Preparing for Rate Studies and Bond Financings: Is Your Utility Ready?

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Utility rate studies often lead to recommendations to increase user rates. One of the challenges for utility management is to build and maintain public support for the utility operation to facilitate the adoption of such increases.

Rate evaluations and increases should be considered an integral part of the utility's business plan, centered on utility best management and financial practices. These practices are necessary to promote effective utility management as it relates to operational efficiency, financial creditworthiness, and compliance with performance standards recognized by the utility industry and credit rating agencies. Such practices also help to ensure long-term rate sustainability and affordability. Utility decision making on rates should consider the long-term interests of customers, from an operational, service, and financial perspective.

Publications from the three major credit rating agencies—Moody's Investors Service, Standard & Poor's Rating Services, and Fitch Ratings—present utility best management and financial practices for public utilities from their point of view. Moody's has published *Analytical Framework for Water and Sewer System Ratings* and *Moody's on Revenue Bonds: The Fundamentals of Revenue Bond Credit Analysis*, while Standard & Poor's has published the *Public Finance Criteria Book and U.S. Public Finance: Key Water and Sewer Utility Credit Ratio Ranges.* Two other publications, *Water and Sewer Revenue Bond Rating Guidelines* and *Rating Criteria for Infrastructure and Project Finance* are available from Fitch Ratings.

Structuring a utility rate and capital funding plan to include or recognize utility best management and financial practices generally leads to higher credit ratings, lower interest rates when financing with debt, and stable long-term rates. Moreover, the utility is in a better financial position to address financial risks and emergencies, such as unexpected capital expenditures or changes in operations due to weather or economic events.

How do rating agencies evaluate a utility? It is important to recognize that the utility's credit rating is a reflection of utility management as well as an assessment of both short-term and long-term financial risk. Fitch Ratings has published its "10 C's" of water and sewer revenue bond analysis (Fitch, 2007):

- Community Characteristics (demographics, household incomes, stability)
- Customer Growth and Concentration (top ten customers, additional revenue opportunities)
- Capacity (availability to serve growth without major expenditures)
- Compliance with Environmental Laws and Regulations
- Capital Demands and Debt Policies (expenditures and need for issuance of additional debt)
- Covenants (bond rate requirements)
- Charges and Rate Affordability (comparability and relationship to household income)
- Crew (management)
- Coverage and Financial Performance (cash flow and funding of ongoing capital)
- Cash and Balance Sheet Considerations (liquidity and asset financing/security)

Utility managers have the ability to control or influence many of these factors. The highest-rated utilities:

- Exhibit practices that maximize stability through ongoing long-term financial and operational planning.
- Anticipate future regulatory and growth demands and continuously notify the stakeholders (public councils and commissions) of such issues.
- Reliably implement rate adjustments consistent with their financial needs over time predicated on their financial plans.
- Maintain adequate cash (liquidity) balances to limit the risk of unexpected sales shortfalls and emergencies.

It is never too late to improve the foundation of the utility business. Time and incremental steps may be required, but there are many success stories of utilities that were able to transform their operations from a less than adequate basis to a high-performing enterprise. The rating agencies have published reports that are available on the Internet that discuss how some utilities were able to effectuate changes and upgrade their credit ratings.

Getting rate adjustments approved and securing higher credit ratings can be easier with: 1) a solid utility business foundation based on best management and financial practices; 2) a realistic and sustainable operational and financial plan; and 3) an effective, ongoing communication program. Each of these items is discussed.

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Establish the Utility Business Foundation

Long-term planning is essential for establishing and maintaining a strong utility business foundation. Critical policies and procedures that form the bedrock of the financial plan (e.g., operational and capital cash reserve policy, financial performance criteria, debt management policy, rate implementation policy, capital prioritization planning procedures, etc.) should be codified and adopted by the local government. It is always important to have the governing body (the "regulators") understand the need for and be part of the policy and procedure development; this will ultimately assist in gaining acceptance from the stakeholders of the utility. Additionally, credit rating agencies often request copies of such documentation when evaluating the utility.

Adopt Business Principles

The utility's business principles serve as a basis for long-term decision making. Examples of business principles are:

- The utility will maintain financial creditworthiness and meet financial benchmarks recognized as prudent by credit rating agencies and the utility industry.
- The utility will establish affordable rates to recover the full cost of providing service.
- The utility, to the extent practical, will establish cost recovery practices and rates whereby growth will pay for growth; existing customers shall not subsidize growth of the utility.
- The utility will comply with all requirements of federal and state regulatory agencies (e.g.,

departments of environmental protection and health, water management districts, etc.).

- The utility will take the necessary steps to ensure that service is uninterrupted, including the: 1) implementation of timely renewals and replacements to reduce the risk of system failures; and 2) preparation for emergencies (e.g., adverse weather conditions such as hurricanes).
- The utility is customer-focused, and customer satisfaction is the highest priority.

Adopt a Long-Term Business Plan

Many local governments require their utilities to have current master plans, and laws often specify how often such plans must be updated. A key element in the master plan is to have a financial and affordability analysis in order to promote the reasonableness of the plan and the overall sustainability of the utility. It is important to modify expansion and sustainability plans based on the latest service area population projections and other economic, environmental, and regulatory factors affecting the utility service area.

Adopt Financial Policies and Performance Measures

Rating agencies routinely publish—either in print or online—what they consider to be prudent financial policies and performance measures, as well as operational and financial medians by rating category (e.g., AAA-rated, AA-rated, A-rated, and all ratings) and location. Such medians enable a utility to benchmark against its peers and set financial targets and goals.

At a minimum, financial policies should contain targets or requirements for debt service coverage, cash reserves, and capital reinvestment. According to guidelines published by Fitch Ratings:

"For utilities in the most stable operating environments with a suitably diverse and healthy service area economy, 1.5x annual coverage, with consistently maintained unrestricted financial liquidity of at least 90 days of operating revenues, could be sufficient for 'AA-' or higher ratings. For utilities with substantial growth, compliance demands, or significant annual volatility in revenues or expenditures, greater financial flexibility may be necessary." (Fitch, 2007)

Utilities should strive to exceed the minimum debt service coverage required in their loan documents. A target all-in coverage (senior and subordinate lien debt service combined) of 150 percent is usually reasonable, as is a working capital target of 90 days of rate revenue.

It is also appropriate to establish, as a financial policy, a methodology for capital reinvestment for ongoing renewals, replacements, upgrades, and betterments. Regardless of the expenditure requirements, it is prudent to make annual deposits for capital reinvestment based ideally on a comprehensive asset management plan, although many utilities base the deposit on a percentage of revenues. The experience of the industry is that the capital reinvestment by most utilities has been and continues to be extremely low and does not relate to the real long-term capital needs of the utility system. By annually funding a realistic allowance for ongoing capital replacement based on a reasonable capital plan, utility rates, over the long-term, are generally lower and do not fluctuate wildly with capital funding requirements (which generally have a "lumpy" expenditure curve).

Set Up Information Systems to Provide Detailed Reports Containing Important Data

Consistent with the long-term planning, the utility should attempt to build a long-term written history of operational and financial information and key performance indicators, as history usually provides a good foundation for

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forecasting. The more years of history, the more trend analysis that can be performed for the utility.

The utility should ensure that its information systems can serve as an effective management tool and provide data to assist in management decisions. Important data includes:

- Historical operating results in budgetary format.
- Cash (fund) balances, including appropriated amounts, so that the utility can determine unrestricted and restricted amounts available to fund operating and capital needs.
- *Fixed asset records.* The fixed asset records should ideally allow utility management to determine for each asset: 1) the utility system to which the asset belongs (e.g., water, wastewater, reuse, etc.); 2) the function or purpose of the asset (e.g., treatment, transmission, distribution or collection, disposal, reuse, general equipment, etc.); 3) the location of the asset; 4) how the asset was funded (e.g., internal funding sources, grants, contributed property, etc.); and 5) the original cost installed, the date of purchase, the service life of the asset, and accumulated depreciation. It is often recommended that utilities use the uniform system of accounts for water and wastewater utilities that are published by the National Association of Regulatory Utility Commissioners (NARUC). The utility's maintenance schedule should be tied to the fixed assets, and it is important to ensure that the utility has realistic estimates of the remaining service life of each asset.
- *Customer statistics.* The information database should enable utility management to produce both detailed and summary reports by customer class to gauge trends in new meter sets and usage on a per class and per customer, or equivalent residential unit, basis.
- *Bill frequency reports.* These reports provide the amount of usage in each consumption block and can be useful for projecting revenue under both the existing volumetric rate structure and alternative rate structures.
- Miles of lines for each system by diameter.
- Number of major and local lift or pumping stations and manholes.
- Monthly operating reports, including peak and average daily flow. The utility should routinely compare the water produced and purchased with the water billed to customers. A high unbilled water percentage can often indicate water system leaks that need to be repaired or opportunities to increase rate revenues.

This information helps to allocate expenditures (revenue requirements) to each utility system and to design rates that meet rate study objectives.

Developing a Realistic Plan

Before requesting that the governing body approve a change in rates, it is important to ensure that the utility has performed due diligence to ensure that the multiyear operational and financial plan is realistic and will enable the utility to maintain affordable user rates. The U.S. Environmental Protection Agency (EPA) considers that rates for an individual water or wastewater utility that are greater than 2 percent of median household income may have a high financial impact on customers (EPA, 1997). Fitch Ratings considers that rates for combined water and wastewater service that are higher than 2 percent of the median household income (or 1 percent for an individual water or wastewater utility) are financially burdensome (Fitch, 2007).

The Capital Program

The need to fund the utility's capital program is often the most significant driver for a rate adjustment. Utility managers must be able to explain the purpose of the capital program and have good total project cost estimates and capital spending (drawdown) projections. Since utilities must have the funds available prior to the appropriation and encumbrance of funds, it is extremely important to understand the total amount and the timing of funds needed for the plan. Since there is a competition of funds (most utilities are not cash rich and are struggling to fully fund the total capital plan identified by utility managers), it is extremely helpful to develop a capital project prioritization ranking system to help isolate critical projects from those that could be deferred. This also helps the utility manager to explain the project need to financial managers responsible for funding, the elected officials responsible for approval, and the stakeholders who pay the ongoing rates for utility service.

When evaluating capacity expansions, historical and projected capacity utilization percentages should be considered. This analysis should really focus on the number of equivalent residential connections (ERCs) served and reserved by development (identified separately) and the level of service (gallons per day of capacity) assigned to each ERC. The capacity planning process represents a balancing of risks. The risk from an engineering standpoint is that the enterprise would not have sufficient capacity to meet the service area needs. As such, in the planning of future capacity, the most conservative approach is to use a higher population or level of service estimate so that sufficient capacity would exist if such growth trend or possible change in use due to an extraordinary event (weather) did occur.

However, from a financial perspective, the growth expectation should be lower so that the enterprise can have reasonable assurance that revenues will be sufficient to meet expenditure needs. The key risk from a financial standpoint is that if the enterprise were to build too much capacity too far in advance of new growth, user rates would need to be increased to pay for the underutilized or unused capacity (e.g., debt service on the capital costs of the capacity and fixed operating expenses to maintain such capacity). Unused capacity is the most expensive capacity of a utility and capacity utilization is considered by rating agencies when evaluating a utility's creditworthiness. This issue has been in the forefront as water demands and use per customer have been decreasing and many utilities are experiencing stranded capacity, which still has a financial and operational burden attached to it.

Historical capital spending levels can sometimes be a good indicator of how much capital program the utility could actually execute during a specific timeframe, especially for renewal and replacement spending. It is important to note that, if the utility is considering bond financing for a portion of its capital program, Internal Revenue Service (IRS) arbitrage rules—Internal Revenue Code 148 (26 USC § 148 – Arbitrage)—generally require that all bond proceeds must be spent within three years. As such, it is very important when sizing a debt issue to carefully assess how much capital program could physically be executed during the three-year timeframe. Issuing too much debt can create an unnecessary financial burden on ratepayers. The arbitrage rules were established so that local governments could not issue tax-exempt bonds, invest the proceeds in taxable securities, and make a profit.

When considering funding options for the capital program, the utility should first consider whether any capital projects would be eligible to be funded through grants or any other cost-free options. For all projects that must be funded through utility revenues, there should be a balance between debt financing and pay-as-you-go capital funding. Debt financing is most appropriate for assets with longer service lives (e.g., 15 years or more), nonrecurring asset replacements, or for major units of property (generally higher-cost asset). Pay-as-you-go capital funding is appropriate for routine capital expenditures and annual renewals and replacements, and for assets with shorter service lives or costs that are not excessive (minor units of property).

Debt financing can offer the following advantages to the utility:

- The annual cash flow is reduced to the level of debt service over the term of the debt.
- The recovery of the capital project costs can be spread over the life of the debt instrument to match asset utilization (e.g., 30-year repayment schedule, 30-year asset service life) and hence, may provide a greater fairness to ratepayers.
- If the utility has implemented growth-related fees such as impact fees, debt financing may enable more time for "growth to pay for growth." Any capital contributions collected can be used to pay for growth-related capital projects or growth-related debt service.

The key to the financing of a project from debt is to balance the cash flow/customer impacts with the in-service date of the utility plant (the plant becomes a "revenue-producing asset"). Debt instruments, such as commercial paper, lines of credit, bond anticipation notes, qualified bank loans, low-interest State Revolving Fund (SRF) loans, and the use of conventional financing, which could include a variety of structures like capitalized interest, interest only, "bullet" bonds, the use of capital appreciation bonds and "super-sinkers," all need to be evaluated to have the proper match of financing to capital expenditures that meet the rate and financial plans of the utility.

Operating Expenses

Efficiency and effectiveness are two common objectives in utility management. What operating cost reductions could be implemented without sacrificing the level of service approved by the governing bodies? Utility managers should keep track of all steps taken to reduce costs and should communicate these efforts to the governing bodies when evaluating rates and the need for rate increases. The public should be made aware that, although the utility management has worked hard to control and manage costs, some cost increases (e.g., electricity, chemicals, fuel, etc.) are beyond management's control. The utility industry is highly regulated, and increased regulations and standards can substantially affect the cost of operations. Rates should be increased as necessary to recover the cost of providing service and maintain the overall financial position of the utility, where possible.

Ongoing Communication Program

Members of the governing bodies responsible for adopting rates should have a fundamental understanding of the utility business and the drivers for the need to increase rates. Utility managers should routinely communicate issues affecting the utility to the governing bodies and the public. It is important to communicate the link between the need for rate adjustments and the long-term interests of the stakeholders, and the communication process should be well in advance of the rate adjustment hearing or adoption program. The educational process could include:

- Periodic (say, quarterly) presentations at public meetings to provide updates to regulators about the utility's operating condition and financial position and changes in the industry due to regulations, results of planning studies, etc.
- Tours of facilities.
- One-on-one meetings before public hearings with elected officials to discuss utility issues, capital plans and needs, rate and financial requirements, and options for providing service that are affecting operations, including the need for rate increases.

Bringing utility finances to the regulators and stakeholders is critical to presenting the

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need for asset condition, capital reinvestment, and rate adjustments. For example, presenting actual samples of utility asset facilities that are representative of utility condition (e.g., sample section of a highly-corroded or tuberculated water main recently replaced by the utility, as pictured in Figure 1) or showing pictures of affected service areas or needs at public meetings, can be an effective communication tool when discussing renewal and replacement needs. If fully informed in advance of utility issues, the governing bodies may have a higher probability of taking action when there is a request to increase user rates.

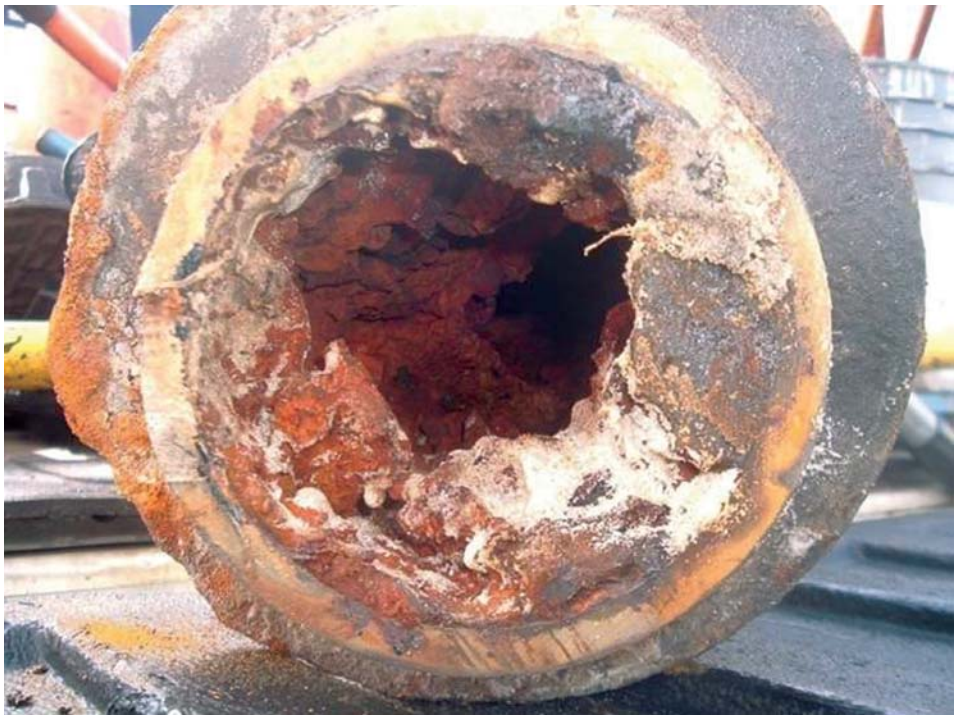

Figure 1. Sample picture showing renewal and replacement needs.

Before Issuing Bonds

If the utility has explored all options and has concluded that utility revenue bond financing appears to be a reasonable financing alternative for the capital program, there are a few additional steps that should be considered before the bonds are issued:

1. Adopt all rate increases needed during the next five years in an amount to fully fund the additional debt and promote maintenance of the financial plan. It is important to show rating agencies a commitment by regulators to raise rates when needed.
2. Consider adopting a rate indexing clause to annually adjust rates automatically for inflation or pass-through expenses (e.g., purchased water and wastewater services, electricity, etc.) without a formal hearing. Such a clause can provide rating agencies more assurance that rates will keep up with inflation.
3. To the extent possible, incorporate utility best management and financial practices into the bond resolution or ordinance.

With respect to item 3 above, the bond resolution or ordinance is a binding agreement between the regulators and the bondholders. One utility best management practice that can be incorporated into the agreement is required annual funding for renewals and replacements (a percentage of the previous year's gross revenue is common). Also, the utility system can be made a "closed-loop" system, meaning that all revenues generated through system operations must generally remain within the system and can only be used for lawful purposes of the system (i.e., cannot be used for non-utility-related purposes).

Conclusion

Utility managers can take proactive steps to prepare their utilities for rate studies and bond financings. By developing a business and financial plan that is reasonable, sustainable, and understandable, and that supports the overall business principles adopted for the utility by the regulators, managers can help their utilities secure lower interest rates on debt financings and keep user rates lower and affordable over the long-term for the benefit of their customers.

References

- U.S. Environmental Protection Agency, 1997. Combined Sewer Flows—Guidance for Financial Capability Assessment and Schedule Development. EPA 832-B-97-004.
- Fitch Ratings, 2007. Water and Sewer Revenue Bond Rating Guidelines. New York, New York.
- Fitch Ratings, 2012. 2012 Water and Sewer Medians. New York, New York.
- Mantz, Bryan A. and Robert J. Ori, 2011. Utility Rates and the Political Environment. *Journal AWWA* 103:8:51-62.