Key Water Strategy No. X: Value of Water & Utility Retail Water Pricing Approaches

Background

Water is life. It nourishes the environment we live in and us as humans. It cleans us and sustains us. Put simply, water has an inherent value to every Californian.

- We withdraw more than 50% of our water supply from our river and streams in California.
- The average California uses 1XX gallons of water per day—that's XX,XXX gallons a year!
- XX% of water in California is used to produce the food we eat and the beverages we drink.
- How is water used in our homes? On average, 17% goes toward showering, 27% is used by the toilet, our faucet drains 15%, our clothes washer another 22%, miscellaneous needs take up 5%, and those pesky leaks steal another 14%.

The price of water varies by water agency and is based on how each water system is designed and operated to meet local needs and conditions based on the available water supplies to the community. Local funds are collected to pay for financing these systems and given the uniqueness of each community and water system, an overarching policy only fits to the extent the system is interconnected between water sources. In California, there is a complex water system that interconnects some, but not all, water utilities. Each communities' needs and water sources are very diverse, but when combined serve to support the state's population of 38 million people and $2 trillion economy.

Retail water pricing can be an effective means of reducing water demand, particularly during peak months driven by irrigation demand. Retail water pricing is the only price signal that customers directly received related to the "value of water" and often this bill is one of the cheapest monthly or bi-monthly bills that customers receive for the service provided when compared to energy, solid waste, wastewater and other monthly bills.

Currently and in the future, the local elected body should continue to provide the local accountability to set the pricing schemes to meet local needs. There are some fundamental principles that each elected body is task with meeting with their selected rate structure, primarily:

- *Financial Management* – ultimately each utility must have financial solvency and meet revenue requirements with some predictability.
- *Cost of Service* – provide equity to allocate costs across the customer classes where customers that use more, pay more (e.g., untreated water customers do not pay for treatment costs, customers at top elevations pay for added pumping fees).
- *Supports the Long Term Cost Structure* – embeds community goals (e.g., promotes conservation, promotes efficiency, easy to administer) in order to meet long term asset needs. There are challenges for each water system financing scheme given local conditions. For example, water abundant systems may best justify charging based on a uniform rate versus a water scarcity situation that may best justify a tiered rate structure. The policy of local elected officials is constrained with Prop 218.

Utilities have a long history of using conservation oriented rate structures. Based on the findings of the American Water Works Association, California Nevada Section, 2013 Rate Survey, there are 217 water utilities in California and 17 in Nevada under diverse ownership and operating conditions, where 99% of utilities currently charge on a volumetric basis. Therefore, nearly all customers in the state pay more for

their individual water use seasonally, driven by the need for supplemental irrigation, which is lagged by one or two months given water is billed after its use. It is important to emphasize and education on the choices in urban landscapes that drive up the customers water charges and total on an annual basis such that customers can see the effect and their own benefits for changing how they manage their water use.

Over the years, inclining block structures or tiered rates and other approaches have been and expanded consistent with the mandates of California Constitution Article X, Section 2, and Article XIII D, Section 6 to recover the costs of service and reduce water use consistent with gallons per capita per day (gpcd) goals established through SB X7-7 of 2009. An inclining block structures has its limitations and alone cannot guarantee greater water use efficiency. For example, research has shown that the impact of water pricing on household water use is closely tied to household income levels and that historically the price elasticity of water (the effectiveness of raising prices to lower water use) may be fairly low depending on the community. Inclining block or other types of conservation oriented rate structures are most effective when combined with other programs such as those that the ITP has emphasized throughout this report, including:

- public education and outreach;
- comprehensive market transformation to facilitate low water landscaping;
- setting efficiency standards for irrigation equipment (among other water fixtures and appliances); and
- compliance with local Landscape Ordinances (and MWELO).

There is a fundamental need for local flexibility in retail water pricing along with an importance of using a combination of conservation tools to achieve the vision that the ITP supports through its recommendations. Provided that fiscal responsibility to maintain water, wastewater and storm water systems rests with local municipalities and the California Public Utilities Commission regulation of private water companies, the ITP recommends that rate making policy be retained at the local utility level.

Opportunities and Challenges

There are some key shifts in water utility practices that are on-going opportunities, include the following utility efforts to improve approaches to retail water pricing and conveying the value of water to customers:

- Continue to make upgrades to transition to automatic meter infrastructure and to collect information on metered consumption to better understand behavioral changes.
- Updated through regular assessment of existing volumetric charges for metered accounts to evaluate the sufficiency of cost recovery. Rate changes typically occur annually based on rate studies done every three years.
- Identifying conservation rate pricing objectives that meet short-term and long-term needs and consider implementing an increasingly more conservation-oriented rate design, such as increasing block rates or water budget based rates for residential customers.
- Maintaining open dialogue with internal and external stakeholders to gather perspective on, evaluate, and implement conservation-oriented rates.
- Monitor utility billing information as it relates to fixed and variable revenue and costs.

- A growing number of utilities are adopting water budget based rate structures, which has seen particular benefits in outdoor water use reduction. This is a more popular approach to educate customers and let them be incentivized to manage to their water budget.

The following are viewed by the ITP as opportunities and challenges with retail water pricing as a strategy:

- It is a challenge having representative usage data from the various neighborhoods and customer classes throughout the utility in order to develop a fair and equitable rate structure that adequately generates utility revenues. This is achieved with assessing the "apparent" losses from AWWA Water System Audits which are now required in California.
- Pricing structures for storm and waste water utilities are based more on fixed costs and driven by wet weather flow design criteria. However, given the average day dry weather flows also have a limited affect on the operation and maintenance and treatment and land disposal costs of capital facilities for storm and wastewater systems, conservation pricing may also be given consideration by these other utilities where there are variable costs like seasonal pumping charges or other incentives that may be shared among utilities.

Key Actions to Support this Strategy

Given the need for local elected bodies to address their fiscal responsibility based on their community's unique needs and overall state's goal to promote more water conserving water rate structures, the ITP recommends that DWR work with statewide agencies and non-profits (e.g., California Urban Water Conservation Council and AWWA California-Nevada Section) to continue to educate, research, provide case studies and tools necessary for financial managers to adapt to the changing mandates on water use reduction targets, which is currently driven by SB X7-7 and emergency regulations associated with droughts. This educational process may also be supported by symposiums for water utilities coming together with waste water and storm water utilities to address the limitations of Proposition 218.

- Education on the "value of water" through a statewide campaign. This may be key messaging after the drought story for the current "Save Our Water" campaign or may take on a new form with a much more hands-on school curriculum. (Recommendation 9)

- California Department of Water Resources and local utilities may work through the Urban Stakeholder Committee to assess the benefits and role in supporting conservation pricing by local utilities.

- State and local organizations should seek to be focused on the watershed approach that optimizes use of conservation pricing for enhancing our urban landscapes. For example, this support can include more educational opportunities, case studies and tools to help financial managers consider water budget based pricing that helps drive more outdoor water efficiency by identifying for customers and utilities where customers are over-budget in terms of water usage and therefore also paying more for their water service than necessary.

- As the need drives changes in the existing volumetric charge, utilities should engage

stakeholders in order to ultimately provide a water rate structure recommendation for the future that is conservation-oriented, considers revenue sufficiency, equity, transparency, legal compliance, and the feasibility of implementation.

- To the extent practical and feasible, water, wastewater and stormwater utilities should collaborate together on cost efficiencies and stakeholder engagement provided it's the same ratepayers in each community affected.