

water

by Oliver Brandes, Kirk Stinchcombe and Steven Renzetti

WORTH EVERY PENNY

Making the case for conservation-oriented water pricing in Canada

Inevitably, society has to pay for the infrastructure and services that store, treat, and distribute water to our homes and businesses. Yet, Canadians typically pay for only a portion of these costs through regular water bills. In fact, Statistics Canada figures show that, in 2007, expenditures by water service providers were on average 30 percent higher than revenues collected from water bills. The remaining expenditures must be postponed, leading to the deterioration of urban infrastructure and system reliability problems. Alternatively, costs must be subsidized from other sources, including infrastructure grants from provincial and federal governments, or municipal government general revenue. This keeps the retail price of water artificially low.

A new report by the University of Victoria's POLIS Water Sustainability Project titled "Worth Every Penny: A Primer on Conservation-Oriented Water Pricing"¹ explores solutions to the water pricing dilemma. A better approach, environmentally and economically, is to begin charging households and businesses for the real costs of water services. Conservation-oriented pricing is a rate structure adopted

by water service providers where costs are fully recovered. Individual customers are metered and pay for the volume of water they use, and the price charged is sufficient to influence consumers' decisions about water use and to encourage efficiency.

Frequently Asked Questions

Do water systems need to be metered to introduce conservation-oriented water pricing?

Metering is a prerequisite for volume-based pricing. It is a beneficial general management practice that allows service providers to better account for water use and measure performance.

Will conservation-oriented pricing result in less stable revenues from water bills?

When a water service provider increases its reliance on volume-based pricing, its revenue may fluctuate more. Fortunately, there are many options to minimize the impacts of revenue variability and avoid budget shortfalls, including: using "rolling average" pricing; establishing reserve funds; and having part of the bill include a

fixed component (a "connection charge") that does not change with the volume consumed. Careful planning and revenue forecasting also go a long way towards mitigating this concern.

Does it disadvantage low-income families?

Low-income people spend a disproportionate amount of their earnings on water bills, so some fear that price increases will hurt them more than others. But, this challenge can be minimized. Service providers can provide people in need with a low cost "lifeline block" to meet basic water requirements. Incentive programs like product rebates can be targeted to disadvantaged groups. Some low-income families may actually experience a decrease in their bills because they have more control over costs.

Do senior governments have a role?

Provincial and federal governments can provide guidelines and best practices on matters such as asset management and accounting practices. They can also provide incentives via conditions for infrastructure grants, create supportive regulatory environments, and reduce legislative barriers to how costs can be recovered.

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1 To download a copy of "Worth Every Penny: A Primer on Conservation-Oriented Water Pricing," visit <www.poliswaterproject.org>.

Key Messages

- ▶ It makes sound sense from both environmental and economic points of view.
- ▶ It can lead to lower operating costs for water service providers and fewer environmental impacts because less water needs to be treated, pumped, and heated.
- ▶ It can help to defer the need to construct major new infrastructure, such as dams and treatment plants, saving money and reducing environmental impacts.
- ▶ It can contribute to improved financial performance for service providers. The goal is to ensure that the amount of revenue from water bills is sufficient to cover the full costs of operating now and in the future.
- ▶ Potentially negative consequences for communities can be mitigated.
- ▶ It allows individuals much greater control over their water costs. Depending on how it is implemented, those who choose to conserve may actually see a decline in the amount they pay.
- ▶ It's a question of fairness. Why should prolific water users pay the same amount as those who do their best to conserve?
- ▶ There is no evidence that it leads to privatization of water infrastructure. In fact, more effective cost recovery can actually strengthen publicly-owned utilities.
- ▶ Revenue generated by conservation-oriented pricing can be reinvested in the water supply system.
- ▶ Improved pricing provides a strong incentive to innovate. When water is valued more, engineers, inventors, and investors are motivated to develop more water-efficient practices and technologies.
- ▶ Many other places around North America and the world are successfully doing it.

Has anyone in North America already implemented it?

Some water utilities in the United States have used conservation-oriented pricing approaches for many years, including Seattle and San Antonio. In Canada, a number of cities have started price restructuring with good success, including Toronto, Guelph and Halifax. Information on the systems in all of these places is readily available, and others can learn from their experiences.

Case Study: Guelph, Ontario

The City of Guelph has demonstrated that historical and political barriers to conservation-oriented pricing can be broken down. Guelph, one of Canada's fastest growing communities, relies solely on groundwater resources for its water. In working to sustain the community's finite supply, the city has set the ambitious goal of reducing daily water use by 20 percent

by 2025 and has set a consumption target of using less residential water per capita than any comparable Canadian city.

In December 2008, Guelph approved a 19 percent increase in water and wastewater user rates, following a number of other increases in recent years. The city's water and wastewater rate has a two-part fee structure, including a relatively low fixed charge (at about \$13/month), as well as a variable charge. The variable portion includes both a water and wastewater charge and bills water users on a uniform basis for each cubic metre of water and wastewater used. The end result is that residents pay a combined cost of just over \$2 for every cubic metre – relatively high by Canadian standards.

This simple and consistent uniform rate structure allows the city to provide a straightforward and easily understood bill to the customer. In concert, the city also offers a comprehensive demand management program that includes product

rebates, an outdoor water use program, and other education resources. In working to receive council's endorsement of this rate increase, Guelph staff noted that water and wastewater services and infrastructure needs are funded solely from the sale of water. As part of their rationale for a user increase, they also emphasized their need to comply with new regulatory requirements imposed by the provincial government.

Representatives from Guelph used a two-pronged message to achieve the desired outcome. First, they noted that, from a financial point of view, the rate increase would allow the city to replace necessary infrastructure as well as meet the needs of a growing community. Secondly, they treated improving efficiency as an equally viable approach to meeting community water needs, as any other source of water supply and wastewater treatment. This bolstered the argument that conservation is the right thing to do from both economic and environment perspectives.²

Conclusion

Most people and organizations will change their behaviours simply because they recognize that conservation will save them money. The water service provider is interested in achieving these greater efficiencies because it will mean better use of scarce operational capital, deferred future expansion costs, and reduced environmental impacts.

Moving communities to more effective water pricing will take time and courage on the part of municipal and senior government leaders. Most municipalities will want to take a gradual approach to implementing pricing improvements, sometimes over a number of years. This allows time to mitigate any potentially negative impacts and to build community support. Improving pricing makes sound sense from both business and environmental perspectives. Continuing to waste water and not generating enough revenue to fund the operation of water supply systems are in nobody's interest. MW

² For more information, see: <www.guelph.ca/water> and <www.guelph.ca/waterconservation>.