

# Proactive planning for tough economic times

**M**ost wastewater, water, and stormwater utilities face substantially increased financial challenges today. Regulatory drivers, such as combined sewer and sanitary sewer overflow requirements for wastewater utilities, are requiring many utility systems to ramp up capital spending at a time when system usage is down – and revenues are therefore reduced. The American Recovery and Reinvestment Act of 2009, or “stimulus bill,” provided only \$6 billion to address water and wastewater infrastructure needs, while there are hundreds of billions of dollars worth of need. At the same time, funding options for many utility systems have decreased rather than increased, as access to the traditional bond markets is uncertain due to global market conditions.

More than ever, utilities need creative solutions that balance utility financing needs with a community's capacity to provide funding. Several types of proactive planning can help improve utilities' financial position and manage the risks associated with today's financial uncertainties.

## Strategic business planning

During the past 10 years, industry research and some progressive utilities have moved forward with strategic business planning – going beyond typical financial planning to evaluate opportunities to improve utility bottom lines. They have provided new revenue-generating services and found ways to improve efficiency in delivering existing services. Examples include expanding into new lines of business, reducing system losses, and increasing collection rates for user fees and other customer charges.

Industry guidance documents outline systematic processes that utilities can use to identify and evaluate potential new ventures or changes to existing processes and tools. But new ventures should be fully vetted by considering overall advantages and disadvantages, evaluating potential returns, and analyzing risk using different variables. Utilities should consider the potential risks and rewards of new ventures in the context of the entire organization, including effects on existing internal and external stakeholders, as well as potential stakeholders related to the marketplace for new products and services.

Based on strategic planning and related financial evaluation, Inland Empire Utilities Agency (Chino, Calif.) has identified and implemented several new product ventures to improve its bottom line. The three revenue-generating ventures are as follows:

**Selling recycled water to regional businesses.** Recycled-water revenues from such sales currently equal 20% of wastewater operations and maintenance costs.

**Using more renewable energy.** The agency generates 45% of its own electricity and expects to be completely off the traditional power grid by 2020.

**With financial pressures worse than ever in the current economic downturn, utilities may have to get creative with their planning processes**

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**Selling composted soil amendment products.** By doing so, the utility reduces its solids-handling costs substantially; the effective net cost is \$39/Mg (\$35/ton) versus \$66 to \$88/Mg (\$60 to \$80/ton) for other conventional solids-handling options.

The Cleveland Division of Water conducted a comprehensive financial plan several years ago that included a new products and services study to evaluate potential benefits. The study identified about a dozen options. After a preliminary screening process, the utility identified several products and services for more detailed evaluation, including a service line insurance program; a residuals management program in which the utility would work with other city departments to produce, market, and sell a compost product; and a point-of-use device program, in which the city would install and maintain supplemental water-filtration devices in customers' residences and places of business.

As part of the comprehensive planning process, the division also evaluated circumstances in which it would be financially prudent to extend service to several additional customer communities, as well as the potential benefits of implementing an automatic meter-reading billing system to improve the efficiency of billing operations. The division is implementing an automatic meter-reading system and may implement some of the other measures evaluated.

## Strategic financial planning

More than ever, utilities should develop an appropriate – and in most cases, wider – range of financial scenarios to evaluate as part of their financial planning processes. Systematic consideration of external and internal drivers, including a realistic range of assumptions for key variables, such as interest rates and access to the municipal bond market, aids in realistic decision-making. Utilities have varying degrees of flexibility in scheduling capital projects. Having robust financial models and planning processes – which accommodate a range of internal options and consider external variables, such as changes in interest rates and construction inflation costs – is increasingly important when charting an appropriate financial course and securing buy-in from customers and governing bodies that need to approve budgets and rate plans.

Most utilities evaluate some alternative assumptions as part of their

rate- and budget-setting processes. But systematic scenario planning has not been widely used in the water industry. By engaging a diverse team within the utility to study the consequences of a realistic range of scenarios, utilities can identify the strategies they would employ for each scenario (see table, p. 47).

The range of available strategies and funding tools has expanded substantially in the past few years to include such new and emerging options as principal forgiveness and negative-interest loans funded through the stimulus bill, Build America Bonds, and an increasing array of private funding sources, from equipment suppliers that provide financing to private-equity funding sources. Also, utilities that have not participated in some conventional funding sources, such as state revolving fund loan programs, are finding that these sources are worth considering.

By evaluating possible strategies for a range of realistic scenarios, utilities can identify

- "no brainers" – strategies, projects, or initiatives common to all scenarios;
- "no ways" – actions the organization deems unacceptable under any circumstances;
- trigger events – external situations that would cause a utility to change from one strategy or plan to another;
- "no regret" – actions that are valuable in some scenarios, not valuable in others, but not damaging to any; and
- contingent possibilities – actions that are valuable only for selected scenarios under certain trigger conditions.

While no one can predict the future, a healthy dialogue by a team that represents the utility's diverse interests can more realistically assess the likelihood of external factors and the appropriate strategies for action.

## Outside funding

While some traditional sources of outside funding have dried up, others may emerge through future federal and state programs. Given reductions in system usage, many utility managers and finance directors have found it prudent to initiate or step up their efforts to secure outside funding for their capital programs. The 2009 stimulus bill's allocation of funds has provided several lessons for the water and wastewater sector:

Outright grants and low-interest loans will never fully fund the nation's substantial backlog of capital projects in the water and sewer arenas.

Utilities that are working to enable implementation of their capital plans by having a backlog of planned and designed ("shovel-ready") projects are better positioned to take advantage of opportunistic funding that might become available.

It behooves the water and wastewater industries to work collectively to enhance the range of funding vehicles available through state and federal legislative endeavors. For instance, utilities can voice their interest in seeing funds made available for water and sewer infrastructure through emerging vehicles, such as trust funds or infrastructure banks, providing legislative relief to help support the health of the municipal bond market, reducing red tape associated with grant funding, and increasing the share of grant equivalents rather than loans. Wastewater industry associations are becoming increasingly proactive in addressing the impact of the cumulative burden that mandated programs have on utility services' affordability. Some individual utilities are also getting engaged in supporting the

industry's efforts on affordability.

Each utility's options for outside funding are different. For example, certain programs are more likely than others to qualify for some grants. It would be worthwhile for utilities to assess their likely eligibility for current and potential future funding programs – and to adjust resources devoted to pursuing grants and low-interest loans accordingly. Utilities that were unable to qualify for stimulus bill funding may want to adjust their project development strategies to accelerate planning and design activities so they have a rolling backlog of shovel-ready projects to qualify for future funding programs.

## Rate and fee structure refinements

Traditional cost-of-service studies following principles defined in industry guidance documents provide the framework for equity in charges to customers. Such studies and related rate-making practices help to align rates and charges with the actual costs that various customers and customer classes cause utility systems to incur.

The typical steps in conducting a cost-of-service evaluation include identifying revenues required from user charges to support the system, allocating those revenue requirements to utility functions (such as treatment, collection, and customer service), and then applying those revenue requirements to system usage characteristics (such as flow, number of customers, and strength) to identify the unit costs of supporting the required capital and operating programs. The cost-of-service study results by customer class and by usage characteristics serve as a primary input in designing a specific rate structure, along with key policy goals for the system. Within the overall framework, there is a fair amount of discretion in the level of detail at which the studies are conducted, how customer classes are grouped for analysis and rate-setting purposes, and the specific rate and fee mechanisms that are used to recover costs. Utilities can use updates to cost-of-service analyses to ensure that rates and charges are adequate to recover costs imposed by specific customers and, where appropriate, to impose additional fees or charges.

In developing its comprehensive financial plan in 2006, the City of Cleveland's Division of Water evaluated the costs associated with providing certain ancillary services to customers, such as meter inspections, providing water from fire hydrants, and charges for new connections, in light of actual labor time and rates, equipment required, and other related costs. Detailed evaluations found that the true full cost of providing these services was substantially higher than the rates being charged, in some cases. For example, costs for installing meters were found to be approximately 50% higher than the rates at the time the study was conducted, so the city adjusted the rates.

In 2009, the City of Richmond, Va., established a new stormwater utility fee structure to address stormwater management needs, rather than relying on general property taxes or wastewater utility revenues. The city needs to substantially increase both capital program costs and operations and maintenance activities related to stormwater in light of stormwater permit requirements and environmental groups' requests for increased levels of service. These needs required an increase in revenue from roughly \$2 million per year to more than \$6 million per year.

The city established a stormwater utility fee structure in which the fee is based on impervious area, because each property's impervious area is a strong indicator of its contribution to stormwater runoff. By creating a dedicated fee, the city's leaders created a program that



provides adequate revenues independent of the city's property tax rate and the city's general fund.

### Securing buy-in for financial programs

Support from utility system customers regarding necessary rate increases is important. Affordability analyses must reflect changes to customer income from increased unemployment and underemployment. Median household incomes in some communities may be declining because of unemployment or underemployment.

At the same time, utilities may need to increase rates to make up for reductions in revenues from some commercial and industrial customers as water and other system usage declines due to reduced economic activity. Utilities should engage customers and other stakeholders in the financial planning process more – not less – to increase the likelihood that boards of directors, city councils, and other governing bodies will approve requested adjustments to rates and other revenues.

Utilities might consider some specific strategies to secure buy-in for required rate increases, including

- creating affordability or lifeline programs to assist low-income or elderly customers who are unable to pay the required rate increases;
- ramping up customer information and engagement activities to more proactively share the basis for required capital improvements and operating cost needs (for example, some utilities have engaged groups in identifying and weighting criteria used to prioritize capital programs.); and
- more proactively engaging commissioners or council members whose votes will be needed to support the rate increases in the project and budget development and prioritization processes.

### Prioritizing projects and initiatives

Faced with uncertain revenues and access to capital markets, many wastewater and water utilities require enhanced flexibility in their capital planning efforts. This flexibility includes making sound decisions on which projects to defer or cancel if funding levels drop. It also involves knowing which projects to advance if revenues become available or as access to capital markets improves. Strategies and tools that can help identify the capital projects that add greatest value, based on weighted stakeholder priorities, provide an objective basis for making these important decisions.

Having a defensible, objective process for identifying utility system goals and measuring the contribution of candidate capital projects toward meeting those goals provides a framework for creating real-time adjustments to capital improvement programs (CIPs). The Water Research Foundation (Denver) developed the *Capital Planning Strategy Manual* in 2001, which identified the prioritization step as the one most in need of development. The manual established

## Consequences of scenarios for utilities

External drivers	Scenario		
	Capital fantastic	Déjà-vu	Leaner and greener
Growth & development	More rapid growth as the economy recovers more quickly than expected	Growth continues at recent "depressed" levels	Sales decline even faster as economy continues to erode
Degree of regulation	Flexibility in enforcement, more focus on discretionary projects	Status quo level of enforcement	Stricter agency enforcement on mandates, no relief on schedule
Funding	Second wave of stimulus funding, bond banks and trust funds also approved	Traditional sources of funding	No grant funds available, problems accessing bond market
Prices	Prices down as contractors scramble for work in a generally down economy	Prices stay relatively stable	Major price increases in key materials and supplies, such as chemicals

a systematic process for identifying goals, creating performance measures to determine how candidate projects would contribute to meeting those goals, and then using the results of the process to guide near- and long-term CIP plan and budget decisions.

Two examples illustrate the value of enhanced prioritization. Aurora Water in Aurora, Colo., decided to enhance prioritization for its capital program. In 2008, over the course of roughly 6 months, a diverse staff team identified and weighted key water system goals, defined performance measures that could be used to objectively measure candidate projects' contributions, tested and refined the framework with roughly 40 sample projects, and then applied the refined framework to the full CIP program.

Aurora Water is using the enhanced prioritization results to guide both near- and long-term capital planning decisions. Capital projects in the fiscal year 2008 budget were prioritized to assist in urgent, near-term financial management decisions.

The Hampton Roads Sanitation District (HRSD) in Virginia also initiated an enhanced CIP prioritization process. In 2008, a staff team identified and weighted 10 key water system goals, defined performance measures, and tested the framework with about 20 sample projects. Based on the added value the sample projects provided, HRSD decided to implement the enhanced prioritization framework for its full 10-year CIP program in 2009.

HRSD used the results of the prioritization scoring to identify roughly \$150 million in lower-priority capital projects that could be moved beyond the immediate 4-year planning window. This decision enabled the utility to keep the capital program within its rate and bonding limits. Having an objective basis for measuring candidate projects' contributions toward key goals helped gain support for the capital programming decisions from HRSD's diverse management team.

In light of substantial challenges, it is incumbent on utilities to focus additional attention on rate and financial issues. By employing proactive strategies, utility managers and finance directors can improve their financial situation. Such actions can allow utilities to move forward with critical capital improvement programs and operating initiatives while minimizing the financial impacts on system customers.

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