Cost-of-Service Rate Study 2007

Public Involvement Committee

Workshop 2: Revenue Requirements

Austin Water Utility

December 17, 2007
Tonight’s Agenda

1. Introductions
2. Ground rules for PIC Meeting
3. Decisions by Executive Team
4. PIC comments from last meeting
5. Presentation on revenue requirements
6. PIC member comments and discussion
7. Summary of decisions, agreements, and next meeting
8. Public comment period
Ground Rules

1. PIC members are responsible for attending meetings or providing a knowledgeable alternate
2. Meetings will be facilitated
3. Meetings are open to the public and include a period for public comment
4. Meetings will begin with a presentation by consultant on the decisions of the Executive Team and on the issue paper topic(s) of the workshop
5. PIC members will be able to ask questions and provide comments and concerns
6. Each meeting will end with a brief summary of decisions made, consensus achieved, and a preview of next meeting, etc.
7. A period for public comment will be provided at each meeting to allow input from non-committee members.

8. PIC members, and others in attendance, are responsible for limiting comments to matters within the scope of the study; comments will be limited to 5 minutes.

9. PIC members should provide formal written comments to the City for Executive Team review no later than 5 business days after the workshop.

10. Comments and materials will be regularly posted to the City of Austin website.

11. PIC committee members are responsible and strongly encouraged to share information with their constituents.
Planned Information Process

Red Oak Prepares Issue Paper on Technical Matters

Present Issue Papers in Workshops

PIC Provides Comments to Executive Team
Objective Criteria Ensures Transparency

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Option 1</th>
<th>Option 2</th>
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</thead>
<tbody>
<tr>
<td>Criteria 1</td>
<td>😊</td>
<td>😞</td>
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<tr>
<td>Criteria 2</td>
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<td>😊</td>
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<tr>
<td>Criteria 3</td>
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</tbody>
</table>

The Wrong Way
Process for Developing Technical Recommendations

- Criteria Development
- Problem Identification

Evaluation → Analysis → Results
### Executive Team’s Evaluation Criteria

<table>
<thead>
<tr>
<th>Implementation</th>
<th>Equity</th>
<th>Customer</th>
<th>Conservation</th>
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</thead>
<tbody>
<tr>
<td>Administrative Burden</td>
<td>Interclass</td>
<td>Affordability</td>
<td>Average-Day Savings</td>
</tr>
<tr>
<td>Public Understanding</td>
<td>Intraclass</td>
<td>Economic Development</td>
<td>Peak-Season Savings</td>
</tr>
<tr>
<td>Public and Political Acceptance</td>
<td>Inter-generational</td>
<td>Rate Shock/Volatility</td>
<td>Peak-Day Savings</td>
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<tr>
<td>Risk of Implementation</td>
<td>Inside/Outside City</td>
<td>Understand Bill</td>
<td>Sustainability</td>
</tr>
<tr>
<td>Legal Defensibility</td>
<td>Industry Standards</td>
<td></td>
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</table>
PIC Comments From Last Meeting

Public Involvement Committee Workshop
December 17, 2007
Summarized Comments from PIC Members

- Additional meetings if the topics requires
- Release of computer model
- Evaluate customer-supplied daily meter data
- Proportionality of PIC membership
- Small commercial rate advocate
- Five-day turnaround for written comments
- Utility operational overview presentation
- Conservation incentives—especially for industrial customers
- Additional issue papers
  - Peaking factors
  - Sewage strength
- Definitions for customer classification
Determination of System Revenue Requirements

Public Involvement Committee Workshop
December 17, 2007
Policies Reviewed

1. Which is the most appropriate overall method?
2. How should future O&M be projected?
3. How should the rate of return be determined?
4. How should the rate base be valued?
5. How should construction work in progress be treated?
Revenue Requirements in the Broader Perspective
### Comparison of Revenue Requirement Elements

<table>
<thead>
<tr>
<th>Cash Basis</th>
<th>Utility Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>O&amp;M Costs</td>
<td>O&amp;M Costs</td>
</tr>
<tr>
<td>Capital Expenditures</td>
<td>Deprecation and Return on Rate Base</td>
</tr>
<tr>
<td>Change in Fund Balance</td>
<td>Deprecation and Return on Rate Base</td>
</tr>
<tr>
<td>Debt Service</td>
<td>Depreciation Expense</td>
</tr>
<tr>
<td>Amortization of Debt</td>
<td>Return on Rate Base</td>
</tr>
<tr>
<td>Interest on Debt</td>
<td>Taxes and Other Requirements</td>
</tr>
<tr>
<td>Taxes and Other Requirements</td>
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</tr>
</tbody>
</table>
### Hypothetical Comparison of Methods

<table>
<thead>
<tr>
<th>Item</th>
<th>Cash Basis</th>
<th>Utility Basis</th>
<th>Utility Basis with Cash Residual</th>
</tr>
</thead>
<tbody>
<tr>
<td>O&amp;M Expenses</td>
<td>$79,127,008</td>
<td>$79,127,008</td>
<td>$79,127,008</td>
</tr>
<tr>
<td>Debt Service</td>
<td>76,636,711</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capital Expenditures</td>
<td>23,525,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depreciation Expense</td>
<td></td>
<td>30,242,924</td>
<td>30,242,924</td>
</tr>
<tr>
<td>Return on Rate Base</td>
<td></td>
<td>81,362,654</td>
<td>69,918,787</td>
</tr>
<tr>
<td>Less: Other Revenue</td>
<td>(3,747,291)</td>
<td>(3,747,291)</td>
<td>(3,747,291)</td>
</tr>
<tr>
<td>User Charge Revenue Requirements</td>
<td>$175,541,428</td>
<td>$186,985,295</td>
<td>$175,541,428</td>
</tr>
</tbody>
</table>
Debt Service Coverage and Revenue Requirements

- Measures income relative to expenses
- Indicator of financial health and debt capacity
- Not an explicit component of revenue requirements—residual based on revenue requirements
### Sample Debt Service Coverage Calculation

<table>
<thead>
<tr>
<th>Line</th>
<th>Description</th>
<th>Value</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Gross Revenues</td>
<td>$ 180,000,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Less:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>O&amp;M (Excluding Depreciation)</td>
<td>80,000,000</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Net Revenues</td>
<td>$ 100,000,000</td>
<td>1 minus 2</td>
</tr>
<tr>
<td>4</td>
<td>Debt Service</td>
<td>$ 77,000,000</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Debt Service Coverage</td>
<td></td>
<td>1.30 3 divided by 4</td>
</tr>
</tbody>
</table>
**Issues of Debt Service Coverage**

- Bond covenants require 1.25 ratio
- City’s financial policies require 1.50 ratio
- Impacts both utility and cash basis
  - Utility basis through return on rate base
  - Cash basis through capital expenditures and/or change in fund balances
Issue 1: Revenue Requirement Options

- Cash basis
- Utility basis
- Utility basis with cash residual
Role of Revenue Requirements in Consumer Protection

- Natural monopolies and economic regulation
- Economic regulation for municipal utilities provided by elected bodies
- For AWU, City Council provides consumer protection
- Outside-city customers often protected by long-term contracts
Cash Basis

- Suited well for utility’s subject to municipal budget requirements
- Relatively easy to administer
- Allows effective financial planning to mitigate rate shock
- Solves revenue sufficiency dilemma
- Uses readily available data
- Less able to align costs with users
  - Impact fees can mitigate
- Recommended by consulting team
Utility Basis

- More appropriate for regulated utilities
- Provides external limitations on utility’s profit
- Consumer protection provided by allowed rate of return
- In purest form may not be feasible for AWU
- Relatively more difficult to administer
Utility Basis with Cash Residual

- Hybrid of two common approaches
- External rate of return applied to outside-city customers
- Residual rate of return calculated to meet cash basis needs—applied to inside-city customers
- Meets revenue sufficiency criteria
- Requires development of detailed asset data
- Consumer protection
  - Inside-city customers: City Council
  - Outside-city customers: limitation on rate of return
Issue 2: Future O&M Projections

- Historical test year with adjustments for known and measurable changes
- Future budget
Historical Test Year

- Most recent completed fiscal year
- Adjusted for known and measurable changes
- Consistent with regulated utilities
- Abnormal weather may influence costs—increases complexity to integrate known and measurable changes
Future Budget

- Existing process—no additional work required
- Consistent with municipal utilities
- Consumer protection provided by budget process and elected officials
- Recommended by consulting team
Issue 3: Determination of Rate of Return

- Weighted average cost of capital
- Indexed return
- Fixed return
Background on Rate of Return

- Provides protection to utility and consumers
- Well established in industry
- Protect the value of the utility’s owners—Takings clause of US Constitution
Weighted Average Cost of Capital

- Weighted average rate of return
  - Weights based on debt/equity ratio
  - Effective interest rate and cost of equity
- Common for regulated utilities
- Complex financial analyses required to develop equity returns
Indexed Return

- A flat equity premium added to common indices of interest rates
  - Bond Buyers Index
  - Long-term treasury bonds
- Similar to an adjustable rate mortgage
- Long-term interest rate indices less volatile than short-term
Fixed Return

- Select return during contract negotiations
- Does not vary with market rates
- Similar to fixed rate mortgage
- Reduces volatility
- Recommended by consulting team
Issue 4: Valuation of Rate Base

- Original cost
- Reproduction cost
Background on Valuation

- Replacement cost of future facilities impacted by inflation
- Recent price changes are relatively more significant
- Regulated framework traditionally focused on capital recovery—not cash flow requirements
Original Costs

- Based on accounting procedures
- Most common in the industry
- Rate base equals original cost less accumulated depreciation
- Ignores inflationary impacts
- Recommended by consulting team
Reproduction Cost

- Requires calculation of reproduction costs
- ENR Construction Cost Index commonly used
- Rare in the industry
- Provides additional cash flow during periods of higher inflation
- Recognizes the cost of replacing facilities
- Normally has an inflation-free (i.e., real) rate of return
Issue 5: Policy on Construction Work in Progress (CWIP)

- Capitalized interest
- Include in rate base
Background on Construction Work in Progress

- Carrying costs of construction projects
  - Actual interest expense
  - Opportunity cost of alternative investment
- Length and complexity of projects
- Rate of return
Capitalized Interest

- Standard accounting procedures
- Allowance For Funds Used During Construction (AFUDC)
- Provides more accurate allocation of capital costs over time—future users pay fair share
- More common in the industry
- Recommended by consulting team
Include in Rate Base

- Provides greater cash flow during construction of complex projects
- Reduces volatility by slowly increasing rate base
- Misaligns costs and users over time
- Less common in the industry
PIC Member Questions, Discussion, and Comments

Public Involvement Committee Workshop
December 17, 2007
Next Steps

- Written comments on tonight’s meeting due 12/26 (to Mike Castillo)
- Cost Allocation issue paper to PIC (12/31)
- Next PIC Workshop (1/7)
Summary Of Decisions, Agreements, And Next Meeting

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Public Comment

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