

Water: Price Regulation, Accounting and Losses



NARUC Energy Regulatory Partnership Program

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The Vermont Public Service Board

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Outline

- ❖ U.S. best regulatory practices with respect to attracting capital, promoting economies of scale and efficient operations
- ❖ Setting rates for consumers without meters
- ❖ Vermont's low-interest loan program for utilities
- ❖ Options when customers don't pay their water bills



U.S. Best Practices

- ❖ Encourage investment in infrastructure
- ❖ Use acquisition adjustments to promote consolidation
- ❖ “Decouple” revenues from sales
- ❖ Customer assistance programs



Encourage Investment

- ❖ Reduce “regulatory lag” and allow more timely recovery of capital
 - Timely recovery of capital is key to the ability to attract capital at the most cost-effective rates and to facilitate construction and capital investment in the most timely and efficient manner possible
 - Several ways to accomplish this, most involve some type of surcharge on customers’ bills that is implemented without a full rate case



Distribution System Investment Charges

- ❖ Surcharges that allow utilities to pass through to customers the revenue requirement associated with a return on, and return of, capital invested to replace infrastructure without filing a full general rate case
- ❖ Should include limits on the amount of the surcharges and some form of “true-up” procedure to protect ratepayers



Distribution System Investment Charges

- ❖ Currently used in several U.S. states
- ❖ Example: Pennsylvania
 - Surcharges originally limited to 5% of revenues; due to success of program and lack of consumer complaints, the limit was increased to 7.5%
 - At the time of the next general rate case, the surcharges are incorporated into base rates



Distribution System Investment Charges

❖ Example: Vermont

- Used occasionally when justified by particular circumstances
- Specific investment project is identified, and the amount of the necessary investment is determined
- Temporary surcharge applied to rates to allow set amount to be collected



Surcharge or Automatic Adjustment Mechanisms for Non-Capital Costs

- ❖ Allow for adjustments for non-capital items such as extraordinary expenses or cost increases that may be beyond the utility's control
- ❖ Mitigate regulatory lag and provide a better opportunity for utility to actually earn the allowed return on equity in between rate cases



Surcharge or Automatic Adjustment Mechanisms for Non-Capital Costs

- ❖ Can enhance revenue stability and maintenance of allowed returns
- ❖ Allow rates to increase more gradually as unavoidable costs rise, rather than requiring much larger increases at the time a general rate case is filed
- ❖ Should include “true-up” mechanisms and/or reporting requirements to ensure that the utility does not exceed its allowed return on equity
- ❖ Used by several U.S. states



Surcharge or Automatic Adjustment Mechanisms for Non-Capital Costs

❖ Example: California

- Utilities file rate cases every three years; in between are allowed certain increases based on projected capital and operating expenses
- Balancing accounts for certain purchased water and purchased power costs
- Water Revenue Adjustment Mechanism tracks changes in recovery of authorized fixed costs due to variations in water sales due to conservation or other issues
- Surcharges are possible when the combined effect of these programs exceeds 2.5% of revenues



Surcharge or Automatic Adjustment Mechanisms for Non-Capital Costs

- ❖ Example: California, continued
 - “Memorandum accounts” track costs for catastrophic events (for example, earthquakes), and extraordinary expenses (for example compliance with Endangered Species Act, water rationing, water contamination litigation costs)
 - Depending on the type of cost, a surcharge may be able to be applied, or the utility can ask for recovery of the full amount in the next general rate case



Surcharges Related to Complying with Certain Regulatory Requirements

- ❖ Changes in water quality regulations can require utilities to make significant infrastructure investments in order to comply with the new rules
- ❖ Allow utilities to recover via a surcharge return on, depreciation of, and prudent operating and maintenance costs associated with complying with government mandates that require large investments
- ❖ Similar to Distribution System Investment Charge



Surcharges Related to Complying with Certain Regulatory Requirements

❖ Example: Arizona

- U.S. Environmental Protection Agency reduced the maximum allowable level of arsenic in drinking water
- Arizona will incur huge arsenic removal costs
- Special recovery of the removal costs facilitates prompt compliance with the new requirements, improves water quality for customers and mitigates rate shock



Acquisition Adjustment

- ❖ In U.S., want to encourage purchase of very small water utilities that are not able to meet technical and financial demands
- ❖ Similar issue to wanting to find buyers when are privatizing utilities
- ❖ Acquisition adjustments are one way to encourage purchases of systems



Acquisition Adjustment

- ❖ Allow acquisition adjustment for the difference between depreciated original cost and a purchase price
 - Traditional regulation would allow purchaser to recover only depreciated original cost from ratepayers
- ❖ Must show that purchase produces identifiable savings, service improvements or other benefits to customers



Acquisition Adjustment

- ❖ Rationale for adjustment is that the difference between depreciated original cost and fair market purchase price is the investment necessary to produce benefits and would be treated similarly to other investments the utility makes to provide cost-effective, reliable service



Acquisition Adjustment

- ❖ Methods for doing so include:
 - Acquisition adjustment to ratebase
 - Allow utility to retain quantified savings resulting from the combination equal to a return of and on the investment necessary to produce the savings
- ❖ Example: Pennsylvania allows acquisition adjustments for small and/or troubled systems, subject to certain conditions



Decoupling

- ❖ Water consumption can fall as a result of droughts or water conservation measures (which sometimes are related to energy efficiency measures)
- ❖ Decreasing water consumption puts pressure on utilities as fixed costs must still be recovered despite smaller sales volumes
- ❖ As in the electric industry, decoupling can promote utility's financial stability and remove disincentive for water utility to encourage conservation



Customer Assistance Programs

- ❖ In the U.S., water is, on average, the lowest cost of all utility services
- ❖ Low-income customers can still have difficulty paying their bills
- ❖ U.S. states have a variety of targeted customer assistance programs that are funded through a combination of customer and company contributions and are often administered in conjunction with a social service agency



Customer Assistance Programs

- ❖ **Goals of assistance programs**
 - Providing targeted assistance only to individual customers who need it
 - Preserving cost-based rates and appropriate price signals
 - Promoting recognition of the value of water, its efficient use and appropriate supply planning



Customer Assistance Programs

❖ Types of programs include:

- Hardship program – grants applied directly to customer's bill
- Discount program – percentage off monthly bill or service charge
- Payment assistance – forgiveness based on timely payments



Customer Assistance Programs

- ❖ Types of programs (cont.):
 - Repair – coordination of repairs to reduce high usage
 - Education – outreach and promotion focused on conservation and program availability
 - Direction to other sources of assistance



Customer Assistance Programs

- ❖ Example: Dollar Energy Fund
 - Non-profit agency that partners with water, gas and electric utilities in multiple U.S. states to administer low-income programs
 - www.dollarenergy.org



Setting Rates for Consumers Without Meters

- ❖ Very small water utilities may not have the capital to install meters and recover the costs over the meters' lifetime
 - Some Vermont utilities do not provide meters to residential customers
 - Board requires utilities to allow customers to purchase a meter at their own cost; very few, if any, have done so



Setting Rates for Customers Without Meters

- ❖ For customers without meters, water rates are flat quarterly charge
- ❖ For residential customers, flat rates are set based on the number of bedrooms in the residence



Vermont's Low-Interest Loan Program for Water Utilities

- ❖ Vermont's water quality regulators administer a low-interest loan program for water utilities
 - Include loans for construction, planning, and source protection
 - Operated as a revolving loan fund
 - <http://www.vermontdrinkingwater.org/grants.htm>



Construction Loans

- ❖ Eligible utilities – publicly owned, privately owned, and non-profit systems
- ❖ Eligible projects - Nearly all water system improvement projects are eligible (new construction, renovation or replacement, or consolidation of systems) which will facilitate compliance with federal primary drinking water regulations or otherwise significantly further health protection objectives of the Safe Drinking Water Act



Construction Loans

- ❖ Interest rates between 3% and -3%
- ❖ Loan terms between 20 and 30 years
- ❖ Interest rates and administrative fees determined at time of loan award
- ❖ Maximum loan amount = \$2 million per year, up to \$6 million per project spread over several fiscal years



Construction Loans

- ❖ Utilities submit applications to water quality regulators
- ❖ Annually water quality regulators develop a project priority list
- ❖ Regulators can add projects to the list without an application from the utility
- ❖ Highest priority projects with a total cost that doesn't exceed estimated funds available during the fiscal year are funded



Planning Loans

- ❖ Eligible utilities – municipal utilities and private non-profit utilities with population less than 10,000
- ❖ Eligible projects - Preliminary engineering planning studies and final engineering plans and specifications for water system improvement projects needed to comply with state and federal standards and to protect public health
- ❖ Maximum annual loan amount = \$100,000
- ❖ Loans are at 0% for five years, but can be rolled into a construction loan at terms applicable to that loan
- ❖ Regulators maintain project priority list if a shortage of funds; currently is no list



Source Protection Loans

- ❖ Eligible utilities – municipal systems
- ❖ Eligible projects - purchasing land or conservation easements to protect public water sources and ensure compliance with state and federal drinking water standards
- ❖ Maximum annual loan amount = \$200,000
- ❖ Loans are at 3% for 20 years
- ❖ Regulators maintain project priority list



Options When Customers Don't Pay Their Bills

- ❖ Shut off water
 - Pursuant to Board rules
- ❖ Use legal system
 - Judgment from small claims court can allow a lien to be placed on the delinquent customer's property
 - Drawbacks: Only works in some situations, and lien may not be paid until customer sells the property



Options When Customers Don't Pay Their Bills

- ❖ Shut the water *almost* off, leaving a trickle
 - Can also be done with a flow restrictor (basically a washer put into the water pipe to reduce the flow)
 - This option mitigates public health concerns because toilets can still be flushed, but customer has incentive to pay bill to restore normal water flow



Options When Customers Don't Pay Their Bills

- ❖ Sometimes shutting off the water is not an option because there is no shut-off valve installed
 - Utility can warn customer that it will install a shut-off valve and add the cost to the customer's bill unless the bill is paid



Options When Customers Don't Pay Their Bills

- ❖ Payment plans that include forgiveness of part of the past-due bill if payments are made according to the plan
 - This option provides customers an incentive to pay because their debt is reduced by more than the amount they pay
 - Electric utilities have successfully used this option with some customers who have accumulated large arrearages and want to pay their bills, but are financially unable to do so