Ratemaking and the General Rate Case

September 2015

Purpose of Rate Making

- To provide the utility with a revenue stream that covers anticipated reasonable costs and allows the utility an opportunity to earn a reasonable profit.
  - A process to set a revenue requirement that will be used to set rates for customers.
  - Ensure safe and reliable operation of the utility.

Some Basics

The Utility is a Monopoly

- Absence of competition and competitive discipline
- By their nature monopolies are inefficient
- High ability to exercise market power absent regulation

The utility is given an opportunity to earn revenue like a business would in a competitive environment (or as close as possible)

Some Basics

A Balancing Act

What stakeholders want from the ratemaking process

Utilities:

- Certainty and a fair return on investment to ensure financial viability.

Customers:

- Safe, reliable, and accessible service at fair, reasonable, stable, and affordable rates.

Society:

- Utility services that promote the public interest and support associated social goals.

Main Components in Energy and Water Ratemaking

- **GRCs - Revenue Requirement:** The total amount of money a utility collects from its customers.
  - Determines the size of the pie

- **Revenue Allocation and Rate Design:** Allocating the revenue requirement to different customer classes and setting rates.
  - Determines how the pie is sliced

Principals Behind Ratemaking

- Money has a time value.
- Cost of capital represents an opportunity cost.
- Higher risk investments require higher expected returns to attract investors.

Principals Behind Ratemaking

Revenue Requirement Calculation

Revenue Requirement = (RoR x RB) + E + T + D

RoR:	Rate of Return
RB:	Rate Base (long term assets)
E:	Expenses (current time frame)
T:	Taxes
D:	Depreciation (recovery of Rate Base)

Energy: GRC Process and Schedule

CPUC Application Process (Highly Simplified)*

18 Months

- Application Filed
- Noticed in Daily Calendar
- Commissioner Assigned by the President
- ALJ Division assigns Administrative Law Judge (ALJ)
- Notice of Prehearing Conference (PHC) posted to Daily Calendar
- PHC Held – Scope and Scheduling discussed **
- Assigned Commissioner sends out Scoping Memo
- Written Opening Testimony Served on Parties
- Written Reply Testimony Served on Parties
- Evidentiary Hearings held
- Briefs filed
- Reply Briefs filed
- Proposed Decision (PD) released to public (possible Alternative Proposed Decision from Assigned Commissioner
- Comments filed on the PD
- Reply Comments filed on the PD
- Commission votes on the PD (maybe with changes depending on the comments)

* A settlement can be negotiated on any or all facts in dispute or on a preferred outcome.

** Public Participation Hearings may be held at any time prior to the case being submitted.

GRC Process and Schedule

Example of Large Energy Utility Rate Case Cycle

- Base Year: 2013
- Rate Case Cycle: 2016 – 2018 (Typically 3 years)
- Test Year: 2016
- Post Test Years / Attrition Years: 2017 and 2018
- Application Submitted: 3rd – 4th quarter 2014
- ORA Testimony: Spring 2015
- Evidentiary Hearings: Summer 2015
- Briefs Filed: Late Summer 2015
- Decision: Late 2015 / Early 2016

Water: GRC Process and Schedule

- Public Utilities Code 455.2 mandates that Class A* water utilities file a GRC every 3 years
- Single service district GRC schedule is 14 months, and multi-service district is 20 months
- Settlement process is built into schedule
- Must meet Minimum Data Requirement in their GRC filing
- Water IOUs file a Proposed Application for deficiency review
- Water IOUs have 2 test years for rate base
- Rate base has one attrition year while expenses have two years of attrition

* Class A Water Utility > 10,000 Service Connections

GRC Process and Schedule

What it looks like from ORA's point of view

Need to Determine the Cost of Capital to Calculate the Rate of Return

- The Cost of Capital is the return on investment necessary to fund capital projects.

- Start with capital structure.
  - Determine appropriate amounts of each component (debt/equity)
  - Determine cost of each component

Cost of Capital*

What the Proceeding Does

- Adopts a capital structure
- Adopts a cost of capital
  - The allowed cost for each component of capital
  - The allowed rate of return on rate base
  - Used to compute the return component of the utility's revenue requirement

* Determined in a separate proceeding for energy utilities; determined in the GRC for water utilities

Cost of Capital

Overall weighted average of the utility's capital cost:

- The cost of long-term debt
  - Generally the weighted average interest rate on outstanding mortgage bonds
- The cost of preferred stock
  - Generally the dividend rate
- The cost of common stock equity
  - Return required or expected by investors
  - More complex and controversial process

Basic Cost of Capital

Example

Long Term Debt		Amount	Weight	Cost	Weighted Cost
Series A	$	2,000	0.20	7%	0.014
Series B	$	2,000	0.20	8%	0.016
Series C	$	1,000	0.10	9%	0.009
Series D	$	1,000	0.10	6%	0.006
					0.045
Common Equity					
Stock	$	2,000	0.20	10%	0.020
Retained Earnings	$	2,000	0.20	10%	0.020
					0.04
Total Capital:	$	10,000	**Cost of Capital:**		**0.085**

Cost of Capital Example

Prior and Currently Authorized)

PG&E

	PG&E 2012 Authorized			PG&E Proposed 2013			D.12-12-034 Adopted		
	Capital Structure	Cost	Weighted Cost	Capital Structure	Cost	Weighted Cost	Capital Structure	Cost	Weighted Cost
Long Term Debt	47.00%	6.05%	2.84%	47.00%	5.69%	2.67%	47.00%	5.52%	2.59%
Preferred Stock	1.00%	5.68%	0.06%	1.00%	5.60%	0.06%	1.00%	5.60%	0.06%
Common Equity	52.00%	11.35%	5.90%	52.00%	11.00%	5.72%	52.00%	10.40%	5.41%
Return on Rate Base			8.79%			8.45%			8.06%

Water Cost of Capital*

Utility	Cost of Equity	% of Equity	Cost of Debt	% of Debt	Cost of Capital
California Water Service*	9.43%	53.4%	6.24%	46.6%	7.94%
California Americna Water	9.99%	53.0%	6.63%	47.0%	8.41%
Golden State Water Company*	9.43%	55.0%	6.99%	45.0%	8.33%
San Jose Water Company*	9.43%	51.4%	6.68%	48.7%	8.09%
Park Water Company	9.79%	57.0%	0.0812	43.0%	9.07%
Apple Valley Ranchos	9.79%	57.0%	8.12%	43.0%	9.07%
Great Oaks Water Company	9.79%	70.0%	7.50%	30.0%	9.10%
San Garbriel Water Company	9.79%	63.0%	6.26%	37.0%	8.78%
Suburban Water Company	9.79%	60.0%	7.05%	37.0%	8.48%

*D.12-07-009 Initially adopted 9.99 Return on Equity for all four utilities.
In 2013, the Modifed Capital Adjustment Mechanism was trigger for three of four IOUs, which resulted in a lower ROE due to the drop in market interest rates.

* Similar to energy companies determined in a separate proceeding.

Calculation for Return on Rate Base

Total Rate Base x *Return on Rate Base*

= ***Net for Return***

What is Rate Base?

- Rate base is the value of property used by the utility in providing service (e.g. "steel in the ground").
- Authorized within the General Rate Case.
- Includes:
  - Plant in service/Capital investment
  - Working capital
  - Materials and supplies
  - Deductions for accumulated provisions for depreciation
  - Accumulated deferred income taxes
  - Contributions in aid of construction
  - Customer advances for construction

PG&E Electric Distribution Rate Base

PG&E 2007 General Rate Case
Rate Base – Test Year 2007
Electric Distribution
(Thousands of Dollars)

Line No.	Description	Adopted
	WEIGHTED AVERAGE PLANT	
1	Plant	$16,807,749
2	Plant Held for Future Use	0
3	Total Weighted Average Plant	$16,807,749
	WORKING CAPITAL	
4	Material and Supplies - Fuel	0
5	Material and Supplies - Other	29,880
6	Working Cash	53,941
7	Total Working Capital	$83,821
	ADJUSTMENTS FOR TAX REFORM ACT	
8	Deferred Capitalized Interest	2,751
9	Deferred Vacation	22,661
10	Deferred CIAC Tax Effects	265,556
11	Total Adjustments	$290,969
	LESS DEDUCTIONS	
12	Customer Advances	95,939
13	Accumulated Deferred Taxes - Fixed Assets	1,305,797
14	Accumulated Deferred Taxes - Other	0
15	Deferred ITC	55,854
16	Deferred Tax - Other	0
17	Total Deductions	$1,457,590
18	**DEPRECIATION RESERVE**	$7,152,589
19	**TOTAL RATE BASE**	$8,572,359

Rate of Return on Rate Base

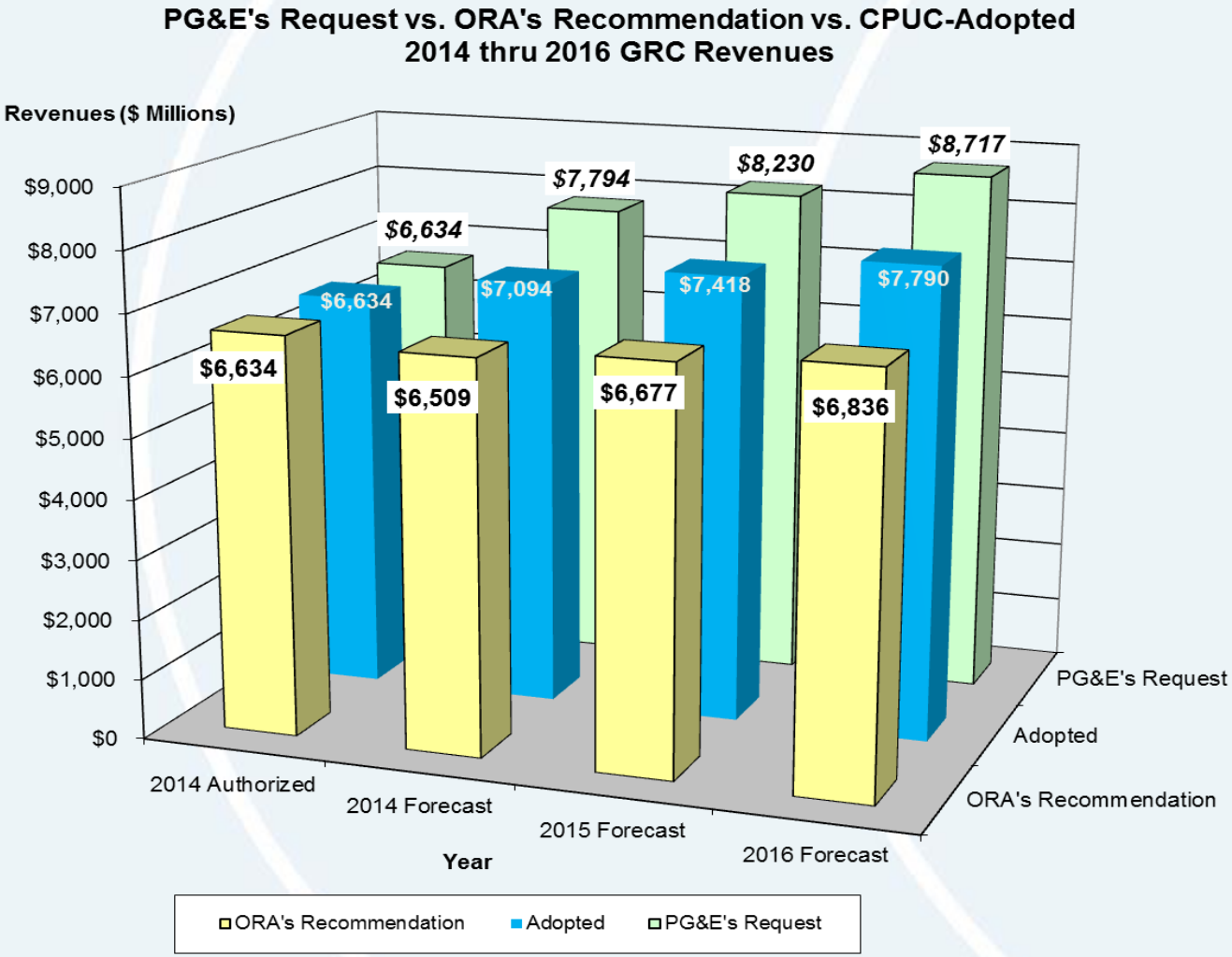
PG&E 2007 General Rate Case
Results of Operations – Test Year 2007
Electric Distribution
(Thousands of Dollars)

Line No.	Description	Adopted
	REVENUE	
1	General Rate Case Revenue	$2,965,600
2	Less Non-General Revenue	90,027
3	Revenue at Effective Rates	$2,875,573
	OPERATING EXPENSES	
4	Transmission	726
5	Distribution	488,040
6	Customer Accounts	243,421
7	Uncollectibles	7,655
8	Customer Services	3,373
9	Administrative & General	337,795
10	Franchise Requirements	22,449
11	Other Adjustments	(332)
12	Subtotal Expenses	$1,103,127
	TAXES	
13	Property	97,402
14	Payroll	37,409
15	Business	386
16	Other	108
17	State Corp. Franchise	70,978
18	Federal Income	306,024
19	Total Taxes	512,308
20	DEPRECIATION	596,774
21	Total Operating Expenses	$2,212,210
22	**NET FOR RETURN**	753,390
23	**RATE BASE**	$8,572,359
	RATE OF RETURN	
24	On Rate Base	8.79%
25	On Equity	11.35%

Differences in Water Attrition

- Water IOUs have 2 test years for rate base
- Rate base has one attrition year while expenses have two years of attrition
- Water IOUs are required to have an earnings test when they file for attrition
- The earnings test determines the amount of inflation adjustment to the utility's revenue requirement
- If a utility is over earning the inflation adjustment is reduced, eliminated, or may result in a reduction in service rates.
- If not over earning, a utility gets the full increase associated with inflation

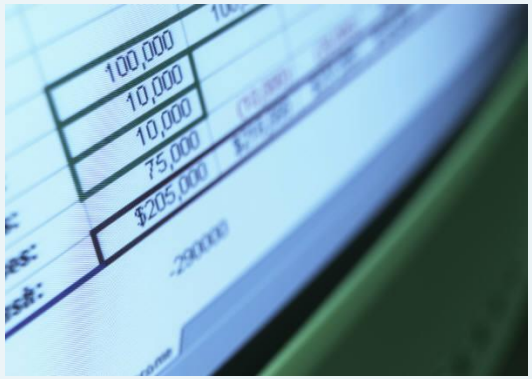
PG&E Request for 2014 thru 2016



Results of Operations

Components

- **Operating Revenues**
- **Operating Expenses**
  - Operation and Maintenance (O&M) Expenses
    - Distribution, Transmission (non-FERC), Utility Owned Generation (UOG)
  - Customer-related
  - Administrative & General (A&G)
  - Taxes
  - Franchise Fees & Uncollectibles
  - Depreciation / Salvage Value of Assets

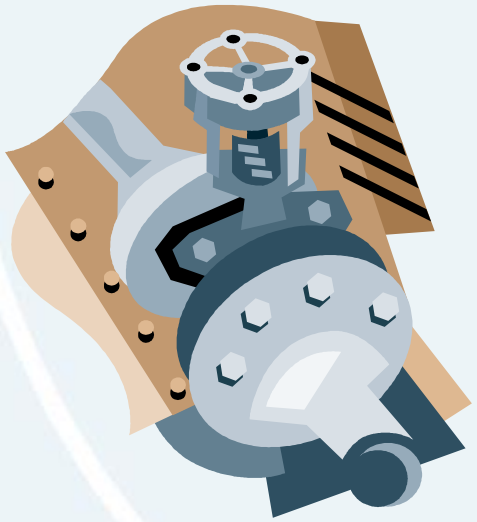


- **Rate Base – Net investment in facilities and equipment**
- **Return on Investment (Return on Rate Base)**

Results of Operations

Gas Functions Within a GRC

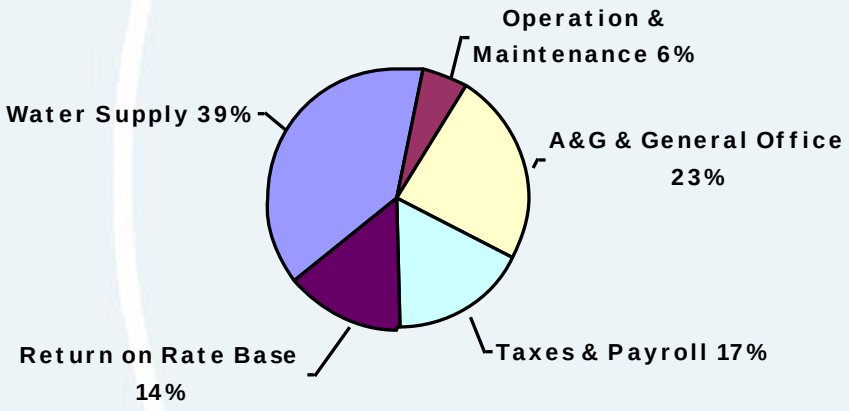
- Leak Surveys and Repair Work
- Distribution / Transmission Integrity Management Programs
- Hydrostatic Testing of Transmission Pipelines
- Cathodic Protection
  - Control corrosion of steel pipes
- Maintenance of Gas Facilities
- Gas Pipeline Replacement
- Gas Reliability



Water IOUs Rate Making

- There are **8 Class A** water utilities with a total of 57 districts, with a combined total of over 1.3 million service connections
- **Legislative mandate** requires all large regulated (Class A) utilities to file a general rate case every three years
- **Costs of service** are reviewed in individual General Rate Cases (GRCs) for each water service district
- **Main components** of costs of service review include operation & maintenance, administrative & general, general office, taxes, payroll, and return on capital investments
- **Total revenue requirement** for Class A regulated water utilities is over $1.4 billion
- **Water Supply Costs** are a pass thru to ratepayers and tracked in balancing accounts
- **Water customer bills** consist of a monthly service charge and a usage-based charge

Components of Water Service Costs*

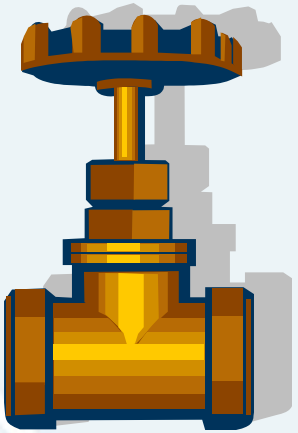


*Includes Costs for all Water Utilities in 2007

Water Results of Operations

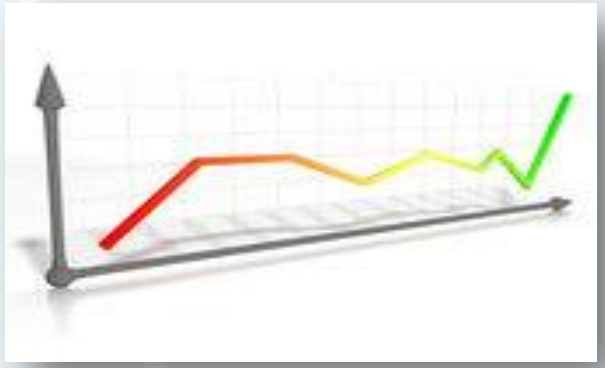
Water Functions Within a GRC

- Leak Surveys and Repair Work
- Distribution / Transmission Pipeline Repairs and Replacement Management Programs (aging infrastructure)
- Water Quality - Compliance with State Water Resources Control Board's Department of Drinking Water (DDW) and EPA drinking water rules
- Sources of Water Supply (Drought Impacts)
- Water Storage Needs
- Conservation
- Water Reliability



Forecasting Methods

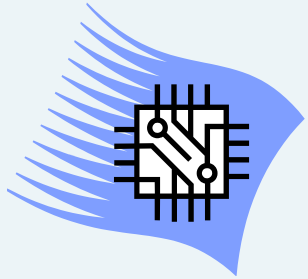
- Historical Data (3 - 5 year data)
- Latest Recorded Year
- Budget based
- Unit cost / Work units
- Independent approach and analysis
- Benchmarking / comparison to other utilities
- Normalizing for variances
- Ratemaking adjustments
  - Charitable Contributions
  - Promotions / Advertising
  - Lobbying
  - Executive Incentives
  - Supplemental Pension for Executives / Stock Options

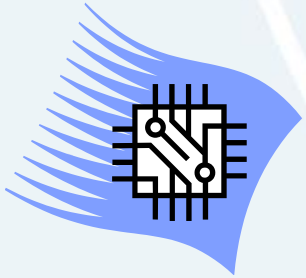


Summary of GRC Process

ORA Work Products

- ~~Evaluation and Acceptance of NOI~~ GONE
- Independent analysis and forecasts of Utility Request
- Modeling results
- Written testimony and spreadsheets
- Serving as expert witness under utility cross examination





Contact

Mark Pocta

Program Manager,

Energy Cost of Service and Natural Gas Branch

rmp@cpuc.ca.gov

415.703.2871

Danilo Sanchez

Program Manager,

Water Branch

des@cpuc.ca.gov

415.703.2771