

CALIFORNIA WATER SERVICE COMPANY

**Before the
California Public Utilities Commission**

Decoupling Revenues, Conservation Programs & Rate Design Policy

**Prepared Testimony of David Morse
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for

**California Water Service Company
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Testimony of David Morse

Introduction

This testimony is prepared for California Water Service Company (Cal Water) in compliance with Decision (D.) 06-08-011, which ordered Cal Water to file an “application that addresses the goals of the Water Action Plan (WAP) by proposing an increasing block rate design for each of the districts in this general rate case... and an accompanying mechanism to decouple sales from revenues.”¹ In accordance with the Commission’s directive this testimony proposes increasing quantity rates (IQR), a mechanism to decouple sales from revenues, and a memorandum account to track water conservation expenditures. Although D.06-08-011 only addresses eight Cal Water ratemaking districts the application and this testimony proposes implementing IQR, a water revenue adjustment mechanism (WRAM) and a water conservation memorandum account in all 24 Cal Water districts. Addressing these issues on a company-wide basis in one proceeding will save time, work, and unnecessary expense for Cal Water, the Commission, and other parties and it is consistent with the Commission’s WAP conservation objective. Moreover, implementing the WAP in separate applications or general rate cases for each series of Cal Water’s ratemaking districts would take several years.

Overview

This testimony is divided into four sections:

1. Decoupling Water Sales from Revenues
2. Increasing Quantity Rates

¹ Ordering Paragraph 3 in D.06-08-011

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3. Increased Water Conservation Program Budgets and Accountability

4. Qualifications of David Morse

Additionally this testimony references five exhibits which are included with the application:

A. Letter detailing Joint Recommendations of three investor-owned water utilities and various environmental groups

B. Southern California Edison electric revenue adjustment mechanism (ERAM) tariff sheets

C. Cal Water example WRAM tariff sheets

D. Detailed description of sales decoupling examples

E. Example residential rates with IQR

1 **Section 1**

2 **Decoupling Water Sales from Revenues²**

3 **Background**

4 State policy requires water suppliers to evaluate “efficient uses of water, demand
5 management measures, implementation strategy and schedule...”³ The California Water
6 Plan Update 2005 (State Water Plan), noted in the Department of Water Resources’
7 (DWR) Bulletin 160-98, forecasts water shortages in non-drought years at 2.4 million
8 acre feet per year by the year 2020 and identifies water conservation as one of the
9 primary resource management strategies.⁴ Additionally, the State Water Plan strongly
10 endorses the California Urban Water Conservation Council’s (CUWCC) Best
11 Management Practices for Urban Water Conservation (BMPs). Moreover, the
12 Commission is a signatory to the CUWCC’s memorandum of understanding (MOU)⁵,
13 which provides policy support for the BMPs, the cornerstone for the state’s water
14 conservation efforts. This issue will be discussed in greater detail below.

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16 The Commission is required to “Provide appropriate incentives to water utilities and
17 customers for conservation of water resources.”⁶ However, until the release of the
18 Water Action Plan, the Commission had not articulated a clear policy endorsing

² David Morse provided testimony requesting a decoupling mechanism in Cal Water's 2005 general rate case (GRC), Application (A.) 05-08-006 et al., Cal Water’s 2006 GRC, A.06-07-017 et al., and Golden State Water Company’s policy filing A.06-09-006. This testimony contains excerpts and material from those proceedings to assure that the Commission has a full record in this proceeding.

³ California Department of Water Resources, “Guidebook to Assist Water Suppliers in the Preparation of a 2005 Urban Water Management Plan,” January 18, 2005. Also see California Water Code, sections 10631, 10644, 10656, and 10657, which requires, among other things, for water utilities to prepare and submit a water plan detailing water conservation programs.

⁴ California Water Plan Update 2005 Volume 2: Resource Management Strategies Chapter 22.

⁵ Cal Water is also a signatory to the MOU.

⁶ California Public Utilities Code (PU Code) Section 701.10 (c). Also see PU Code Section 727.5 (d): “The commission shall consider, and may authorize, a water corporation to establish programs, including rate designs, for achieving conservation of water and recovering the cost of these programs through the rates.”

1 implementation of cost-effective water conservation programs despite its endorsement of
2 the BMPs. It is encouraging to note that the Commission has adopted “efficient use of
3 water supplies” as a key water principle and a Water Action Plan Objective to
4 “Strengthen Water Conservation Programs to a Level Comparable to those of Energy
5 Utilities.” Currently, water utilities are not afforded the beneficial ratemaking treatment
6 for water conservation programs that the Commission provides to energy utilities, to
7 encourage energy efficiency programs.

8

9 A recent report entitled “Actions to Improve the Efficiency of Water Uses in California
10 Urban Landscapes,” recommends that the Commission approve a revenue adjustment
11 mechanism to encourage the further development of water conservation programs for
12 privately owned utilities.⁷ The report was prepared by a task force including staff of the
13 CUWCC, state agencies, water utilities, water consumers, and environmental groups.

14

15 The Commission’s recent Water Action Plan recommends removal of “current financial
16 disincentive to water conservation.”⁸ The Commission notes that:

17

18 *Because water utilities recover their costs through sales, there is a*
19 *disincentive associated with demand side management: a successful*
20 *campaign to reduce water use leads to less revenue and less profit. The*
21 *Commission will consider de-coupling water utility sales from earnings in*
22 *order to eliminate current disincentives associated with conservation.*⁹

23

24 Recently, a commissioner with years of experience involving California’s energy
25 efficiency issues indicated: “I was astonished to learn, shortly after I was appointed; that

⁷ “Actions to Improve the Efficiency of Water Uses in California Urban Landscapes; AB 2177 Landscape Task Force Findings, Recommendations, and Actions; Report to the Governor and Legislature,” September 10, 2005. See Working Group 4, recommendation #2. The report is available on the CUWCC’s website.

⁸ CPUC, op cit., page 9.

⁹ CPUC, op cit., page 9.

1 water utilities do not have a decoupling mechanism....I would like to see water
2 decoupling mechanisms instituted within the year.”¹⁰

3

4 Cal Water, California American Water Company, and Golden State Water Company and
5 various environmental organizations including the Natural Resources Defense Council
6 (NRDC) recently submitted joint recommendations to the Commission outlining the water
7 utilities’ commitment and key steps to implementing the Commission’s water conservation
8 objective. The letter, Exhibit A, indicated that:

9

10 *One key action necessary to substantially increase the water conservation*
11 *actions of regulated utilities is for the Commission to remove the current*
12 *financial disincentive to conserve water. Several water companies,*
13 *including CAW and Cal Water, have proposed a water revenue*
14 *adjustment mechanism (WRAM). As clearly stated in the WAP, a WRAM*
15 *provides water companies and customers revenue neutrality with respect*
16 *to the effects of water conservation programs and is consistent with the*
17 *Commission’s successful revenue decoupling mechanisms for gas and*
18 *electric utilities.*¹¹

19

20 Decoupling revenues from sales for water utilities was recently endorsed by the state
21 Legislature in AB 2515, which calls on the Commission to report its progress in
22 implementing Water Action Plan issues including: “The progress achieved toward
23 development and implementation of a ratemaking mechanism and rate design that will
24 encourage water conservation and efficient water use.”¹²

¹⁰ Paraphrasing of a statement by Commissioner Dian Grueneich at the conclusion of the “Symposium: Improving the Efficiency of California Water & Energy Systems,” sponsored by the CPUC, CE, DWR, and CAISO, March 28, 2006.

¹¹ Letter to Commissioners, July 25, 2006 signed by representatives from the three water utilities, NRDC, Mono Lake Committee and endorsed by the California Urban Water Conservation Council, Environmental Defense, Pacific Institute, Planning & Conservation League, League of Women Voters of California, and Friends of the River.

¹² AB 2515 was recently approved by the governor; it will add section 2714.5 to the Public Utilities Code. The full text: the new section 2714.5:

1 Commission's efforts to promote successful energy conservation programs have been
2 recognized nationally and internationally. For example, the Commission's ratemaking
3 mechanism used to decouple sales and revenues has been applauded by energy efficiency
4 advocates; it has also been duplicated by many other state Commissions.¹³

5

6 This testimony recommends that the Commission adopt a revenue decoupling
7 mechanism for Cal Water, also known as a revenue adjustment mechanism (RAM) or
8 water revenue adjustment mechanism (WRAM).¹⁴ The decoupling mechanism will
9 promote the development and implementation of water conservation programs. In
10 addition, Cal Water's request for increasing quantity rates is contingent upon approval of
11 Cal Water's decoupling request.

12

13 **General Discussion**

14 The Commission's stated view of energy efficiency is:

15 *In today's world of rising energy prices and environmental degradation,*
16 *we strive to provide you with in-state benefits of cost-effective energy*
17 *efficiency programs. Our programs not only work to protect our state's*
18 *environment, but they also help you save money on your utility bill! (PUC*
19 *Website)*

The commission shall, by June 30, 2008, prepare and submit to the Legislature, a report that describes the progress achieved toward implementing the policy objectives of the commission's Water Action Plan, adopted December 15, 2005, which includes all of the following:

(a) The progress achieved toward development and implementation of a ratemaking mechanism and rate design that will encourage water conservation and efficient water use.

(b) The progress achieved toward development and implementation of rates that remove the financial disincentive for water corporations to conserve water that exists in the current rate structure, while preserving continued revenue stability for water corporations as new rate structures are implemented.

(c) The impacts of water conservation and efficiency programs on future water, energy, and wastewater treatment costs to customers of water corporations.

¹³ David Moskovitz, "Profits & Progress Through Least-Cost Planning," NARUC, November 1989; Moskovitz, Harrington, Auston, "Decoupling vs. Lost Revenues, Regulatory Considerations," May 1992, Regulatory Assistance Project; Sheryl Carter, "Breaking the Consumption Habit, Ratemaking for Efficient Resource Decisions," The Electricity Journal, December 2001.

¹⁴ Cal Water has requested a WRAM in its 2006 general rate case, A.06-07-017 et al., Exhibit M.

1 Likewise, cost-effective water programs can be good for customers, the utility, and the
2 environment. Additionally, saving water saves energy. And, as noted above, water
3 conservation is consistent with California's water policy.

4
5 Currently, the Commission's ratemaking policies encourage water utilities to increase
6 water sales. This is due to traditional water ratemaking procedures that use projections
7 of sales to set rates. If actual sales exceed the projection, the water utility receives
8 additional revenues and earnings (shareholder profits). If actual sales are below the
9 projected levels, revenues and earnings will be less than what is authorized by the
10 Commission. Before the Commission created ERAM and removed the disincentive to
11 promote energy conservation programs, energy utilities experienced the same incentive
12 to increase sales.

13
14 Clearly, the Commission's current ratemaking procedures, which link sales to earnings,
15 are a major disincentive to promote successful water conservation programs. For
16 example, Cal Water proposed a toilet replacement water conservation program in its
17 Bear Gulch district. Water savings were estimated at 15 acre feet per year. However,
18 without a WRAM implementing this program will cause Cal Water to lose \$15,682 in
19 revenues annually.¹⁵ Another water utility recently provided detailed calculations in a
20 filing before the Commission showing that a 10% reduction in water sales would result
21 in a reduction in earnings of 36%.¹⁶ Likewise, a 10% increase in water sales would
22 result in a 36% increase in earnings. If the Commission wishes to promote water
23 conservation programs it must remove the incentive to promote sales and the water

¹⁵ In the Bear Gulch district, current rates are approximately \$2.40 per 100 cubic feet (CCF). There are 435.6 CCF per acre foot, so the revenue loss for 1 acre foot is \$1,045.44.

¹⁶ Great Oaks Water Company, Advice Letter filing No. 173-W-A, October 31, 2005, page 12-4.

1 conservation disincentive by decoupling sales and earnings. Until water utility sales and
2 revenues are decoupled the Commission is sending water utilities an unclear message
3 about participation in conservation programs. By shifting policy to be more in line with
4 energy conservation policy the Commission would eliminate confusion and provide the
5 investor-owned water utilities with a strong message to implement cost effective BMPs
6 consistent with the state policy.

7
8 A revenue decoupling mechanism for water utilities would provide several benefits. As
9 shown below it would:

- 10 1. Implement a Water Action Plan Objective;
- 11 12 2. Align water and energy ratemaking mechanisms;
- 13 14 3. Promote water conservation by removing the financial
15 16 disincentive associated with lost sales;
- 17 18 4. Remove the incentive for utilities to promote sales;
- 19 20 5. Align the state's policy for water efficiency and water
21 22 demand management measures with the ratemaking
23 interests of water utilities;
- 24 25 6. Comply with the Public Utilities Code sections relating to
26 water conservation;
- 27 28 7. Minimize the importance of sales forecasting, which would
29 reduce litigation time and expenses;
- 30 31 8. Encourage the development of better price signals for
32 water conservation, such as implementing increasing tiered
33 rates as advocated in the Commission's Water Action
34 Plan.¹⁷

¹⁷ California Public Utilities Commission, "Water Action Plan," December 15, 2005, page 9.

1

2 **Brief History of Revenue Adjustment Mechanisms**

3 The Commission originally instituted ERAM¹⁸ in a 1981 Pacific Gas & Electric
4 Company (PG&E) rate case (7 CPUC2d 349, D. 93887) and a San Diego Gas & Electric
5 Company (SDG&E) rate case (D.93892). A similar balancing account for gas utilities
6 called the supply adjustment mechanism had been in operation for several years at the
7 time of the SDG&E rate case decision. ERAM was instituted as a means to deal with
8 uncertainty of shortages of electricity supplies by making the utility financially whole
9 even if it experienced decreases in sales. In addition, it was clear that conservation was a
10 significant concern of the Commission as it implemented the ERAM mechanism. This is
11 borne out by the Commission’s rejection of the staff proposal which would have limited
12 the balancing account to 5% of revenues. The Commission noted that a limit “could be
13 counterproductive to the conservation ethic.”¹⁹ Furthermore, in the PG&E decision that
14 adopted ERAM the Commission noted that:

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...the establishment of a revenue adjustment mechanism is especially important to eliminate any disincentives for a utility to promote conservation and to pursue the policies enunciated by this Commission in achieving all cost-effective conservation. (D. 93887)

21 Over the last twenty plus years the Commission has promoted various energy
22 conservation programs, which are now referred to as “energy efficiency” programs.
23 These programs were intended not only to deal with short-term shortages of supply, but
24 also to promote the efficient use of electricity and gas, which have benefited customers,
25 the state, and the environment. A kilowatt hour not produced saved energy, improved air

¹⁸ ERAM is sometimes erroneously referred to as an Electric “Rate” Adjustment Mechanism. D.93892 stated “Staff Exhibit 160 named the mechanism the Electric Revenue Adjustment Mechanism (ERAM).”

¹⁹ D.93892, SDG&E rate case application.

1 quality, and water quality, and in many instances the total energy saved deferred the need
2 for new power plants. With ERAM, energy utilities were no longer concerned with
3 losses in sales. Moreover, they fully embraced energy efficiency by creating
4 departments to design, promote, and implement energy efficiency programs. The
5 Commission estimated that in the year 2000, \$292 million in energy utility programs
6 saved \$749 million in energy bills and yielded net benefits of \$289 million for the
7 state.²⁰ Currently, the Commission authorizes energy utilities to spend nearly \$300
8 million a year in energy efficiency programs.

9
10 Proponents of energy efficiency programs view the ERAM mechanism as a key policy
11 tool necessary to assure that utilities promote and implement energy efficiency
12 programs.²¹ Additionally, regulators at the national level have recognized the
13 importance of decoupling sales and profits:

14
15 *In 1989, the National Association of Regulatory Utility Commissioners*
16 *(NARUC) adopted a resolution that expressly recognized the fact that*
17 *utilities lose revenues and profits when they or their customers invest in*
18 *cost-effective energy efficiency. NARUC's response was simple and*
19 *unequivocal – reform regulation so that the successful implementation of*
20 *a utility's least-cost plan is its most profitable course of action. In other*
21 *words, align the utility's financial interest with the interest of its*
22 *customers.*²²
23

24 In order to ensure that future Commissions continue to provide electric utilities the sales
25 decoupling incentive, energy efficiency supporters sponsored language requiring the
26 continuation of a revenue decoupling mechanism in an electric restructuring reform bill,

²⁰ The PUC's website, www.cpuc.ca.gov

²¹ See testimony of Ralph Cavanagh, National Resources Defense Council, before the Public Service Commission of Wisconsin, Docket No. 6680-UR-114, April 4, 2005.

²² Cheryl Harrington, David Moskovitz, Tom Austin, Carl Weinberg, Edward Holt, "Regulatory Reform: Removing the Disincentives," June 1994, the Regulatory Assistance Project.

1 which was signed by Governor Davis in April 2001.²³ Today, California’s major energy
2 utilities are operating with an ERAM type mechanism.²⁴ Between 1985 and 1988 the
3 Commission considered ERAM elimination to promote sales and discourage large
4 customers from leaving the electric utilities’ systems. However, by 1989 the elimination
5 efforts were abandoned and it became evident that “ERAM will be embedded in
6 California ratemaking practice for the foreseeable future.”²⁵ During the electricity
7 restructuring period of 1996 through 2001 the Commission never officially abandoned
8 ERAM.²⁶

9

10 For example, in its recent decision on the Edison general rate case the Commission
11 noted:

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13 *NRDC’s [Natural Resources Defense Council] concern is ensuring that*
14 *SCE is not rewarded for increasing commodity sales, an objective implicit*
15 *in Section 739.10 and one that we share. A revenue balancing account*
16 *mechanism is consistent with this objective. No party opposed the use of*
17 *a revenue balancing account, and we will approve SCE’s proposal for*
18 *such a mechanism. (D.04-07-022)*

19

20 In a recent decision on PG&E ratemaking issues the Commission noted:

21

22 *Section 4.6 of the Distribution Settlement provides that PG&E will*
23 *comply with Section 739.10 by implementing the Distribution Revenue*
24 *Adjustment Mechanism (DRAM) and Utility Generation Balancing*

²³ Assembly Bill X1 29 (Kehoe) added section 739.10, “The commission shall ensure that errors in estimates of demand elasticity or sales do not result in material over or under collections of the electrical corporations.”

²⁴ See PG&E D.04-05-055, SCE D.04-07-022, and personal conversation with the Commission’s Division of Ratepayer Advocates staff member Don Schultz, May 16, 2005.

²⁵ C. Marnay and G.A. Comnes, “Ratemaking for Conservation: the California ERAM Experience,” Lawrence Berkeley Laboratory, May 1990, LBL-28019. This paper includes a discussion on staff and Commission thoughts about promotion of energy sales and conservation policy. It also provides a detailed example of how ERAM is actually calculated.

²⁶ Sheryl Carter, *The Electricity Journal*, December 2001, “In Decision No. 96-09-092, the CPUC found that ‘[w]e do not consider today whether it is desirable or appropriate to apply some form of ERAM solely to the distribution revenue requirement. The details of implementing a distribution ERAM may also be considered in the distribution PBR [performance-based ratemaking] proceedings.’”

1 *Account (UGBA) as revenue adjustment mechanisms effective January 1,*
2 *2004, to ensure that PG&E recovers its authorized electric distribution*
3 *and electric generation revenue requirements regardless of the level of*
4 *sales. (D.04-05-055).*
5

6 Edison, PG&E, SDG&E all have revenue decoupling mechanisms.²⁷ The energy company
7 decoupling mechanisms focus on “base revenues.” Base revenues are equal to total revenues
8 less allowances for key variable costs, such as fuel.

9

10 The Commission considered a revenue adjustment mechanism or RAM similar to ERAM
11 for water utilities in its broad investigation into ratemaking for water utilities in 1994.
12 However, in that proceeding the Commission did not consider a RAM as a tool to
13 promote water conservation. Rather, it considered RAMs within the context of “a time
14 in which sales forecasts consistently will fall short because of unavailability of water.”

15 In that proceeding the Commission concluded that:

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17 *...utilities must show that existing ratemaking procedures are inadequate*
18 *to deal with chronic water shortages and resulting loss of revenue (if*
19 *those circumstances occur) and increased capital costs for water quality.*
20 *Utilities have not met that burden.*²⁸
21

22 The Commission has implemented an ERAM type mechanism for one water utility
23 district. The Commission authorized a Water Revenue Adjustment Mechanism
24 (WRAM) balancing account for California American Water Company’s (Cal Am)
25 Monterey District, in 1996.²⁹ The WRAM account was implemented in the context of an
26 inverted rate schedule proposed by Cal Am to provide economic incentives to conserve

²⁷ Southern California Edison’s Base Revenue Requirement Balancing Account was established in accordance with D.04-07-022 and as modified by D.06-05-016. SDG&E’s Electric Distribution Fixed Cost Account was established in D.05-03-023. The Commission adopted a Distribution Revenue Adjustment Mechanism and Utility Generation Balancing Account for PG&E in D.04-05-055.

²⁸ D.94-06-033.

²⁹ D.96-12-005, 69 CPUC2d, 418-420, which adopted a settlement for Cal Am’s Monterey District General Rate Case)

1 water. The Cal Am WRAM is not considered as an example of a full decoupling
2 mechanism since its purpose is to decouple risk of over or under collecting revenues with
3 an inverted rate design. Accordingly, the Cal Am WRAM does not account for
4 differences caused by variations in consumption. However, the Cal Am WRAM sets a
5 water industry precedent for the nexus between a WRAM and increasing quantity rates.
6 It also provides useful insights in implementing a sales related adjustment mechanism for
7 water utilities. The original settlement provided that the:

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...WRAM account balance would accrue interest at the 90-day commercial paper rate, and Cal-Am would file an advice letter for amortization of such balance at any time that it exceeded 5% of gross annual revenues and it anticipated to exceed 5% of gross annual revenues within the following six months for the Monterey District. (69 CPUC2d at 405)

16 A WRAM is not without precedent elsewhere in California. The Los Angeles
17 Department of Water and Power (LADWP) uses a “Water Revenue Adjustment” for
18 recovery of “any shortage in revenue due to variation in water sales...”³⁰ The LADWP
19 mechanism is discussed in more detail in a subsequent section entitled: “Description of
20 Revenue Adjustment Mechanisms.”

21

22 The Commission’s recent Water Action Plan recommends removal of “current financial
23 disincentive to water conservation.”³¹ The Commission notes that:

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Because water utilities recover their costs through sales, there is a disincentive associated with demand side management: a successful campaign to reduce water use leads to less revenue and less profit. The

³⁰ “Water Rates,” June 1, 1995, amended July 28, 1997; February 4, 2000; and June 20, 2004; Ordinance No. 170435, 171639, 173017 and 175964, page 22, available on the LADWP website.

³¹ CPUC, op cit., page 9.

1 *Commission will consider de-coupling water utility sales from earnings) in*
2 *order to eliminate current disincentives associated with conservation.*³²
3

4 The Commission’s Water Action Plan also endorses “increasing block rates,”³³ which
5 would provide customers with better price signals. Section 2 of this prepared testimony
6 requests the Commission to approve criteria to implement increasing quantity rates. The
7 request is contingent on approval of a WRAM.³⁴ Decoupling revenues or sales from
8 revenues removes the key impediment to increasing quantity rates. Under current
9 ratemaking practices Cal Water and customers would be at risk for over or under
10 recovery of revenues if tier block rates increased. New, increasing tier rates may over
11 collect the revenue requirement, thus providing a windfall to Cal Water. On the other
12 hand, the rate structure may induce customers to reduce consumption, which may lead to
13 an under collection of revenues. However, with a decoupling mechanism the issue of
14 over or under recovery of revenues becomes moot.

15
16 With a WRAM, Cal Water’s water conservation effort will further parallel the energy
17 side, becoming a “demand management program.” More precisely, a set of programs
18 that reduce consumption through price signals and consumption reduction programs will
19 be created. With a demand management program, Cal Water will be well on its way to
20 developing an integrated supply planning program.

21
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³² CPUC, op cit., page 9.

³³ CPUC, op cit., page 8.

³⁴ Under such a rate structure rates increase at higher consumption levels. This is similar to the rate structure for energy utilities. It also more closely represents Cal Water’s costs to provide customers water. This recommendation is also consistent with the previously referenced report: “Actions to Improve the Efficiency of Water Uses in California Urban Landscapes; AB 2177 Landscape Task Force Findings. The report recommends that water utilities consider rate structures with lower service charges and inverted rates, see Working Group 4, recommendation #1. The report is available on the website of the California Urban Water Conservation Council.

1 **The Arguments Against a Revenue Decoupling Mechanism are not Consistent with**
2 **the Commission Policy Toward Energy Conservation, the State Water**
3 **Conservation Policy, or the Commission’s Water Action Plan**
4

5 In the Commission’s 1994 investigation into risk and rate reform for the water utilities
6 (D.94-06-033), the Commission focused on water shortages and in that context rejected
7 the notion of a RAM type mechanism. However, the Commission did not consider a
8 water utility RAM in the context of promoting water conservation programs or an
9 inverted rate design structure. Below is a summary of the arguments against a water
10 industry RAM type made by the Commission in its 1994 decision followed by a
11 response:

- 12
13 1. “Utilities must show that existing ratemaking procedures are
14 inadequate to deal with chronic water shortages and resulting loss of
15 revenue.” Also, “... the anticipated shortage of water supply that
16 drives the ERAM recommendation is speculative...”
17

18 Cal Water is not requesting a RAM treatment to deal with water shortages. Rather, it is
19 requesting RAM treatment in order to remove the disincentive it has to promote water
20 conservation programs. Logic dictates that the Commission should recognize its
21 decades of experience in promotion of energy conservation and thus afford water
22 utilities the same ratemaking treatment to promote efficiency (conservation) which is
23 given to energy utilities.
24

- 25 2. “That water utilities are allowed an opportunity to earn a return
26 reasonably sufficient to assure confidence in the financial soundness
27 of the utility and should be adequate, under efficient and economical
28 management, to maintain and support its credit and enable it to raise
29 the money necessary for the proper discharge of its public duties.”
30 And further, “Class A water companies in California are provided
31 special rate relief for certain expenses that are beyond their control.”
32 Also, “With these regulatory tools available to them, the 14 Class A
33 water utilities have shown stable earning and healthy rates of return.”
34

1 Cal Water believes that the available regulatory tools do not properly deal with the
2 disincentive to promote water conservation programs. This was clearly shown in the
3 example of losses with the Bear Gulch water conservation program.
4

5 3. “An ERAM would assuredly relieve sales risk”
6

7 A RAM mechanism would reduce Cal Water’s sales risk, which is driven mostly by
8 weather, economics, and demographics. The risk is symmetrical to customers and Cal
9 Water. Customers pay more when sales are below the rate case adopted levels, utilities
10 benefit when sales are above adopted levels. Also, there is a regulatory upside to
11 removing sales risk: it would reduce the importance of the sales forecasting in
12 regulatory proceedings. Typically, the Division of Ratepayer Advocates (DRA) argues
13 for a higher sales forecast than the utility. Although this controversy has been lessened
14 to a degree with the Commission’s new water rate case plan and a standard forecasting
15 method, controversy in forecasting still occurs. Water utilities still have an incentive for
16 actual sales to exceed the ratemaking sales forecast. With a RAM, there would be no
17 more incentive to “game” the sales forecast. The Commission noted the difference in
18 forecasting and the benefit of eliminating the sales forecast controversy in its decision to
19 implement ERAM for PG&E:
20

21 *Historically, the staff and PG&E in a rate proceeding have disagreement*
22 *over the estimation of sales and revenues for a test period. In their initial*
23 *exhibits in this proceeding, there was a \$150 million difference in electric*
24 *revenue estimates... (D.93887)*
25

26 Furthermore, a RAM would remove weather and economic risk associated with sales
27 volatility from both Cal Water and its customers. Removing this risk has not increased
28 costs to energy customers. In fact, a study by scientists at Lawrence Berkeley
29 Laboratory looking at 10 years of ERAM for California electric utilities found that:

1
2 *...for most California utilities, decoupling has actually reduced rate*
3 *volatility compared to a situation in which there is no decoupling.*
4 *Decoupling can in principle add to or counteract other sources of rate*
5 *volatility and, in California, the net effect has been one of offsetting these*
6 *other sources.....the risk shifting accounted for by ERAM is small or non-*
7 *existent and, in any case, ERAM has contributed far less to rate volatility*
8 *than have other adjustment to rates, such as the fuel-adjustment clause.³⁵*
9

10 The LBL report was published in 1994 and focused on various electricity revenue
11 decoupling mechanisms. The report used data for California electricity utilities to assess
12 various policy related concerns as to the ERAM including “Has ERAM Shifted Rate
13 Risk?” In reference to California electricity utilities, the report found that any shift in
14 risks is “small or nonexistent” and that an assignment of risk should not be done
15 “piecemeal.”

16
17 *We find that, for most California utilities, decoupling has actually*
18 *reduced rate volatility compared to a situation in which there is no*
19 *decoupling...The record in California indicates that the risk-shifting*
20 *accounted for by ERAM is small or non-existent...(page xvi)*

21
22 *...the record in California suggests that the issue of the additional*
23 *rate volatility and risk-shifting associated with decoupling should be*
24 *conducted in a framework that considers all sources of rate volatility*
25 *and risk-shifting in ratemaking. In this framework, the questions of*
26 *what the risk are and who is best suited to bear them can be made*
27 *explicit and their treatment made comprehensive, rather than*
28 *piecemeal. (xviii)*

29
30 *...in the overall context of California ratemaking, the clearing of*
31 *ERAM balances has accounted for only a small proportion of the*
32 *total change in revenue requirements in the last 10 years.*
33 *Adjustments resulting from ECAC have been, by far, the dominant*
34 *source of changes to revenue requirements. (page 42)*

35
36 *...we should conclude that for these two California utilities, there has*
37 *been no risk shifting at all. Instead, ERAM has been accompanied by*

³⁵ J. Eto, S. Stoft, and T Belden, “The Theory and Practice of Decoupling,” Lawrence Berkeley Laboratory, University of California, 1994, LBL-3455, UC-350

1 *rate risk reductions to customers and profit risk reductions to utilities.*
2 (page 48)
3

4 Water utilities are similar to electric distribution utilities in terms of variable costs
5 relative to fixed costs. A high portion of electric rates cover purchase power and fuel
6 costs. In the water industry approximately 50% of water revenues cover water
7 production costs (purchased water, purchased power, and pump taxes). Hence, it can be
8 expected that variation in rates will be driven mostly by these costs, rather than by a
9 RAM.

10
11 Customers of energy utilities have operated with ERAM for over two decades. It is
12 clear that there has been sufficient time and resources over the last 20 years devoted to
13 energy proceedings to remove ERAM if it was deemed a problem. Conservation
14 experts are in general agreement that a RAM for energy utilities is good public policy.³⁶
15

16 Regulators who implemented decoupling mechanisms in other states clearly understood
17 that there would be a shift in risk.³⁷ For example, in Washington:

18
19 *Commission staff and WICFUR both accurately note that the decoupling*
20 *mechanism is broad; it not only insulates the company from deviations in*
21 *sales caused by conservation efforts, but also from deviations in sales*
22 *caused by other factors, for example temperature and customer-initiated*
23 *conservation. The Commission views this as a virtue, not a drawback of*
24 *the decoupling mechanism.*³⁸

25 And, in Maine:
26

³⁶ David Morse served from 1987 to 1996 on the National Association of Regulatory Utility Commission's subcommittee on Energy Conservation, conclusions as to industry perceptions are based on his familiarity with various studies, testimony, and discussions with national known conservation (efficiency) experts.

³⁷ The excerpts from the Washington and Main Commissions were documented in the 1994 Regulatory Assistance Project report previously referenced.

³⁸ Docket No. UE-901183-T and UE-901184-P, April 1, 1991.

1 *Since weather and the economy are not within the control of the utility,*
2 *there are practical limits to the amount of efficiencies that can be*
3 *squeezed out by the utility in response to these factors. For these reasons,*
4 *requiring the utilities to remain exposed to the risks does not really save*
5 *the ratepayer any money in either capital costs or significant management*
6 *efficiencies.*³⁹
7

8 More recently, the Public Utility Commission of Oregon implemented revenue
9 decoupling mechanisms for Cascade Natural Gas Corporation⁴⁰ without ordering any
10 adjustment to the rate of return.

11
12 The California, Oregon, Maine, and Washington commissions did not make any
13 adjustment to the cost of capital at the time they adopted RAMs for energy utilities.

14 Rather, the commissions either explicitly or implicitly relied on their normal cost of
15 capital update process to incorporate any effects of changes in risk. Since earning
16 volatility is a factor in the cost of capital, the change in volatility would be incorporated
17 in market inputs to the cost of capital.⁴¹
18

19 4. “Under current ratemaking, there is incentive to hold the line on costs.
20 By contrast, an ERAM carries with it an implied disincentive. Our
21 experience suggests that efforts to reduce costs are less intense if a
22 utility can simply raise rates to reach any shortfall in sales revenue.”
23

24 Even with a RAM, Cal Water will still have an incentive to reduce costs. Since a RAM
25 only adjusts actual revenues based on changes in sales, Cal Water still has the standard
26 regulatory incentives to minimize expenses.
27

³⁹ Docket No. 90-085 May 7, 1991.

⁴⁰ Oregon PUC, UG 167, Order No. 06-191, entered 4/19/06, see Final Order.

⁴¹ “Because utility rates include a rate-of-return based on the company’s cost of capital, customers of utilities without decoupling mechanisms pay for increase utility volatility through higher, although more stable, electricity prices.” Harrington, etc., “Regulatory Reform: Removing the Disincentives,” June 1994.

1 5. “...if an ERAM or similar device is to be considered, it should be
2 done on a utility-specific basis upon a showing of need, rather than
3 on a generic basis without such a showing.”
4

5 This application meets the above requirement. The application deals with Cal Water
6 specific issues and provides a detailed showing of the need for a decoupling mechanism.
7

8 In Cal Water’s 2005 GRC, the DRA objected to a WRAM proposal on a variety of
9 grounds.⁴² However, DRA later approved an agreement with Cal Water for a partial
10 decoupling mechanism, deferral of the effect on cost of capital, and agreement of Cal
11 Water to propose an increasing tier rate structure. However, since the stipulation did not
12 fully address an increasing tier rate structure, the Commission rejected the stipulation.
13 The Commission noted that “settlements...must provide the Commission with sufficient
14 information to discharge its regulatory obligations.”⁴³ Since DRA had raised the issue of
15 increasing tiered rates, but Cal Water and DRA failed to resolve it in the stipulation, the
16 Commission found the stipulation incomplete and therefore did not adopt the stipulation.
17

18 **WRAM and Cost of Capital**

19 Given the Commission’s policies in implementing revenue decoupling for energy
20 utilities, the Commission should not impose a return on equity (ROE) adjustment with
21 implementation of revenue decoupling for water utilities.
22

23 There is no record that:⁴⁴
24

⁴² “Water Revenue Adjustment Mechanism (WRAM) Proposed by California Water Service Company,”
witness Jay Morse, DRA, A.05-08-006 et al., December 19, 2005.

⁴³ D.06-08-011, page 17.

⁴⁴ “Rebuttal Testimony of David Morse, In Reference to the Office of Ratepayer Advocates report entitled:
“Water Revenue Adjustment Mechanism (WRAM) Proposed by California Water Service Company,”
A.05-08-006 et al., January 9, 2006.

- 1 1. The Commission or Commissions in other states that instituted
2 decoupling mechanisms for energy utilities included an adjustment to
3 the rate of return as part of their decoupling implementation orders.
4
- 5 2. The Commission adjusted the rate of return on energy utilities when it
6 reinstated revenue decoupling mechanism.
7

8 As noted earlier in this testimony, a study by LBL found that there have been no risk
9 shifts with ERAM.

10

11 Although there is no evidence that there is risk shifting, even if there were:

12

- 13 1. The risks shifts would be symmetrical and offsetting to consumers and
14 stockholders. Utilities get a windfall if sales are above projected
15 revenues and ratepayers would no longer get a windfall if sales are
16 below projected revenues.
17
- 18 2. The risk shifts would not be instantaneous with implementation of a
19 WRAM, they would occur over time. However, an adjustment to Cal
20 Water’s earnings for WRAM implementation would be immediate.
21
- 22 3. The effects that implementation of WRAM has on risk and the cost of
23 capital would be captured in the ROE models and thus accounted for
24 in subsequent, general rate cases.
25

26 **DRA Proposed WRAM Alternative Does Not Discourage or Promote Water**
27 **Conservation**

28

29 In Cal Water’s A.05-08-006 et al DRA suggested that rather than decoupling revenues
30 from sales through a WRAM, that a side calculation of “conservation measures would
31 suffice.”⁴⁵ The alternative suggested by DRA has been considered as an alternative to
32 decoupling mechanisms in other states, in reference to energy efficiency programs.

⁴⁵ Jay Morse, op. cit.; “A sales forecast that takes account of the sales impact of verified installed and ongoing conservation measures will suffice. Alternately, the Commission can permit utilities to track revenue shortfalls related only to verified installed conservation measures in a balancing account and true them up on a rate case cycle basis.”

1 Thus, there is a considerable amount of literature and experience with what experts call
2 the “loss revenues” or sometimes “loss sales” approach.⁴⁶ Moreover, the lost revenue
3 approach is not used by the Commission for energy utilities; rather, the Commission has
4 implemented a revenue decoupling mechanism.

5

6 The lost revenues approach reimburses a utility for the theoretical financial losses from
7 successful conservation programs. However, the key problem with the lost revenues
8 approach is that it does not remove the incentive a utility will have to promote sales.
9 Since a utility is reimbursed for the “theoretical financial losses,” through a side
10 calculation, any further reduction in sales leads to reduced revenues and thus reduced
11 profits. That is, if conservation programs do better than the estimate, a utility loses
12 profits. Thus, the loss revenue method leads to complicated, high stakes calculations of
13 water conservation program savings. There are also several other important tradeoffs to
14 consider. The Table below summarizes the major difference between the two
15 approaches:

⁴⁶ The international literature on conservation programs has analyzed decoupling versus lost revenues methods. See “Barriers to Energy Efficiency,” the Regulatory Assistance Project, Wayne Shirley, July 2005, available at www.raonline.org. Also see the Regulatory Assistance Project, “Decoupling vs. Lost Revenues,” Moskowitz, Harrington, Austin, May 1992.

1
2
3

Table 1.1
Decoupling vs. Lost Revenues⁴⁷

	Decoupling	Lost Revenues
Sales	Removes sales incentive and all water efficiency disincentives.	Removes some water efficiency disincentives, does not remove sales incentives.
Measurement & Evaluation	Does not require sophisticated measurement and/or estimation.	Requires sophisticated measurement and/or estimation.
Scope	Addresses revenues lost due to: rate design, all water efficiency programs (for example removes utility disincentive to support public policies that reduce water consumption), and customer water efficiency.	Address revenues lost due to the utility water efficiency programs only.
Scope	Eliminates load forecast gaming.	No direct effect on subsequent rate cases.
Scope	Low litigation potential, low administrative costs.	Cost recovery uncertainty, litigation prone, high administrative cost.

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Thus the decoupling approach is far superior to the lost revenues approach in dealing with incentives to promote conservation, removing gaming of the forecast, encouraging alternative rate designs such as increasing tier rates, easing the burden of estimating conservation savings, and lowering litigation and administrative costs.

Description of Decoupling Mechanisms

This subsection provides a summary of different decoupling mechanisms including those used for energy utilities and water utilities. A more detailed and technical summary of decoupling mechanisms is included in Exhibit D.

⁴⁷ The majority of the material is taken from Shirley, op.cit.

1 *Energy Revenue Adjustment Mechanisms.*

2 The Commission has a long history of supporting revenue decoupling mechanisms for
3 energy utilities. Most recently the Commission reiterated its policy that utilities should
4 not be rewarded for increases commodity sales in a decision that adopted the second
5 generation of energy decoupling mechanisms.⁴⁸ A summary description of energy RAM
6 is included in a recent decision in Edison’s general rate case:

7
8
9
10
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15

With a revenue balancing account, variations between recorded revenues and the utility’s authorized revenue requirement are tracked for subsequent recovery from, or refund to, ratepayers. Any additional revenues beyond the authorized revenue requirement that result from customer growth or increased usage per customer are returned to customers as a rate decrease. (D.04-07-022)

16 Edison, Pacific Gas and Electric, and San Diego Gas & Electric all have revenue
17 decoupling mechanisms that are calculated using “base revenues.”⁴⁹
18

19 The following is a summary of the basic components of a “Base Revenue Requirement
20 Balancing Account.”⁵⁰

21

22 The purpose of the Base Revenue Requirement Balancing Account is to record the
23 difference between an energy company’s authorized distribution and generation base

⁴⁸ “NRDC ’s (Natural Resources Defense Council) concern is ensuring that SCE is not rewarded for increasing commodity sales, an objective implicit in Section 739.10 and one that we share. A revenue balancing account mechanism is consistent with this objective. No party opposed the use of a revenue balancing account...” (D.04-07-022)

⁴⁹ Southern California Edison’s Base Revenue Requirement Balancing Account was established in accordance with D.04-07-022 and as modified by D.06-05-016. SDG&E’s Electric Distribution Fixed Cost Account was established in D.05-03-023. The Commission adopted a Distribution Revenue Adjustment Mechanism and Utility Generation Balancing Account for PG&E in D.04-05-055.

⁵⁰ For convenience and simplicity, Cal Water uses Edison’s terms. As noted in the footnote above, each company uses a different set of terms for their base revenue balancing accounts.

1 revenue requirements, and recorded revenues from authorized distribution and generation
2 rates.

3
4 Revenue decoupling basic steps for energy companies:

- 5
6 1. Monthly Base Revenue Requirements are determined in the GRC.
7
8 2. Utilities track actual base revenues on a monthly basis.
9
10 3. The Base Revenue Requirement Balancing Account includes the net balance
11 between recorded and authorized revenues. The balance account is interest
12 bearing.
13
14 4. Adjustments to recorded revenues include deductions for franchise fees and the
15 uncollectables accounts factor.
16

17 Note: energy utilities have a base rate component in their tariffs.
18

19 *Water Revenue Adjustment Mechanisms*

20 The Commission's RAM for Cal Am is based on a sales adjustment. Below is the
21 Commission's description of the water RAM, quoting from D.04-05-037:

22
23 *The Commission established the WRAM account in 1996 as part of*
24 *CalAm's experimental rate design for residential customers in its*
25 *Monterey District. (See D.96-12-005, 69 CPUC2d 398, 418-420, which*
26 *adopted a settlement for CalAm's Monterey District general rate case.)*
27 *Because the experimental rate design increased the variability of CalAm's*
28 *revenues, the settlement contained a new WRAM account to track the*
29 *variation in projected revenue incurred under the experiment. The*
30 *purpose of the WRAM is to allow the experimental rate plan, which is*
31 *designed to encourage conservation efforts and mitigate the impact of*
32 *rising water rates on customers with fixed low incomes, to go forward*
33 *without significant impact on the ratemaking risk and reward ratio for*
34 *CalAm. The settlement provided that the "WRAM account balance would*
35 *accrue interest at the 90-day commercial paper rate, and CalAm would*
36 *file an advice letter for amortization of such balance at any time that it*
37 *exceeded 5% of gross annual revenues and is anticipated to exceed 5% of*
38 *gross annual revenues within the following six months for the Monterey*
39 *District." (69 CPUC2d at 405.)*

1 The Cal Am example is not considered a full decoupling mechanism since its purpose is
2 to decouple risk of over or under collecting revenues with an inverted rate design. The
3 Commission has specified that “Only the differences caused by the design should accrue
4 to the account and that differences caused by variations in consumption are not
5 appropriately accrued to the account.”⁵¹ Therefore, the WRAM does not completely
6 decouple revenues from sales. Reduced sales resulting from a successful water
7 conservation program could result in less revenue for Cal Am. However, the
8 implementation mechanics of the Cal Am WRAM provides important insight into a
9 water industry decoupling mechanism and a decoupling mechanism based on adjusting
10 sales.

11

12 The “Water Revenue Adjustment” for the Los Angeles Department of Water and Power
13 (LADWP) is based on a revenue decoupling concept. It has the following features⁵²:

14 A Water Revenue Adjustment Factor (WRAF) is calculated annually by the formula:

15
$$\text{WRAF} = (a-b)/c$$

16

17 a= “The revenue target set for the prior fiscal year...”

18 b= “Total revenue billed for the prior fiscal year...”

19 c= “Total estimated water sales for 12 months commencing with the
20 effective date of the WRAF...”

21

22 “The WRAF shall be established as zero for each year that the factor
23 would otherwise be negative.”

24

25 The LADWP mechanism removes the disincentive for effective water conservation
26 programs and also removes some risk for rate design and low sales. However, the
27 LADWP mechanism is not a true “balance” account since the mechanism is not

⁵¹ CPUC Resolution No. W-4206, July 6, 2000, concerning Cal Am’s WRAM advice letter.

⁵² LADWP, op cit.

1 symmetrical. Rates and thus revenues are adjusted if sales fall short of the target level.
2 However, there is no adjustment to reduce rates or revenues if sales result in revenues
3 above the target level.⁵³

4
5 Exhibit D includes a more detailed description of various decoupling methods with
6 numerical examples.

7
8 **Cal Water’s Recommendation on Decoupling Mechanisms**

9 Cal Water requests a revenue mechanism modeled closely after that implemented by the
10 Commission for energy utilities. Edison, PG&E, SDG&E all have revenue decoupling
11 mechanisms that are calculated using “base revenues.”⁵⁴

12
13 The purpose of the Base Revenue Requirement Balancing Account, or ERAM as it is
14 commonly referred, is to record the difference between an energy companies’s
15 authorized distribution and generation base revenue requirements and recorded revenues
16 from authorized distribution and generation rates.

17
18
19 REVENUE DECOUPLING BASIC STEPS FOR ENERGY COMPANIES:

- 20
21 1. The monthly base revenue requirement is determined in GRCs.
22
23 2. Actual base revenues are calculated monthly.
24
25 3. A balancing account tracks the net balance between recorded and
26 authorized revenues and is interest bearing.
27

⁵³ Since WRAF is zero “for each year that the factor would otherwise be negative.”

⁵⁴ Southern California Edison’s Base Revenue Requirement Balancing Account was established in accordance with D.04-07-022 and as modified by D.06-05-016. SDG&E’s Electric Distribution Fixed Cost Account was established in D.05-03-023. The Commission adopted a Distribution Revenue Adjustment Mechanism and Utility Generation Balancing Account for PG&E in D.04-05-055.

1 4. Adjustments to recorded revenues include deductions for franchise
2 fees and uncollectibles.

3

4 A copy of the Edison ERAM tariff is included in the Exhibit B.

5

6 *Note: energy utilities have a base rate component in their tariffs.*

7

8 Like energy utilities, the purpose of a Base Revenue Requirement Balancing Account or
9 Water Revenue Adjustment Mechanism (WRAM) for Cal Water is to decouple sales and
10 revenues, which will allow Cal Water to aggressively pursue water conservation
11 measures and implement increasing quantity rates.⁵⁵ Cal Water's request for
12 authorization of water conservation memorandum accounts to track costs associated with
13 implementation of the best management practices and its increasing block commodity
14 rate proposal are discussed later in this report.

15

16 As proposed, Cal Water's decoupling mechanism would mirror the mechanisms that the
17 Commission authorized for energy utilities. The mechanism would record the difference
18 between Cal Water's authorized and recorded base revenue requirement for each
19 ratemaking district. As such, the basic steps for Cal Water's mechanism, shown below,
20 are the same as the basic steps for energy utilities, shown above.

21

22

23 PROPOSED REVENUE DECOUPLING BASIC STEPS FOR CAL WATER:

24

- 25 1. Cal Water's monthly base revenue requirement will be determined in
26 its GRCs.
- 27 2. Actual base revenues will be recorded on a monthly basis.
- 28 3. A balancing account will track the net balance between recorded and
29 authorized revenues and is interest bearing.
- 30
- 31

⁵⁵ Section 3 of this testimony includes a request to increasing water conservation program budgets consistent with the California Urban Water Conservation Council's best management practices. Section 2 of this testimony requests approval of a proposal for increasing quantity rates.

1 4. Adjustments to recorded revenues will include deductions for
2 franchise/business license fees and uncollectibles.
3

4 Accordingly, Cal Water proposes that its base revenue requirement be calculated by
5 subtracting the revenue requirement for all expense related balancing and memorandum
6 accounts from its total revenue requirement. All adjustments will include deductions for
7 franchise/business license fees and uncollectibles and the balancing account will be
8 interest bearing. To facilitate the following detailed discussion on the mechanics of Cal
9 Water’s decoupling mechanism, below are listed several new acronyms that will be used.

10

11	WRAM	-	base revenue requirement balancing account
12	TRR	-	total revenue requirement
13	BR	-	base revenue requirement authorized
14	BRR	-	base revenue requirement rate
15	MBR-A	-	monthly base revenue requirement authorized
16	MBR-R	-	monthly base revenue requirement recorded
17	B/MAR	-	balancing/memorandum account revenues excluding
18			WRAM

19

20 How Cal Water’s Proposed WRAM would work:

- 21
- 22 1. Cal Water proposes that its authorized, base revenue requirement
23 (BR), be adopted for each ratemaking district in its GRC decisions.
24 To determine the BR the GRC decision’s adopted revenues
25 associated with any costs that are subject to balancing/memorandum
26 accounts (excluding WRAM) e.g. purchased water, purchased power,
27 pump taxes, conservation expenses, etc. are subtracted from the
28 adopted total revenue requirement (as shown in the GRC decision
29 adopted summary of earnings).
30
 - 31 2. The adopted balancing/memorandum account revenues (B/MAR) are
32 calculated by adding the associated franchise/business license fees and
33 uncollectibles to the balancing/memorandum account expenses (as
34 shown in the GRC decision adopted summary of earnings).
35
 - 36 3. To determine the monthly base revenue requirement (MBR) Cal
37 Water proposes that a five year average of historical monthly water
38 sales (as a percent of annual water sales) by district be adopted in each
39 GRC. The MBR is calculated by multiplying the monthly percent of

1 annual sales by the BR. The MBR would be shown in each GRC
2 decision.

- 3
- 4 4. The recorded monthly base revenue requirement (MBR-R) is
5 calculated by multiplying the recorded monthly sales by the
6 authorized base revenue requirement rate (BRR) where the BRR is
7 equal to the BR divided by the authorized sales.
8
- 9 5. The monthly entry into the BRA is the difference between the MBR-A
10 and the MBR-R.
11
- 12 6. Consistent with the balancing account for energy utilities, Cal Water’s
13 BRA is an interest bearing account that tracks the balance between
14 monthly recorded vs. authorized base revenues.⁵⁶ Any change in base
15 rates, e.g. attrition, will result in a revisions to the BR, BRR, and
16 MBR-A. The balancing/memorandum accounts, excluding WRAM,
17 continue to operate as previously.
18
- 19 7. Annually, by March 31st, Cal Water proposes to provide Water
20 Division a written report for each district with a WRAM showing the
21 revenue over- and under-collection related to recorded water sales as
22 of December 31st of the preceding calendar year. Differences between
23 recorded base revenues and adopted base revenue requirements will
24 be tracked in the balancing account and accrue interest at the 90-day
25 commercial paper rate. If the annual report filed with Water Division
26 indicates that the over- or under-collection for any district exceeds 5%
27 of the district’s prior calendar year total recorded base revenue
28 requirement, Cal Water will file an advice letter within 30 days that
29 amortizes the balance in the account. In each general rate filing, Cal
30 Water will request an amortization of any remaining amounts in the
31 WRAM, credits or debits.
32
- 33 8. Since the BRR is similar to the base rate for energy utilities, Cal
34 Water proposes that the BRR be identified on Cal Water’s metered
35 rate schedules.
36
- 37 9. An example WRAM tariff sheet for the Bear Gulch district is included
38 in Exhibit C.
39

⁵⁶ For Southern California Edison, the monthly interest rate is “one-twelfth of the Federal Reserve three-monthly Commercial Paper Rate – Non-Financial, from Federal Reserve Statistical Release H.15 (expressed as annual rate. If in any month a non-financial rate is not published, SCE shall use the Federal Reserve three-month commercial Paper Rate – Financial.” Source Edison Tariffs, Advice letter 2019-E, filed July 27, 2006.

1 Below is an example WRAM calculation.

2
3
4
5
6

**Table 1.2
WRAM Example Calculation**

District _____

Step 1 GRC Findings to be used in WRAM

Month	A	B	C	E	F	G	H
	Sales CCF	TRR \$	Annual B/MAR \$	BR \$ (B-C)	BR monthly factor ratio*	MBR-A \$ (F*E)	Annual BRR \$/CCF (G/A)
Jan	252,250	\$ 630,625	NA	NA	0.08	\$ 341,724	NA
Feb	250,222	\$ 625,555	NA	NA	0.075	\$ 320,366	NA
March	255,230	\$ 638,075	NA	NA	0.09	\$ 384,439	NA
etc.							
Annual	3,106,578	\$ 7,766,446	\$ 3,494,900	\$ 4,271,545	1	\$ 4,271,545	\$ 1.375

*based on 5 year average of historical monthly water sales as a percent of annual water sales.

Step 2 Calculation of WRAM

Month	I	J	K	L
	Actual sales CCF	MBR-R \$ (H*I)	WRAM \$ (G-J)	WRAM Accrual \$
Jan	240,890	\$ 331,224	\$ 10,500	\$ 10,500
Feb	245,340	\$ 337,343	\$ (16,977)	\$ (6,477)
March	260,230	\$ 357,816	\$ 26,623	\$ 20,146
etc.				

Adjustments for interest accruals are not shown.

This example is for illustrative purposes only and does not represent any specific Cal Water district.

- Base revenue requirement account (WRAM)
- Base revenue requirement authorized (BR)
- Base revenue requirement rate (BRR)
- Monthly base revenue requirement authorized (MBR-A)
- Monthly base revenue requirement recorded (MBR-R)
- Balancing/memorandum account revenues excluding WRAM (B/MAR)
- Total revenue requirement (TRR)

7
8
9

Transition methodology

10 Future GRCs will include the components for calculating the Base Revenue
11 Requirement. In order to implement WRAM immediately for all of Cal Water's
12 districts, a transition method is proposed to set up WRAMs between now and the next
13 GRC:

14
15
16

1. Use the adopted annual sales and total revenue requirement (TRR) from the last GRC decision, updated for any escalation.

- 1 2. Calculate the annual B/MAR by totaling the authorized purchase
2 water, purchase power, pump taxes, and other balancing accounts
3 included in the last GRC decision.
4
- 5 3. Calculate BR by subtracting B/MAR from TRR.
6
- 7 4. Convert the BR to monthly data by using five years of monthly sales
8 data. If available, use monthly sales coefficients from the GRC
9 decision.
10

11 **Summary and Conclusions**

12 Cal Water requests a WRAM based on the method the Commission has used for revenue
13 decoupling for energy companies. The key component of such a mechanism is the use of
14 “base rates.” Alternatively, Cal Water requests a WRAM based on other methods
15 selected by the Commission that result in 1. decoupling water sales from revenues; 2.
16 ensuring that customers and Cal Water are made whole for any over or under collection
17 of revenues resulting in implementation of IQR; and 3. assuring that customers and Cal
18 Water face symmetrical consequences for sales over or under the forecast level.

1 **Section 2**

2 **Proposal for Increasing Quantity Rates (IQR)**

3 **Introduction**

4 Cal Water requests approval of IQR conditioned on Commission approval of its WRAM
5 request.⁵⁷ In this Section Cal Water proposes rate design criteria for residential, single
6 family IQR. Because of the complexity and equity issues addressed below Cal Water
7 proposes to address IQR for master metered residential and non residential customers in
8 individual GRC filings. As discussed in this Section the IQR criteria is applied to Cal
9 Water’s residential metered customers in all districts and is revenue neutral.⁵⁸ Exhibit E
10 illustrates Cal Water’s proposed IQR and bills using the method for all districts.

11
12 **Rationale for IQRs**

13
14 IQR should be adopted for the following reasons:

- 15
16 1. Provides better price signals by more closely aligning rates with long
17 run marginal cost pricing.
18
19 2. Increases financial incentive for customers to conserve water.
20
21 3. Implements a Commission Water Action Plan objective.⁵⁹
22
23 4. Aligns water rate design with the Commission’s rate design policy for
24 energy utilities.
25
26 5. Endorsed in a recent report to the governor and legislature⁶⁰ and
27 supported in a joint letter by Cal Am, Cal Water, Golden State Water

⁵⁷ Cal Water has requested IQR in its 2006 general rate case application, A.06-07-017, Exhibit M. This application supersedes that request.

⁵⁸ Any over or under collection will be accrued in a Base Revenue Requirement Balancing Account. Proposed IQR rates result in projects revenues of 100.5 % to 101% of revenues under single quantity rates.

⁵⁹ CPUC, *Water Action Plan*, December 15, 2005.

⁶⁰ California Urban Water Conservation Council, *Water Smart Landscapes for California*, AB 2717 Landscape Task Force Findings, Recommendations, & Actions, Report to the Governor & Legislature, December 2005. See WWW.cuwcc.org/ab2717.

1 Company and various environmental organizations including the
2 Natural Resources Defense Council. (Exhibit A includes a copy of
3 the letter).⁶¹

4 **The key objectives**

5

6 The key of objectives of Cal Water’s proposal for IQR include the following:
7

- 8 1. “Provide a financial incentive for customers to reduce water
9 consumption.”⁶²
- 10 2. “Consider the impact on low income customers...”⁶³ Cal Water is
11 proposing that the first rate tier be set at a level to include basic water
12 needs. Thus, customers with minimal water usage will have a reduced
13 bill over the current single quantity rate. In addition, Cal Water has an
14 application before the Commission proposing a low income rate
15 assistance program.⁶⁴
- 16 3. Consideration of water long-run marginal costs.
17

18 ***Criteria for Residential Single Metered Customers for IQR***

19

20 ***Criteria for Sizing Rate Tiers***⁶⁵

21

22 **Three Tiered Rate Structure:**

- 23 1. The first tier extends from zero consumption to the midpoint between
24 the median winter consumption and average winter consumption.
25 Rationale: this value provides a proxy for minimal, indoor usage for
26 low and average levels of consumption.
- 27 2. The second-tier extends from the end of the first tier to the midpoint
28 between the weather adjusted average monthly annual consumption
29 and the weather adjusted average monthly summer consumption.
30

31
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34

⁶¹ Letter to Commissioners, July 25, 2006 signed by representatives from the three water utilities, NRDC, Mono Lake Committee and endorsed by the California Urban Water Conservation Council, Environmental Defense, Pacific Institute, Planning & Conservation League, League of Women Voters of California, and Friends of the River.

⁶² CPUC, *Water Action Plan*, December 15, 2005, page 8.

⁶³ CPUC, *Water Action Plan*, December 15, 2005, page 9.

⁶⁴ Cal Water Application A.05-10-035.

⁶⁵ Much of the size criteria for rate tiers was developed by Cal Water in collaboration with the DRA.

- 1 3. The third tier begins at the end of the second tier and has no upper
2 limit. Rational for second and third tier sizes: about 40% to 60% of
3 the total consumption is by customers whose average monthly
4 consumption would put them in the third tier. High consuming
5 customers will see an increase in their total annual bills, including an
6 increase in their summer bills.

7

8 Two Tier Rate Structure:

9

- 10 1. Districts where there is little seasonal variation in consumption only
11 have two tiers. The size of the first tier is a statistical proxy for
12 minimal usage. This method is proposed for three districts: South San
13 Francisco, East Los Angeles, and Coast Springs in Redwood Valley.⁶⁶
14
15 2. Where the break even discount is greater than the average summer
16 consumption: reduce the size of the first tier, e.g. use mode winter
17 consumption rather than the midpoint between median winter
18 consumption and average winter consumption.⁶⁷

19

20 Method for Determining Steps Between Rate Tiers

21

- 22 1. Second tier set at the current, single quantity rate
23
24 2. Third tier set at 20% above the second tier rate
25
26 3. First tier rate set at 95% of the single quantity rate
27
28 4. Second tier rate is adjusted up or down to achieve revenue neutrality.
29 Revenue neutrality is defined as IQR revenue projected within 100.5
30 % and 101% of revenues based on the single quantity rate.⁶⁸
31
32 5. If step 4 above does not achieve target revenues, the first tier is
33 adjusted until revenues balance.⁶⁹

⁶⁶ In the South San Francisco district winter average consumption is 6 ccf/month, annual average is 7 ccf/month and summer consumption averages 9 ccf/month. The first tier for SSF was set at 5 ccf/month, which is the winter mode. In East LA winter average consumption is 14 cc/month, annual is 16ccf/month and summer is 19 ccf/month. The first tier for East LA was set at 8 ccf/month, which is the winter mode. In Coast Springs winter average is 5 ccf/month, annual average is 6 ccf/month and summer average is 9 ccf/month. The first tier for Coast Springs was set a 4 ccf/month, which is the winter mode.

⁶⁷ Districts where the size of the first tier was reduced include Bear Gulch, East LA, Salinas, South SF. The winter mode was used for the first tier rather than the midpoint between winter median and winter average.

⁶⁸ For example, with the Bakersfield district, the initial revenue recovery was 99.55% with rate tiers at .95, 1.0 and 1.20. The second tier was adjusted to 1.03, resulting in projected revenue recovery of 100.61%.

- 1 6. Six districts needed steps 4 and 5 to achieve target revenues and
2 assure that the break even discount was less than average summer
3 consumption.⁷⁰
4
5 7. Exceptions:
6
7 a. Districts with two tiers: the second tier is 20% greater
8 than the first tier with the projected revenues within
9 100.5% to 101% of revenues based on current single
10 quantity rate.
11
12 b. The third tier in Redwood Valley districts which have
13 rates in excess of \$5/ccf are limited to a 10%
14 increase.⁷¹ Coast Springs which only has two tiers is
15 limited to a 15% difference between the tiers.
16

17 *Rate Design Results for Residential Customers*
18

19 Cal Water’s proposed rate tiers; typical bills, and projected revenue recovery based on
20 the proposed IQR criteria by district are included in Exhibit E. Listed below is a brief
21 summary for one of the larger districts.
22

23 **Bakersfield Residential**
24

25 The Table below provides a statistical summary of the 2005 monthly bills for 26,514
26 single metered customers in the Bakersfield District. The weather adjusted average level
27 of consumption was 26 ccf/month. The winter average level of consumption was 15
28 ccf/month. The summer average consumption was 42 ccf/month.

⁶⁹ For example, in the Kern River district the initial settings of .95, 1.0, and 1.2 resulted in revenue recovery of 101.57% over the target level. Reducing the first tier to .93 resulted in revenue recovery of 100.53%.

⁷⁰ For example, Bear Gulch has a first tier of .9 and second tier of .96. Step 6 was used for Antelope Valley (Fremont & Lake Hughes), Mid Peninsula, Coast Springs, Westlake.

⁷¹ Current Redwood District quantity rates are \$14.02/ccf for Coast Springs, \$5.16/ccf for Lucerne, and \$6.58/ccf in the Unified Area.

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Table 2.1

Bakersfield Data Base Summary Results of Residential Monthly consumption 2005 ccf/mo.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Total	270,724	242,621	304,228	365,969	482,116	705,699	877,188	850,131	887,644	664,779	476,714	410,230
Average	13.99	12.54	14.60	17.40	22.71	32.99	40.57	38.96	40.33	30.11	21.59	18.52
Mode	9	7	8	11	17	25	30	31	24	20	16	11
Median	10	9	11	14	18	27	33	32	32	24	17	14
Stan Dev.	24.82	22.01	22.99	25.07	28.18	37.27	46.84	44.91	67.92	39.26	30.34	30.78

Bakersfield Data Base Summary Results of Residential Monthly consumption 2005 ccf/mo.

	Total	Monthly	Weather *		Weather Adjusted Basis		
			Winter	Summer	Adj Fctr.	Annual	summer
Total	6,538,043	651,391	NA	NA	1.04846	6,854,877	
Average	651,391	25	15	40		26	42
Mode	NA	2	8	29			30
Median	NA	21	10	31			32
Stan Dev.	NA	29	NA	NA			

* Weather adjustment based on Cal Water filings for 12 mos ending Sept. 2005.

Other values:

mid point wntnr average and median 13
mid point averg annual and summer average 34

The Residential Customer and Consumption Block table below illustrates the skewed consumption patterns. That is, a large portion of customers account for a smaller portion of overall consumption, and a large portion of consumers account for a small portion of consumption. This skewed pattern is prevalent in all of the districts included in this proposal. The data indicates that in the Bakersfield district, 26.21% of the residential customers have annual average consumption of 13 ccf a month or less. However those customers represent only 6.91 % of total consumption. Annual consumption of 34 ccf/mo and below represents 83% of residential customers and 61% of total consumption. Customers with consumption of 52 ccf a month or more represent only 5.5% of customers, yet represent almost 20% of consumption.

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Table 2.2
Residential Customer Consumption Blocks

Customer and Consumption Blocks					Cumulative Data For Consumption Groups				
ccf/mo.	# cust	% cust	cons ccf	% consum.	Cust #	Cust %	consump consump	consumpt %	Rationale
0 to 8	3,673	13.85%	123,605	1.89%	3,673	13.85%	123,605	1.89%	winter mode
9 to 13	3,277	12.36%	328,225	5.02%	6,950	26.21%	451,830	6.91%	wntr median & wntr avg mid point
14 to 15	1,601	6.04%	227,150	3.47%	8,551	32.25%	678,980	10.39%	tot wntr avg.
16 to 26	9,359	35.30%	2,015,929	30.83%	17,910	67.55%	2,694,909	41.22%	to weather adjusted avg.
27 to 34	4,127	15.57%	1,288,443	19.71%	22,037	83.11%	3,983,352	60.93%	annl avg & smr avg mid point
35 to 42	1,970	7.43%	766,619	11.73%	24,007	90.54%	4,749,971	72.65%	to smmr avg.
43 to 51	1,042	3.93%	484,427	7.41%	25,049	94.47%	5,234,398	80.06%	to 1 SD over summer average
52+	1,465	5.53%	1,303,645	19.94%	26,514	100.00%	6,538,043	100.00%	over 1 SD
total	26,514		6,538,043	100.00%					

4

Table 2.3 below provides information on current rates and the proposed rates for the three increasing tier rates. The current quantity rate is \$1.017/ccf. The proposed IQR is a reduction for tier one yielding a rate of \$.97/ccf. The second tier is 3% above the current rate of \$1.01/ccf at \$1.05. The tier three rate of \$1.22/ccf is 20.0% above the current single quantity rate.

10

11

Table 2.3
Bakersfield Residential consumption 2005
Key rate input assumptions

Current rates		rate design	ccf/mo.	portion of current rate	new rate by block
		block 1	0 to 13	0.9500	\$ 0.97
		block 2	14 to 34	1.0300	\$ 1.05
		block 3	35 +	1.2000	\$ 1.22
qnty rate	\$ 1.0170				
cust.	26,514				
Target rev.	\$ 6,649,190				

12

13

Tier 1 includes consumption levels between 0 and 13 ccf/month and provides a proxy for indoor water needs. This tier includes 26.21% of residential customers and represents 6.91% of residential consumption. The second tier includes monthly consumption levels between 14 and 34 ccf/month. This tier includes annual average consumption. However, customers with average levels of consumption will have some of their summer consumption in the third tier. Note that while average annual consumption is 26 ccf/month, the summer average annual consumption is 42 ccf/month. Thus, average

1 level consumption customers will see a portion of their consumption in the third tier, thus
 2 providing a conservation incentive during Cal Water’s peak consumption season.

3
 4 Table 2.4 listed below illustrates the effect of the proposed rates on various consumption
 5 levels. For example, a residential customer consuming 5 ccf/month will see a 5%
 6 reduction in the commodity charge to \$5/month. However, the customer with the highest
 7 level of consumption will experience an increase of 19.6% increase in the commodity
 8 charge to \$2,068/month.

9
 10 **Table 2.4**
Bakersfield Summary Table of Typical Customer Bills*

usage	consumption	new bill	percent change
Low	5	\$ 5	-5.00%
Average winter	15	\$ 15	-3.93%
Annual average	26	\$ 26	-1.00%
Average summer	42	\$ 44	3.76%
High	100	\$ 115	13.18%
Highest	1,700	\$ 2,068	19.60%

11 * Does not include Service Charge.

12
 13 The “skewed” consumption patterns present a challenge in designing rates. In order to
 14 charge a higher rate (e.g. tier 3) for higher levels of consumption, a discount must be
 15 given to many customers who have low levels of consumption. This is necessary to
 16 assure that new rates collect the same level of revenues as the existing single quantity
 17 rates. Customers with average monthly consumption of 34 ccf/month or less will receive
 18 a discount. However, these customers will still see an increase in the summer months
 19 and hence a rate signal to conserve.

20
 21 Table 2.5 below provides a summary by district of key rate design indicators for Cal Water’s
 22 IQR proposal. In additional the table indicates the projected level of revenues under the new

1 rate design vs. the current rate design. For example, for the Bakersfield district, the new
 2 rates are projected to recover .61% more revenues than current rates. Of course, Cal Water
 3 and customers will be indifferent as to over or under collection with the WRAM.

4 **Table 2.5**

5 **Summary Statistics - Residential Single Meter Customers - Tier Widths and Rates and Revenues**

District	Tier 1 top CCF/mo	Tier 2 top CCF/mo.	Brek-Even Pt Avg. CCF/mo*	Summer Avg CCF/mo	Tier 1 Rate Multiplier	Tier 2 Rate Multiplier	Tier 3 Rate Multiplier	Rev Above Current Rates %	# Cust
Antelope Valley									
, Frmnt & Lk Hghs	10	24	28	29	0.86	1.03	1.2	0.65	283
Lancaster	14	56	60	72	0.93	1	1.2	0.74	702
Leona	11	46	50	60	0.91	1	1.2	0.77	424
Bakersfield	13	34	34	42	0.95	1.03	1.2	0.61	26,514
Bear Gulch***	10	35	44	46	0.9	0.96	1.2	0.72	16,083
Chico	10	31	33	40	0.95	1	1.2	0.66	12,832
Dixon	10	27	23	39	0.95	1.055	1.2	0.67	2,951
Dominguez	11	17	17	20	0.95	1.07	1.2	0.54	30,535
East LA***	8	NA	15	19	0.9125	1.095	NA	0.78	21,428
Hermosa	10	15	16	17	0.95	1.035	1.2	0.51	24,280
Kern River	6	13	15	18	0.93	1	1.2	0.53	4,285
King City	11	21	22	25	0.95	1.01	1.2	0.61	2,095
Livermore	9	23	25	29	0.95	1	1.2	0.51	18,244
Los Altos	10	27	30	33	0.95	0.99	1.2	0.67	18,235
Marysville	9	21	23	27	0.92	1	1.2	0.52	549
Mid Peninsula	8	14	15	18	0.95	1.03	1.2	0.5	33,973
Oroville	8	22	22	28	0.95	1.02	1.2	0.66	2,894
Palos Verdes	15	35	39	40	0.935	1	1.2	0.66	24,373
Redwood									
Coast Sp.**,**	4	NA	9	8	0.9217	1.06	NA	0.51	238
Lucerne**	9	18	20	22	0.95	1	1.1	0.53	1,349
United**,**	9	17	19	20	0.95	1.02	1.1	0.69	455
Salinas ***	7	17	18	19	0.95	1	1.2	0.51	23,742
Selma	12	34	31	42	0.95	1.045	1.2	0.58	2,876
So. SF***	5	NA	8	9	0.9208	1.105	NA	0.64	15,197
Stockton	9	20	20	25	0.95	1.03	1.2	0.5	42,684
Visalia	11	29	29	37	0.95	1.02	1.2	0.71	15,246
West Lake***	13	44	52	53	0.82	1.02	1.2	0.9	6,652
Willows	8	25	24	32	0.95	1	1.2	0.69	1,312
									349,022 Total

* Maximum consumption level getting a discount.
 ** Denotes bi monthly bill, all others are monthly bills.
 *** Alternative criteria applied

6
7

8 ***Master Metered Residential Customers***

9 Cal Water analyzed options for IQR for master metered customers, which present a
 10 particular challenge in rate design. Although residential master metered customers
 11 represent a very small percent of residential meters, they represent about 15% of

1 residential consumption for the districts in this general rate case. The table below
 2 indicates the percent of master metered consumption relative to total residential
 3 consumption for Cal Water’s districts.⁷²

4 **Table 2.6**

5 ***Master metered Residences
 Percent of Total Residential Consumption***

District	%
Bear Gulch	3%
Bakersfield	23%
Chico	34%
Dixon	8%
Dominguez	24%
E. LA	5%
Hermosa/R	27%
King City	5%
Kernville	10%
Kern River	1%
Los Altos	8%
Livermore	7%
Mid Peninsula	21%
Marysville	72%
Oroville	15%
Palos Verdes	4%
Selma	25%
Salinas	14%
So. SF	12%
Stockton	14%
Visalia	11%
West Lake	3%
Willows	21%
Total	15%

6
 7 In addition, residential master metered customers may represent a higher portion of
 8 lower income customers than single metered customers. IQR in the master metered class
 9 will not necessarily provide a proper price signal for the following reasons:

- 10
 11 1. The free rider problem: since individual customers are not metered, it
 12 is difficult to impose higher rates on higher users. For example, in an
 13 apartment complex resident A takes short showers and resident B

⁷² Based on data for December 2005, does not include very small districts.

1 takes longer showers, yet the apartment owner receives one bill that
2 includes the consumption for both residents.

- 3
- 4 2. Cal Water does not have current data indicating the number of
5 housing units that are served by each master meter. Thus, data on
6 master metered consumption can not provide any distinction between
7 a customer with 100 units and one with 4 units. This information can
8 be used to establish tiers by apartment complex based on the number
9 of dwelling units.
- 10
- 11 3. Consumption variations in usage for many master metered customers
12 are not weather dependent since apartment dwellers have little or no
13 landscape watering. Their usage may constitute a basic indoor use
14 level. Thus pricing strategies to discourage higher usage during
15 summer peak months may not be effective.
- 16
- 17 4. The master metered customers may represent a much higher
18 proportion of low income customers. Thus special care must be taken
19 to not be in conflict with Commission policies regarding low income
20 customers.
- 21

22 Cal Water intends to build a data base for the number of units for each master metered
23 customer. Additionally, Cal Water will evaluate information from its low income
24 program to determine consumption patterns for low income users. However, at this time,
25 Cal Water does not currently have sufficient customer information to propose effective
26 IQRs for residential master metered customers.

27

28 ***Non residential Customers***

29 Non residential customers include commercial, industrial, irrigation, and public authority
30 customers. The objective of increasing rates is to provide customers with better price
31 signals including encouraging customers to reduce consumption during peak usage. Non
32 residential customers present different issues in designing rates than with residential
33 customers:

- 1 1. The sector is non homogeneous. There are wide variations in usage
2 and the ability for customers to reduce consumption, especially during
3 summer peak periods.
4
- 5 2. Many industrial and commercial customers do not have landscape
6 water demands, so there are not significant changes in winter versus
7 summer consumption.⁷³
8
- 9 3. In many districts there is little or no distinction between industrial or
10 commercial customers.
11

12 Based on its preliminary analysis it may be appropriate to separate non residential
13 customers into five groups based on average monthly consumption as illustrated in the
14 table below.

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20

⁷³ For example, there is a difference of only 8% between winter and summer consumption for industrial customers in the Dominguez district.

1

Table 2.7

2

Combined business and industrial rate classification based on consumption levels

District	Class	over 100,000 ccf/mo.	10,000 to 99,000 ccf/mo.	1,000 to 9,999 ccf/mo.	100 to 999 ccf/mo.	under 100 ccf/mo.
BK	bus	0	3	46	909	5516
	industrial	0	0	0	9	33
	total	0	3	46	918	5549
BG	bus	0	0	3	80	1133
	industrial	0	0	0	0	0
	total	0	0	3	80	1133
Dixon	bus	0	0	1	11	139
	industrial	0	0	0	0	8
	total	0	0	1	11	147
Dom	bus	0	2	34	739	2515
	ind	1	18	11	49	110
	total	1	20	45	788	2625
HR	bus			5	132	2185
	industrial	0	0	3	8	29
	total	0	0	8	140	2214
KC	bus	0	0	6	48	248
	ind	0	0	1	6	12
	total		0	7	54	260
MRL	bus	0	0	0	53	500
	industrial	0	0	0	3	1
	total	0	0	0	56	501
Oroville	bus	0	1	4	78	669
	ind	0	1	1	5	4
	total	0	2	5	83	673
PV	bus	0	1	9	98	351
	industrial	0	0	0	9	2
	total	0	1	9	107	353
Selma	bus	0	0	3	63	418
	industrial	0	0	1	5	10
	total	0	0	4	68	428
SO. SF	bus	0	1	14	251	1588
	industrial	0	1	4	12	53
	total	0	2	18	263	1641
West Lake	bus	0	1	17	133	223
	industrial	0	0	0	6	6
	total	0	1	17	139	229
Willows	bus	0	0	0	26	279
	industrial	0	0	0	0	0
	total	0	0	0	26	279
Grand total		1	29	163	2707	15753

3

4

1 The table illustrates two important points about non residential rate design:
2

- 3 1. The designation of “business” versus “industrial” has little
4 relationship to consumption patterns;
5
- 6 2. There is a very wide variation in monthly consumption between
7 customers within the current classification of “business” and
8 “industrial.”

9 At this point, Cal Water is not proposing IQR for its non residential customers. Cal
10 Water intends to address IQR for non residential customers in future GRCs.
11 Furthermore, Cal Water may propose further refinements, even another classification
12 approach. Once Cal Water has experience with residential IQR, it will evaluate
13 refinements to the current non residential classifications, assess the non residential data
14 and its billing abilities, and propose IQR for non residential customers where
15 appropriate.

16 **Need for Revenue Decoupling** 17 18

19 Section 1 of this testimony discusses Cal Water’s proposal for a revenue decoupling
20 mechanism called a Base Revenue Requirement Balancing Account. The key benefit of
21 revenue decoupling is to remove the incentive Cal Water now has to promote sales. In
22 addition, a revenue decoupling mechanism is needed to avoid over or under collecting
23 revenues under IQR. The likelihood for over or under collecting authorized revenues
24 levels increases with IQR since increases or decreases in consumption will often be at
25 the third tier rate, which is 15% - 20% greater than the current single tier rate. Therefore,
26 in order to protect consumers and Cal Water form possible over or under collection of
27 revenues, Cal Water’s IQR proposal is contingent upon the Commission adopting a
28 revenue decoupling mechanism.
29

1 **Summary and Conclusions**

2 Cal Water requests that the Commission adopt criteria for IQR and direct Cal Water, to
3 file rates that comport with the adopted design with the Water Division within 60 days
4 after the Commission adopts rate design criteria and a revenue decoupling mechanism.
5

1 **Section 3**

2 **Increase Conservation Programs and Accountability**

3
4 **Introduction and Summary**

5
6 In conjunction with Cal Water’s request to remove the disincentive to promote
7 conservation programs, Cal Water is requesting authority to increase its current water
8 conservation program budgets through a memorandum account to the equivalent of 1.5%
9 of operating revenues. Cal Water’s current budget of about \$ 1.1 million would increase
10 to about \$4.7 million annually. This request will not affect current water rates since Cal
11 Water proposes to use a Water Conservation Memorandum Account (WCMA) to track
12 water conservation program expenditures. The memorandum account will be trued up in
13 general rate cases.

14
15 **Increased conservation program activity and accountability**

16 Cal Water is requesting authority from the Commission for Cal Water to implement the
17 water conservation policies described in the joint letter submitted by Cal Water, Cal Am,
18 Golden State and various environmental groups regarding water conservation.⁷⁴ These
19 policies are consistent with the Commission’s water conservation objectives outlined in
20 its Water Action Plan.⁷⁵ Specifically Cal Water wishes to implement the increased

⁷⁴ Letter to Commissioners, July 25, 2006, signed by representatives from Cal Am, Cal Water, Golden State Water, Mono Lake Committee and NRDC. The letter was also supported by the California Urban Water Conservation Council, Environmental Defense, Pacific Institute, Planning & Conservation League, League of Women Voters of California, and Friends of the River.

⁷⁵ “Water IOUs would be required to demonstrate that they are up-to-date in meeting coverage requirements with Best Management Practices when cost-effective.” Page 8, CPUC, Water Action Plan, December 15, 2005.

1 conservation program activity and accountability items noted in the joint letter under
2 phase one:

- 3
- 4 1. Cost-effective water conservation program investment to be
5 maintained at a level equivalent to 1.5% of revenues or more.
6
- 7 2. Water companies will report annually on water conservation programs
8 budgets, expenditures and accomplishments in report format
9 developed by the California Urban Water Conservation Council
10 (CUWCC).
11

12 In order to implement the above programs, Cal Water is asking the Commission to
13 authorize Cal Water to set up a Water Conservation Memorandum Account to track
14 conservation program expenses up to an annual budget cap equivalent to 1.5% of
15 revenues for each of its districts for cost-effective water conservation programs.⁷⁶
16 Initially, this request will not affect rates since Cal Water proposes to use a memorandum
17 account to track water conservation program expenditures. The WCMA would be
18 reviewed in Cal Water's general rate case applications.

19
20 **Cal Water Proposes Conservation Program Funding Level Based on 1.5 Percent of**
21 **Revenues.**

22 As illustrated in Table 3.1 below, Cal Water's currently authorized water conservation
23 program budget of \$1.1 million is well below the roughly \$4.6 million needed to bring
24 the conservation budget up to the equivalent of 1.5% of revenues. The Commission's
25 model for energy utilities is a system's benefits charge, based on a percentage of
26 revenues. This has provided consistency that has allowed energy efficiency programs

⁷⁶ Cal Water's 2006 general rate case A.06-07-017, seeks authorization of an overall conservation budget equivalent to 1.5% of revenues. The general rate case request and the request in this application are compatible. Should the Commission issue a decision in this policy application before it issues a decision in the Cal Water 2006 general rate case, Cal Water could increase conservation program spending up to the 1.5% cap. If the Commission issues a decision in the 2006 general rate case before issuing a decision in this policy application, Cal Water would implement that conservation budget.

1 continuity, creativity and expansion into new areas. Likewise, Cal Water requests a
 2 conservation budget level, providing certainty, continuity, and a commitment from the
 3 Commission to fund water conservation programs. Authorization of a memorandum
 4 account with a 1.5% cap is the first step.
 5

6 **Table 3.1**
 7 **Cal Water Conservation Budget**

District	Annual Budget		Revenues	Annual % of revenues
2005 GRC Districts				
	Current authorized			
Antelope Valley	\$ 24,000		\$ 1,570,500	1.53%
Bear Gulch	\$ 154,100		\$ 19,822,200	0.78%
Dominquez-South Bay	\$ 106,433		\$ 33,238,800	0.32%
Hermose-Redondo	\$ 95,567		\$ 18,052,300	0.53%
Kern River Valley	\$ 28,267		\$ 3,405,000	0.83%
Marysville	\$ 30,833		\$ 2,128,200	1.45%
Palos Verdes	\$ 76,533		\$ 26,084,000	0.29%
Redwood - Coast Springs	\$ 2,700		\$ 207,000	1.30%
Redwood - Lucerene Rate area	\$ 14,600		\$ 1,218,600	1.20%
Redwood - united rate area	\$ 5,900		\$ 567,800	1.04%
All districts	\$ 538,933		\$ 106,294,400	0.51%
(per decision D. 06-08-011)				
2006 GRC Districts				
	Current authorized	GRC Proposed*		Current Authorized
Bakersfield	\$ 15,300	\$ 714,122	\$ 47,488,500	0.03%
Dixon	\$ 3,700	\$ 18,401	\$ 1,175,800	0.31%
King City	\$ 1,300	\$ 17,658	\$ 1,178,600	0.11%
Oroville	\$ 1,300	\$ 5,700	\$ 2,340,400	0.06%
Selma	\$ 4,600	\$ 37,921	\$ 2,414,100	0.19%
South SF	\$ 25,100	\$ 145,530	\$ 9,958,700	0.25%
West Lake	\$ 3,600	\$ 97,959	\$ 9,186,400	0.04%
Willows	\$ 1,500	\$ 23,691	\$ 1,069,800	0.14%
All districts	\$ 56,400	\$ 1,060,982	\$ 74,812,300	0.08%
* the proposed budget in A. 06-07-017 is at 1.5% of revenues, except for Oroville.				
2004 GRC Districts				
	Current authorized			
Chico	\$ 20,200		\$ 12,021,700	0.17%
Visalia	\$ 35,200		\$ 11,056,600	0.32%
Livermore	\$ 42,500		\$ 11,544,900	0.37%
Stockton	\$ 118,000		\$ 23,409,600	0.50%
Salinas	\$ 66,600		\$ 16,116,800	0.41%
Mid-pen	\$ 91,600		\$ 21,637,500	0.42%
Los Altos	\$ 53,400		\$ 16,338,700	0.33%
East LA	\$ 63,300		\$ 18,627,800	0.34%
All districts	\$ 490,800		\$ 130,753,600	0.38%
(per decision D. 05-07-022)				
Total system, current authorization	\$ 1,086,133		\$ 311,860,300	0.35%
1.5% buget	4,677,905			1.50%
Increase	3,591,771			

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1 Cal Water’s conservation program memorandum account will be reviewed in subsequent
2 general rate cases to assure that Cal Water is following Best Management Practices
3 (BMP) as outlined by the Urban Water Conservation.

4 **Summary and Conclusions**

5 Cal Water requests authority to increase its current water conservation program budgets
6 and establish a WCMA to track conservation program related expenditures, including
7 administrative costs, equivalent to approximately 1.5% of operating revenues. This
8 request will not affect current water rates since Cal Water proposes to use a
9 memorandum account to track water conservation program expenditures. The WCMA
10 will be trued up in general rate cases.

1 Currently I am an independent consultant; I have done work related to utility regulation
2 for USAID and the World Bank. As part of my international work, I have advised
3 cabinet level officials on energy and utility regulatory matters in Australia, China, Egypt,
4 India, Mongolia, Romania, and Sri Lanka.

5

6 I have testified numerous times before the Commission. I will focus on my recent work
7 with the water industry. I recently sponsored prepared testimony before the Commission
8 requesting a WRAM for Cal Water Service in its 2005 and 2006 general rate case
9 applications. I also sponsored a proposal for increasing quantity rates and expanded
10 conservation programs in Cal Water's 2006 general rate case application. I was a
11 panelist for the Symposium: "Improving the Efficiency of California Water and Energy
12 Systems," sponsored by the Commission, the Energy Commission, the Department of
13 Water Resources, and the California Independent System Operator, March 28, 2006. I
14 sponsored testimony on WRAM, balancing accounts and other issues in Golden State
15 Water Company's policy application A.06-09-006. Also I sponsored conservation
16 program testimony in Cal American Water's General Rate Case Application A.06-01-
17 005 and also rebuttal testimony on WRAM and increasing quantity rates in the Cal Am
18 general rate case.

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