

**CALIFORNIA PUBLIC UTILITIES COMMISSION  
WATER DIVISION**

**STANDARD PRACTICE FOR**  
**DETERMINING FIXED CAPITAL AND RATE BASE**  
**OF CLASS B, C and D WATER UTILITIES**

**STANDARD PRACTICE U-5-SM**

**SAN FRANCISCO, CALIFORNIA**

**June, 2001**

**WATER ADVISORY BRANCH**

**STANDARD PRACTICE FOR**

**DETERMING FIXED CAPITAL AND RATE BASE**

**OF CLASS B, C and D WATER UTILITIES**

**A - PURPOSE AND BACKGROUND**

1. The purpose of this standard practice is to provide the staff engineer or analyst (analyst) with the steps to calculate rate base for General Rate Cases (GRCs) or rate base offset Advice Letters (ALs) from small (Class B, C and D) water utilities or districts of large utilities that have received approval to file a rate base offset AL during a formal GRC. It also discusses facilities fees, which may be charged by Class B, C or D utilities or districts of large utilities that serve less than 2000 service connections.
  
2. The Water and Sewer Advisory Branch (WB) analyst will first check that annual reports have been filed as required by G.O. 104-A. If the utility is not up to date with its annual reports, or if the reports are clearly in error, the analyst will inform the utility and processing will not continue until they are up to date. The analyst needs to apply judgment, since, if there are many years of reports missing or wrong, it could be difficult for the utility to reproduce them. At the very least, the latest annual report must be filed before any additional rate case work is done.
  
5. Rate Base: Determine Water or Sewer Plant in Service by determining the original cost of the property to the person or entity first devoting it to public utility service. If the utility's records (Account No. 101) do not properly represent such original cost, it will be necessary to adjust the booked costs or to request that the utility have an original cost appraisal made. In the case of Class D utilities, the engineer or analyst may make such an appraisal and reserve study if approved by the Project Manager. Where an earlier appraisal has been made, that appraisal should form the starting point for the inclusion of subsequent plant improvements, additions and retirements.
  
6. If facilities have been acquired by purchasing an existing mutual or municipal utility, the law requires that the Commission use the purchase price for original cost<sup>1</sup>.
  
7. Rate base is the net dollar investment of the utility. It is calculated by taking the Water Plant in Service, subtracting the Accumulated Depreciation of Water Plant (Account No. 108) (depreciation reserve), deferred tax reserve (if any), contributions and advances, and

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<sup>1</sup> Public Utilities Code §2719 & 2720.

adding working cash and materials and supplies (M&S). Water Plant in Service is the original cost of all used and useful plant. Accrued depreciation is the sum of the depreciation expense booked each year at that year's depreciation rate plus the Accumulated Amortization on Contributions (Account No. 272). Working cash is calculated using the appropriate method in Standard Practice U-16-W. M&S is estimated by the engineer or analyst based upon the utility's actual operating needs.

8. Ratebase ordinarily contains the following items, with appropriate adjustments or estimates:

- Original Cost of Organization, Franchises, Water Rights and other Intangibles
- Original Cost of Land that is used and useful for utility service
- Original Cost of Depreciable Properties that are used and useful for utility service
- Reasonable Allowance for Materials and Supplies
- Allowance for Working Cash
- Less: Contributions in Aid of Construction
- Less: Unrefunded Advances
- Less: Depreciation Reserve
- Less: Deferred Tax Reserve (if any)

9. Determining Rate of Return: The Audit and Compliance Branch of the Water Division will provide you with the latest values of allowable Rate of Return on equity (ROE) for each class of water company. For Class C and D utilities this value will have a range of 50 basis points (one basis point is .01%) such as 13.8% to 14.3%. You should chose a value from this range based upon your best determination of the quality of service the utility is providing. If the utility is doing a good job of meeting the needs of its customers, it should receive a return near the high end of the range. If the utility responds poorly to customer complaints and is not meeting its public utility obligations, it should receive the minimum allowable return. For Class B utilities the Audit and Enforcement Branch will determine a reasonable rate of return (ROR).

10. If the utility is financed in part by long term debt, the situation is more complicated. You need to determine the capital structure, which is considered the percentage of equity that is financing the company and the percentage of debt. For large utilities the capital structure normally ranges from 40% investment and 60% debt to about 60% investment and 40% debt. After you have determined the capital structure, you multiply the percentage of debt by the actual average cost of debt and the percentage of capital by the reasonable return on equity and add these two quantities to get the rate of return on ratebase. For example, assume a 70% equity, 30% debt Class B utility is paying an average of 9% on its debt. Audit and Compliance Branch informs you that the return on equity should be 11%. The rate of return is:

$$\begin{array}{r}
 \text{weighted cost of equity } .70 \times .11 = .077 \\
 + \text{ weighted cost of debt } .30 \times .09 = .027 \\
 \hline
 \text{----}
 \end{array}$$

rate of return

.104 = 10.4%

If the utility capital structure were 100% equity the ROR would equal the return on equity (ROE) and be 11%.

12. Operating Margin: This ratemaking method develops a revenue requirement where little or no ratebase exists. The operating margin a percentage of operating expenses that, when added to the operating expenses, gives the operating revenue. Operating expenses include operations and maintenance expenses, annual depreciation on non-contributed facilities, amortization of multiyear expenses and applicable taxes. Resolution W-4524 described how the Audit and Compliance Branch will annually determine the operating margins for Class C and Class D water utilities.

13. Calculating the Net-to-Gross Multiplier: The net-to-gross multiplier is calculated by taking the reciprocal of one minus the total of uncollectibles rate, franchise tax rate and state and federal income tax rates.

14. Revenues: Once you have determined the reasonable expenses and depreciation, calculate the return by multiplying the ROR by the ratebase. Using these figures, you can now calculate the revenue requirement. Simply multiply the return by the net to gross multiplier, add the expenses and depreciation and you have the revenues. The Water Branch analyst will then check all of the calculations on the worksheets and the standard data request items for Class D filings (Appendix B) or Class B and C filings for accuracy. Completion of these two reviews enables the analyst to determine whether the filing is complete or needs further explanation or additional data. If the AL is not complete, the analyst will send a data request to the utility listing the information needed to make it complete. Upon receipt of this information and verification of its accuracy, or if it is determined that the original filing is complete, the analyst will send an acceptance letter with the draft Notice to Customers (Appendix C) to the utility.

16. The analyst will maintain a log of all data requests and telephone conversations with the utility. All data requests made orally must be followed by a letter signed by the Supervisor or Project Manager.

17. If the workpapers are in such poor condition that they cannot be used, the analyst will confer with the Project Manager about converting the filing to an outreach filing (Class D only). If it is an outreach filing, staff will prepare the workpapers and the AL if necessary.

## **B – PREPARATION FOR THE FIELD INVESTIGATION**

18. The analyst will do the following in order to finish the field trip with all of the information needed to complete the Results of Operations (R/O) report:

- a. Review prior Commission decisions, resolutions and the utility's correspondence files (602, 609). Check the compliance report to see if there are any delinquent items.
- b. Review prior GRC resolutions, workpapers and reports, if available. Compare the amounts authorized in the last GRC with the utility's request. This should help identify potential issues.
- c. Check with Consumer Affairs Branch for customer complaints.
- d. Review all replies to the Public Notice. Each reply will be answered. The analyst may use a form letter for general complaints, but will write a personalized letter for specific complaints.
- e. Check the local telephone book for the utility's listing. There should be adequate identification so the customers can contact the utility. The analyst will call the company during non-business hours to determine that the answering machine works.
- f. Call the State Department of Health Services or the local health department. The analyst will attempt to make an appointment to talk to the assigned engineer during the field trip and will invite him or her to the public meeting and the system inspection trip.
- g. Request the system map from the utility. This map is a requirement of G.O. 103, I.10.a.
- h. Make an appointment with the local fire chief or representative.
- i. Contact the utility to make sure it is prepared for the visit and has its books of accounts in order.
- j. Inform the utility representative ahead of time that he or she needs to make a presentation on the reasons the utility wants the increase. Request that the utility prepare a handout that summarizes its situation.

### **C - FIELD INVESTIGATION**

19. During the field trip, the analyst will meet with the county health department or Department of Health Services engineer assigned to the utility to discuss the water quality history of the utility and any other information the health department has.

20. During the field inspection the analyst will:

In the Utility's Office

- a. Using the system map, have the company explain how the system operates.
- b. Ask to see the utility's copy of its tariff book. It is a requirement of G.O. 96-A that the tariff book be available for public inspection.
- c. Ask to see the utility's complaint file. It is a requirement of G.O. 103, I.8. that the utility maintain a file for two years and a summary list for an additional three years.
- d. Ask for a leak map. This is a map showing the system with main leaks marked on it. Some small companies won't have one. It is not a requirement, but it is handy to have as it helps to determine when mains need replacement.
- e. Audit the utility's books of account to determine the accuracy of its records, verify expenses and plant additions and ensure conformance with the Uniform System of Accounts.

#### In the Field

- a. Inspect facilities. Determine the condition of the facilities, the type and location of supply sources, the location of any proposed additions, inspect any new construction and any prior ordered or authorized additions (particularly where money has been authorized in rate base), growth potential, current activities, compliance with G.O. 103, etc. Verify that any prior order or authorized additions have actually been installed.
- b. Take pictures of facilities.
- c. Take pressure readings, particularly at a high point or at a location distant from the source of water.
- d. Meet with the chief or representative of the local fire-fighting agency (discuss pressure problems, fire flows, etc.).

### **D - RESOLUTION**

- 21. If the appeal process has resulted in changes in rates from those in the first resolution, the Project Manager or analyst will prepare a second resolution authorizing the utility to file a supplemental advice letter to charge those rates.
- 22. The analyst will respond to any remaining letters from customers.

### **E - FILE**

23. The analyst shall file all workpapers and a copy of the staff report in the file room under the utility's name and discard the prior GRC file except for any material that may need to be retained for future use.



Appendix C

**(LETTERHEAD OF WATER UTILITY)**

NOTICE TO CUSTOMERS

(Date)

Regulated Water Company recently requested permission from the California Public Utilities Commission (CPUC) to increase its rates for water service by \_\_\_\_% or \$\_\_\_\_\_. The CPUC rendered its decision on (date) and has authorized Regulated Water Utility to charge the rates shown below, which represent a rate increase of \_\_\_\_% or \_\_\_\_\_ per year. The effective date for the new rates is \_\_\_\_ (date)\_\_\_\_\_.

<u>Service Charge</u>	<u>Per Meter Per Month</u>
For 5/8 x 3/4-inch meter	\$XX.XX
3/4-inch meter	\$XX.XX
1-inch meter	\$XX.XX
1 1/2-inch meter	\$XX.XX
2-inch meter	\$XX.XX
3-inch meter	\$XX.XX
4-inch meter	\$XX.XX
6-inch meter	\$XX.XX

Quality Rate

All water, per 100 cu. Ft.	\$XX.XX
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If you have any questions about the billing or your service, please contact our office at (company's telephone number).

(If the utility has a flat rate schedule, substitute or add the appropriate rates. Also include all other rates or charges that have been increased.)