Cost Accounting for Rate & Fee Setting: Calculating Defensible Rates and Charges

UNC School of Government EFC
2017 Water & Wastewater Finance Workshop
February 28 – March 1, 2017
The William & Ida Friday Center for Continuing Education
Chapel Hill, NC

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Objective: To identify the types of information needed to develop cost justified and defensible fees and charges for government-owned water and wastewater utilities.

Or - How to develop defensible rates and charges.

Focusing on recovery of the capital cost components for:

• Wholesale Rates
• Capital Recovery Fees

Categories of Rates and Charges

• User Rates and Charges – Water & Wastewater
  • Typically based on metered flow or usage
  • Typically includes a Base/Minimum Charge and Volumetric Rates
  • Based on a Cash Needs Approach
    • Operation and Maintenance costs
    • Debt service costs
    • Cash funded capital
      • PayGo
      • Contributions to reserves
• Capital Recovery Fees (CRF’s)
• Wholesale Rates and Charges
• Miscellaneous Fees and Charges
User Rates and Charges

• Generates the vast majority of revenues
• Designed to Recover “Net Revenue Requirements”
  • Total Revenue Requirements (Costs) - Less Adjustments:
    • Misc. revenues, including:
      • Tap or connection fees
      • High strength surcharges
      • Service fees, inspection fees, customer service fees, etc.
    • Revenues from wholesale customers
    • Revenues from CRF’s
  • Based on a Cash Needs Approach – same approach used to develop budgets
• Caveat: Revenues from User Rates and Charges must also address debt service coverage requirements and other legal commitments
  • Know your bond covenants

Defensible User Rates and Charges – Cost Accounting Issues and Challenges

• Allocation of costs between Water and Wastewater
• Allocation of costs between Base/Minimum Charge and Volumetric Rates
  • Base/Minimum Charges typically recover:
    • Billing, collection and customer service costs
    • Meter reading and meter maintenance and/or replacement
    • Administrative overhead costs
    • Portion of debt service costs – Readiness-to-Serve component
  • Volumetric Rates – Recover everything else
    • Used to encourage efficient use of water resources
    • Tendency to be more volatile depending on weather and economy
• Other Considerations – Balancing Act
  • Impacts on Affordability
  • Revenue Stability and Predictability
Wholesale Rates and Charges

• Revenue Requirements determined based on either:
  • Cash Needs Approach:
    • O&M Costs
    • Debt Service Costs
    • PayGo or Coverage
  • Utility Approach:
    • O&M Costs
    • Return on Investment (ROI) in Fixed Assets
    • Depreciation

Wholesale Rates and Charges – Defensibility Issues

• O&M Costs
  • Should be the same under either approach
  • Include only those costs that benefit the wholesale customers
    • Exclude most customer service and meter costs
    • Exclude costs for local service distribution lines and collection lines
  • Key Issue: Does the cost accounting system and financial records provide this type of information
    • Segregation of costs between “Retail Only” and “All Customers”
  • Can information be verified and reproduced for a contractual commitment?
  • Requires judgement and reasonableness
    • Work arounds are available – e.g. inch-feet of pipe
Wholesale Rates and Charges – Defensibility Issues

• Capital Costs
  • Should only address costs related to assets that benefit wholesale customers
    • Core System Assets that benefit all customers
      • Water: Reservoirs and intakes, WTP, storage tanks, transmission mains
      • Wastewater: WWTP and outfall, larger pump stations, sewer interceptors
  • Pro’s and Con’s for each method
  • Utility Approach
    • Based on Net Book Value - Requires good fixed asset records
    • More complicated to update as fixed assets change
    • What is an appropriate Rate of Return?
      • Negotiated?

Wholesale Rates and Charges – Defensibility Issues

• Capital Costs (continued)
  • Cash Needs Approach:
    • Includes debt service on Core System Assets
    • Cash funded capital outlays (PayGo) – more problematic
      • Can vary significantly from year to year, hard to predict
      • May not relate to Core System Assets
    • Alternative Approach – Set wholesale contribution equal to coverage requirement on debt
  • Key Issues for Defensibility
    • Allocation of Capital Costs to Wholesale Customers
    • Timing: Based on budgeted costs (forward looking) or actual (audited) costs (backward looking)
Wholesale Rates and Charges – Defensibility Issues

- Allocation of Costs to Wholesale Customers
  - O&M Costs – Usually based on percentage of flows
    - Flows at the plant – not billable flows
    - Requires some mechanism to meter flows to/from wholesale customers
  - Capital Costs – Two methods available
    - Percentage of flows
    - Reserved Capacity – contractually committed capacity as a percentage of rated system capacity
    - Issues – Pro’s and Con’s to each approach
      - Need a mechanism to make adjustments as situations change
      - Compensation if customer exceeds Reserved Capacity allocation

Capital Recovery Fees – Defensibility Issues

- Key Measure – Cost per gallon per day of Capacity
  - Based on Fixed Asset Records
  - Usually includes only Core System Assets that benefit all customers
- Issues:
  - Identifying Core System Assets
    - Exclude smaller local service lines
  - Escalating NBV of assets to current dollars
    - RCNLD – Replacement Cost New Less Depreciation
  - Construction work in progress (CWIP)
  - Including a portion of Reserves accumulated for capital investment
  - Grand Funded Assets & Developer Contributions
  - Debt Service Credit
Capital Recovery Fees – Defensibility Issues

• Assessment Methodology
  • When to assess – triggering event
  • How to assess CRF’s to different types of customers
    • Meter size
    • Equivalent residential units
      • State guidelines
      • Actual usage
    • Fixture units
    • Equity vs. Administrative Burden

• Use of Revenues generated from CRF’s
  • Should be used to enhance or add capacity
  • Requires keeping reasonable records of how used
  • Should benefit all customers (Rational Nexus test)

Capital Recovery Fees – Defensibility Issues

• Rational Nexus Test – Based on national case law
  • Must demonstrate a linkage between the service needs of new customers and additional facilities or available capacity in existing facilities
  • Must demonstrate a linkage between fees and benefits received by new customers
  • Level of CRF’s must not exceed proportional share of cost of capacity to provide service