovery only "when the utility fails to earn up to its authorized rate of return due to

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[38] Memorandum to Commissioners from the Public Utilities Commission, Joseph Bodovitz, Executive Director, September 23, 1985, pp. 1-3, Appendix E.

[39] Memorandum to Commissioners from the Public Utilities Commission, Joseph Bodovitz, Executive Director, September 23, 1985, pp. 1-3, Appendix E.

[40] Memorandum to Commissioners from the Public Utilities Commission, Joseph Bodovitz, Executive Director, September 23, 1985, p. 4, Appendix E.

[41] Memorandum to Commissioners from the Public Utilities Commission, Joseph Bodovitz, Executive Director, September 23, 1985, p. 6, Appendix E.

[42] R.01-12-009 OIR on the CPUC's Own Motion to *Evaluate Existing Practices and Policies for Processing Offset Rate Increases and Balancing Accounts in the Water Industry to Decide Whether New Processes are Needed.*

significant unforeseen expenses beyond its control."[43] In the Findings of Fact, D.03-06-072 states:

> The procedures for recovery of under and over collections in balancing [surcharge] accounts served, in effect, as insurance to protect a utility against its failure to earn its authorized earnings due to unanticipated expenses beyond the utility's control. […] The existing procedures become problematic when they have the effect of enhancing utilities' earnings above CPUC-authorized rates of return.[44]

In current use cases and under D.03-06-072 when the CPUC determined that a utility has over-earned, the amount the utility requests to recover is reduced by the amount by which the utility has over-earned.[45]

D.04-03-041 revised D.03-06-072 to clarify balancing account recovery procedures that both protect utilities from unforeseen expenses and ensure ratepayers do not fund a windfall to utilities.[46] D.04-03-041 explains that:

> [t]he revised procedures simply require a utility that is over earning to use such over earnings as a measure by which to reduce offset expenses before allowing the utility to recover such expenses from the balancing account. Recovery from a balancing account was never intended to enhance a utility's earnings.[47]

The CPUC's consideration and balancing of two interests — protecting shareholders' investment-backed expectations and shielding customers from exorbitant rates — resulted in D.03-06-072 and D.04-03-041. Two years later, in response to the California Water Association's petition for modification of D.03-06-072, the CPUC determined that the earnings

[43] D. 04-03-041 at 3.

[44] D.03-06-072, Findings of Fact 3 and 4, p. 24.

[45] D.03-06-072, p. 25.

[46] Order Modifying Decision 03-06-072 and Denying Rehearing of Decision (D. 04-03-041), p. 19.

[47] D. 04-03-041, p, 21.

test analysis of balancing accounts was unnecessary for Class A Water Utilities.[48] D.06-04-037 removed the use of the earnings test on balancing accounts for Class A Water Utilities because the CPUC reasoned that earnings tests were less necessary with a three-year rate setting cycle because the utilities have more opportunity to adjust rates using this rate-setting cycle compared to longer cycles that were previously used. The CPUC concluded that triennial GRCs would provide regulators with "much more current" and, thus, reliable rate forecasts in 2006.[49] Notably, Class B, C, and D Water Utilities were not included in this modification and continue to submit surcharge requests that apply earnings tests to Surcharge Accounts.[50] In this D.06-04-037, the CPUC also reasoned that earnings tests undermine Public Utilities (PU) Code §456,[51] which allows water companies to retain profits that they earn through efficient operation between rate cases.[52] This reasoning does not take into consideration the fact that Surcharge Accounts are intended for use in response to unanticipated events, thus not applicable in the case of efficient operations.

D.06-04-037 also established that Class A Water Utilities can propose adjustments to rates any time the balancing account exceeds 2% of annual revenues. The utilities must report the status of their balancing accounts in GRCs and propose adjustments to their rates in GRCs to amortize either under or over-collections in balancing accounts.

The CPUC currently applies a Rate of Return (RoR) earnings test to Class B, C, and D Water Utilities in many cases, including when applying for rate base offsets, expense offsets and Consumer Price Index (CPI) offsets, and requesting the approval of Surcharge Accounts and reserve account amortization (explained further in Appendix B).[53] Class A Water Utilities are

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[48] Opinion granting petition [by California Water Association] for Modification of Decision (D.) 03-06-072 (D. 06-04-037), p. 9.

[49] D. 06-04-037, p. 7.

[50] Standard Practice U-27-W paragraph 28 and 31.

[51] "Nothing in this part shall be construed to prohibit any public utility from profiting to the extent permitted by the commission, from any economies, efficiencies, or improvements which it may make, and from distributing by way of dividends, or otherwise, disposing of, such profits. The commission may make or permit such arrangement with any public utility as it deems wise for the purpose of encouraging economies, efficiencies, or improvements and securing the public utility making them such portion of the profits thereof as the commission determines." (P.U. Code, §456.)

[52] D.06-04-037, p. 7.

[53] Standard Practice U-27-W.

only subject to the RoR earnings tests when they apply for rate base offsets or when requesting to move a memorandum account to a balancing account.[54] [55]

[54] Standard Practice U-27-W.

[55] Some Class A Water Utilities have argued that D.06-04-037 applies to memorandum and balancing account recovery. However, it is clear in reading D.06-04-037 that the decision only applies to balancing accounts. D.10-04-031 applied this requirement, making it clear that memorandum accounts of Class A Water Utilities are subject to an earnings test.

Appendix B: The Rate of Return earnings test fails to protect customers.

In some cases, the CPUC currently uses an earnings test using RoR to determine whether utilities are earning more than authorized. However, authorized and actual RoRs are not comparable, meaning this test produces inaccurate results. RoR is a valid forecasting mechanism to forecast a water utility's profit when calculating the utility's Revenue Requirement in a GRC. However, RoR cannot be used to determine a water utility's actual earnings.

Rate of Return (RoR) is a measure used to forecast how much investors should be making based on rate base and net income.

Rate base is a measure a utility's assets used to forecast a utility's Rate of Return.

Working cash allowance is the amount of cash the utility is projected to need to have on hand. In developing the rate base, working cash allowance is used as a general estimate for the amount the utility may need in cash.

Allowance for Funds Used During Construction (AFUDC) is an allowance to compensate a utility for the costs of financing large capital projects before the projects are operational.

Calculating Authorized RoR

When used for forecasting profits to include in a companies' Revenue Requirement, RoR is multiplied by the companies' rate base.

Revenue Requirement *= (Rate Base * RoR) + Operating Expenses + Depreciation Expense + Taxes.*

RoR is also used to forecast a utility's net income by multiplying RoR and rate base. Therefore, another way of expressing RoR is.

RoR *= regulatory net income / rate base.*

Net income is a utility's forecasted revenue minus the utility's forecasted administrative and general (A&G) expenses, operations and maintenance (O&M) expenses and taxes. Rate base is a sum of a utility's plant and equipment, working cash allowance and allowance for funds used during construction (AFUDC), minus its accumulated depreciation, contributions and deferred taxes.[56] The RoR calculation utilizes rate base, which includes elements that do not determine a water utilities' actual profits.

[56] Tietjen, Darryl. "Tariff Development -Basic Ratemaking Process" Briefing for the NARUC/INE Partnership, https://pubs.naruc.org/pub.cfm?id=538E730E-2354-D714-51A6-5B621A9534CB, accessed March 30, 2022.

Net income *= a utility's forecasted revenue – the utility's forecasted administrative and general (A&G) expenses - operations and maintenance (O&M) expenses - taxes*

Rate base *= a utility's plant and equipment + working cash allowance + allowance for funds used during construction (AFUDC) - accumulated depreciation - contributions - deferred taxes*

Calculating Actual RoR

The RoR earnings test does not allow for authorized and actual profits to be compared because RoR is composed of regulatory net income and rate base, which both include regulatory forecasting elements where there is no comparable financial equivalent.

RoR accounts for the cost of debt but does not include interest expenses in net income. Therefore, regulatory net income is not comparable to a utility's actual net income, which includes interest expense:

Actual net income *= revenue - A&G expenses - O&M expenses - tax -* ***interest expense****.*

Rate base includes working cash allowance, which is a regulatory judgement of cash the utility uses for bridging the time between paying expenses and collecting revenues. In developing the rate base, working cash allowance is used as a general estimate for the amount the utility may need in cash. In actuality, utilities can readily change the amount of cash they have on hand by liquidating or investing in assets, which means regulatory and actual working cash allowance amounts are not comparable. Additionally, rate base includes AFUDC, which is used as an allowance to compensate a utility for the cost of financing large capital projects before they are operational, but it is not an actual amount that the utility will earn during the given time.[57]

Rate base *= property + equipment plant costs + AFUDC + working cash allowance – contributions - deferred taxes*

[57] *See* Energy Knowledge Base, https://energyknowledgebase.com/topics/allowance-for-funds-used-during-construction-afudc.asp. Accessed on March 28, 2022.

Example: California Water Company (Cal Water), 2020

Cal Water's authorized RoR for the year 2020 was 7.48%.[58] The calculations below attempt to use amounts from Cal Water's audited financial statements from 2020 to derive an actual RoR for that year, with bolded numbers being those that differ from calculating authorized net income and rate base (all numbers are in thousands).

*Actual net income = revenue – operating expenses - net other income - **interest expense***

*$92,244[59] = $745,034[60] - $614,273[61] - ($2,042)[62] - **$40,559**[63]*

*Rate base = property + equipment plant costs + **AFUDC** + **working cash allowance** – contributions - deferred taxes*

*$1, 985,742 = $2,459,992[64] + $7,439[65] + **(no AFUDC)** + **(no working cash allowance)** - $215,457[66] - $266,232[67]*

"Actual RoR" = $92,244/$1,910,070= 4.65%

As shown above, actual net income includes interest expenses, while authorized net income does not; therefore, authorized and actual net income are not comparable. There are also substantial line items in authorized rate base that have no equivalents in actual financial statements (AFUDC and working cash allowance), meaning that "actual rate base" is not

58 D.18-03-035, p. 2.

59 California Water Company (Cal Water) Audited Financial Statement 2020, using "Net income", p. 5.

60 Cal Water Audited Financial Statement 2020, using "Operating revenue", p. 5.

61 Cal Water Audited Financial Statement 2020, using "Total operating expenses", p. 5.

62 Cal Water Audited Financial Statement 2020, using "Net other income", p. 5.

63 Cal Water Audited Financial Statement 2020, using "Net interest expense", p. 5.

64 Cal Water Audited Financial Statement 2020, using "Net utility plant", p. 4.

65 Cal Water Audited Financial Statement 2020, using "Materials and supplies at weighted average cost", p. 4.

66 Cal Water Audited Financial Statement 2020, using "total contributions in aid of construction", p.4. Subject to confirmation, this is comparable to the contribution amounts outlined in rate base.

67 Cal Water Audited Financial Statement 2020, using "Net deferred tax liabilities", p. 22.

comparable to authorized rate base. These equations show that “actual RoR” cannot be compared to authorized RoR.

For these reasons, the RoR earnings test does not adequately compare authorized and actual earnings. The RoR earnings test should not be used. The profitability test applied to Surcharge Accounts can be easily derived and implemented, as shown in Appendix C

Appendix C: Implementation instructions

The following directions, sources and templates offer a guide to applying the Surcharge Account Profitability Test when Class A Water Utilities request memorandum or balancing account recovery.

Directions to Complete Surcharge Account Profitability Test

1. Request audited financial statements for years for which the utility is requesting memorandum or balancing account recovery.
2. Find net income in the income statement in the audited financial statement, enter into cell C3 in the Implementation Template found below.
3. Find stockholder equity in the Balance Sheet and Statements of Changes in Common Stockholder's Equity in the audited financial statement, enter into cell B4-C4, or B4-X4 for multiple years in the Implementation Template found below.
4. Find authorized RoE in Cost of Capital Proceeding decision (see table below).
5. Calculations will automatically show actual RoE (cell B6), the difference between Authorized and Actual RoE (cell B9).
6. Calculations will automatically show the net income that a utility should have if achieving its authorized RoE (holding stockholder equity constant) (cell B13), and the upper limit the utility can collect in surcharges before surpassing its Authorized RoE (cell B14).

Sources

- Audited Financial Statement from the Class A Water Utility of the CPUC's Audits Branch
- Cost of capital proceeding decision

Definitions of key terms

Audited financial statement	A report containing financial information about an organization, including a balance sheet, income statement and statement of changes in financial position.
Net income	Revenue minus all expenses (may also be referred to as "net profit")

Stockholder equity (SE)	The remaining amount of assets available to shareholders after all liabilities have been paid (may also be referred to as "common stockholder equity", "shareholder equity", "owner's equity"
Return on Equity (RoE)	A measure of the returns earned on the owner', or common stockholders', investment. Calculated by dividing net income by stockholder equity
Authorized Return on Equity	The ceiling amount the CPUC has authorized utilities to earn in a given time period (prospective)
Actual Return on Equity	A utility's realized return (retrospective)

Authorized RoE based on Cost of Capital Decisions 2012-2021

	Authorized RoE									
Utility	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Cal Water	9.99%	9.43%	9.43%	9.43%	9.43%	9.43%	9.20%	9.20%	9.20%	9.20%
Cal-American	9.99%	9.99%	9.99%	9.99%	9.99%	9.99%	9.20%	9.20%	9.20%	9.20%
Golden State	9.99%	9.43%	9.43%	9.43%	9.43%	9.43%	8.90%	8.90%	8.90%	8.90%
Great Oaks	10.20%	9.79%	9.79%	9.79%	9.79%	9.79%	9.97%	8.85%	8.85%	8.85%
Liberty Apple Valley Ranchos	10.20%	9.79%	9.79%	9.79%	9.79%	9.79%	9.79%	9.35%	9.35%	9.35%
Liberty Park	10.20%	9.79%	9.79%	9.79%	9.79%	9.79%	9.79%	9.35%	9.35%	9.35%
Liberty combined	10.20%	9.79%	9.79%	9.79%	9.79%	9.79%	9.79%	9.35%	9.35%	9.35%
San Gabriel	10.20%	9.79%	9.79%	9.79%	9.79%	9.79%	9.79%	9.20%	9.20%	9.20%
San Jose	9.99%	9.43%	9.43%	9.43%	9.43%	9.43%	8.90%	8.90%	8.90%	8.90%
Suburban	10.20%	9.79%	9.79%	9.79%	9.79%	9.79%	9.79%	9.25%	9.25%	9.25%

Upper limit of Surcharge Account amount recovery that can be recovered 2012-2016

	2012	**2013**	**2014**	**2015**	**2016**
Cal Water	over authorized RoE	$ 3,312,866.20	$ 1,038,761.30	$14,806,024.15	$12,696,665.90
Cal-American	$ 2,730,009.95	$ 2,516,402.35	$ 2,873,257.85	$ 2,411,543.15	$ 1,436,342.70
Golden State	$ 793,096.85	over authorized RoE	over authorized RoE	over authorized RoE	over authorized RoE
Great Oaks	not reported	not reported	not reported	not reported	not reported

Liberty Apple Valley Ranchos	not reported	$ 1,392,417.00	$ 773,903.85	$ 1,620,230.10	not reported
Liberty Park	not reported	over authorized RoE	over authorized RoE	over authorized RoE	not reported
Liberty combined	not reported	over authorized RoE	over authorized RoE	over authorized RoE	not reported
San Gabriel	over authorized RoE	$ 2,919,075.25	$ 5,239,790.40	$ 7,345,732.40	$ 3,720,079.65
San Jose	$ 2,282,853.30	$ 3,723,253.70	over authorized RoE	over authorized RoE	over authorized RoE
Suburban	over authorized RoE	over authorized RoE	over authorized RoE	over authorized RoE	over authorized RoE

Upper limit of Surcharge Account amount recovery that can be recovered 20217-2012

	2017	2018	2019	2020	2021
Cal Water	over authorized RoE	$ 167,388.00	$ 2,707,240.00	over authorized RoE	over authorized RoE
Cal-American	$ 2,700,519.55	$ 2,997,652.00	over authorized RoE	$ 585,762.00	over authorized RoE
Golden State	over authorized RoE	over authorized RoE	over authorized RoE	over authorized RoE	over authorized RoE
Great Oaks	not reported	not reported	over authorized RoE	over authorized RoE	over authorized RoE
Liberty Apple Valley Ranchos	not reported	not reported	not reported	$ 4,968,709.50	$ 656,579.25
Liberty Park	not reported	not reported	not reported	over authorized RoE	over authorized RoE
Liberty combined	not reported	not reported	not reported	over authorized RoE	over authorized RoE
San Gabriel	over authorized RoE	over authorized RoE	over authorized RoE	over authorized RoE	over authorized RoE
San Jose	over authorized RoE	over authorized RoE	$ 2,614,118.00	$ 3,042,213.00	$ 7,958,134.50

Suburban	$ 326,836.60	over authorized RoE	over authorized RoE	over authorized RoE	$ 688,163.75

Implementation Template

	A	B	C
1	**Comparing Actual vs. Authorized RoE**		
2		**beginning period**	**end period**
3	Net Income		$ -
4	Stockholder Equity (SE)	$ -	$ -
5			
6	**Actual RoE**	#DIV/0!	
7	Authorized RoE	%	
8			
9	**Actual vs. Authorized RoE**	#DIV/0!	
10			
11			
12	**Amount that can be recovered from Surcharge Accounts to reach Authorized RoE**		
13	Net Income given Authorized RoE and holding SE constant	#VALUE!	
14	**Upper limit that can be recovered**	#VALUE!	

Legend

insert number

Calculation

Implementation Template Example 1: Actual RoE is greater than Authorized RoE[68]

	A	B	C
1	**Comparing Actual vs. Authorized RoE**		
2		**2018**	**2019**
3	Net Income		$ 63,116,000
4	Stockholder Equity (SE)	$ 730,157,000	$ 700,783,000
5			
6	Actual RoE	8.82%	

68 Example is using Cal Water 2019 Financial Statements.

7	Authorized RoE	9.20%	
8			
9	Actual vs. Authorized RoE	-0.38%	
10			
11			
12	**Amount that can be recovered from Surcharge Accounts to reach Authorized RoE**		
13	Net Income given Authorized RoE and SE	$ 65,823,240	
14	Upper limit that can be recovered	$ 2,707,240	

Implementation Template Example 2: Actual RoE is less than Authorized RoE[69]

	A	B	C
1	**Comparing Actual vs. Authorized RoE**		
2		**2019**	**2020**
3	Net Income		$ 92,244,000
4	Stockholder Equity (SE)	$ 700,783,000	$ 829,227,000
5			
6	Actual RoE	12.06%	
7	Authorized RoE	9.20%	
8			
9	Actual vs. Authorized RoE	2.86%	
10			
11			
12	**Amount that can be recovered from Surcharge Accounts to reach Authorized RoE**		
13	Net Income given Authorized RoE and SE	$ 70,380,460	
14	Upper limit that can be recovered	$ (21,863,540)	

69 Example is using Cal Water 2020 Financial Statements.

Appendix D: Additional data for figure 3

The table below provides detail on the calculated Actual and Authorized RoEs, and the differences between these two figures depicted in Figure 3.

	Utility	Cal Water	Cal-American	Golden State	Great Oaks	Liberty combined	San Gabriel	San Jose	Suburban
Actual RoE	2012	10.57%	9.02%	9.79%	23.03%	not reported	14.06%	9.07%	13.12%
	2013	8.81%	9.13%	11.39%	not reported	26.45%	8.18%	8.14%	12.87%
	2014	9.26%	9.06%	10.97%	not reported	19.20%	6.98%	14.90%	14.01%
	2015	7.10%	9.24%	11.08%	not reported	13.84%	5.87%	10.45%	11.12%
	2016	7.48%	9.57%	10.79%	not reported	not reported	7.85%	11.43%	10.80%
	2017	9.89%	9.24%	11.67%	not reported	not reported	11.12%	10.96%	9.40%
	2018	9.18%	8.44%	9.82%	not reported	not reported	13.86%	11.47%	14.65%
	2019	8.82%	9.57%	12.64%	10.69%	not reported	11.75%	8.34%	14.17%
	2020	12.06%	9.08%	10.85%	22.69%	10.39%	12.26%	8.29%	10.50%
	2021	10.04%	9.46%	11.55%	23.69%	14.42%	11.33%	7.38%	8.71%
Authorized RoE	2012	9.99%	9.99%	9.99%	10.20%	10.20%	10.20%	9.99%	10.20%
	2013	9.43%	9.99%	9.43%	9.79%	9.79%	9.79%	9.43%	9.79%
	2014	9.43%	9.99%	9.43%	9.79%	9.79%	9.79%	9.43%	9.79%
	2015	9.43%	9.99%	9.43%	9.79%	9.79%	9.79%	9.43%	9.79%
	2016	9.43%	9.99%	9.43%	9.79%	9.79%	9.79%	9.43%	9.79%
	2017	9.43%	9.99%	9.43%	9.79%	9.79%	9.79%	9.43%	9.79%
	2018	9.20%	9.20%	8.90%	9.97%	9.79%	9.79%	8.90%	9.79%
	2019	9.20%	9.20%	8.90%	8.85%	9.35%	9.20%	8.90%	9.25%
	2020	9.20%	9.20%	8.90%	8.85%	9.35%	9.20%	8.90%	9.25%
	2021	9.20%	9.20%	8.90%	8.85%	9.35%	9.20%	8.90%	9.25%
Difference between authorized and actual RoE	2012	0.58%	-0.97%	-0.20%	12.83%	not reported	3.86%	-0.92%	2.92%
	2013	-0.62%	-0.86%	1.96%	not reported	16.66%	-1.61%	-1.29%	3.08%
	2014	-0.17%	-0.93%	1.54%	not reported	9.41%	-2.81%	5.47%	4.22%
	2015	-2.33%	-0.75%	1.65%	not reported	4.05%	-3.92%	1.02%	1.33%
	2016	-1.95%	-0.42%	1.36%	not reported	not reported	-1.94%	2.00%	1.01%

	2017	0.46%	-0.75%	2.24%	not reported	not reported	1.33%	1.53%	-0.39%
	2018	-0.02%	-0.76%	0.92%	not reported	not reported	4.07%	2.57%	4.86%
	2019	-0.38%	0.37%	3.74%	1.84%	not reported	2.55%	-0.56%	4.92%
	2020	2.86%	-0.12%	1.95%	13.84%	1.04%	3.06%	-0.61%	1.25%
	2021	0.84%	0.26%	2.65%	14.84%	5.07%	2.13%	-1.52%	-0.54%

Appendix E: 1985 CPUC Executive Director Memo (attachment)