

PRICE IT RIGHT FOR CONSERVATION

UVic Promotes Municipal Water Security Through Price Reform

Many lessons have been learned in the 10 years since the Walkerton water tragedy, and now a new University of Victoria report is stimulating a national dialogue on water pricing as part of a sustainable approach to management.

Worth Every Penny – Conservation-Oriented Water Pricing in Canada, published by the University of Victoria’s POLIS Water Sustainability Project, is a primer on how to reform water pricing. The report is aimed at water managers and municipal leaders across Canada and makes the economic case for water conservation and sustainable water service infrastructure in Canada as a way to increase water security for communities.

“Water infrastructure in many Canadian towns and cities is deteriorating, and water bills are not enough to even cover the costs of operation,” says Oliver M. Brandes, co-author and leader of the POLIS Water Sustainability Project at UVic. “Communities are relying on federal and provincial government subsidies to operate their water systems. Yet, conservation-oriented water pricing has the potential to stabilize revenue, address deteriorating water infrastructure and to contribute towards comprehensive water conservation programs.”

Worth Every Penny (available online at www.poliswaterproject.org) provides practical economic and technical information about how to implement conservation-oriented water pricing—starting with setting water rates sufficiently high to encourage conservation. Lead examples from communities on Vancouver Island and cities such as Halifax and Guelph are used to demonstrate successes: they are communities that have reduced water demand and improved the environmental performance of water utilities, without negative impacts on low-income families.

“Canada has one of the lowest prices for water use and the highest consumption levels in the world,” says Brock University’s Dr. Steven Renzetti, report co-author and one of Canada’s leading water economists. “With little financial incentive to conserve, we over-consume, and our overconsumption is threatening water supplies and the sustainability of our water service infrastructure. One key step is the implementation of metering across the board.”

According to the most recent data (2006), over one-third of Canadian homes still do not have a water meter, and the implementation of metering varies considerably from province to province (e.g., 32.6 per cent of residential customers are metered in BC, 6.5 per cent in Quebec, and less than 1 per cent in Newfoundland).

“Conservation-oriented pricing makes sound sense from both economic and environmental points of view,” says Kirk Stinchcombe, report co-author and principal of Econnics, a Victoria-based consulting firm that specializes in water use efficiency. He notes that the current approach to pricing encourages overuse and is also typically not generating enough revenue to fully fund infrastructure maintenance and replacement. “Wasting water and not being able to fund the operation of water systems are in nobody’s best interest,” says Stinchcombe.

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Backgrounder attached.

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BACKGROUND

CONSERVATION-ORIENTED WATER PRICING

Worth Every Penny: A Primer on Conservation-Oriented Water Pricing, published by the University of Victoria's POLIS Water Sustainability Project, provides an overview of conservation-oriented water pricing for water utilities in Canada. It explains how water pricing works, what the benefits are, and how water utilities can implement conservation-oriented water pricing structures as a key tool in the water manager's toolkit. As well, it offers advice on how to address implementation challenges, including how to avoid penalizing low-income families and how to maintain revenue stability for water utilities.

Why should we care about water under-pricing and over-consumption?

- Excess water treatment requires significant energy inputs, thereby increasing greenhouse gas emissions.
- Wastewater flows become higher resulting in unnecessary treatment and disposal costs.
- Costly, new bulk supplies such as water from dams or groundwater wells may need to be constructed sooner or larger than necessary.

Water Use and Pricing in Canada

- International comparisons of unit prices for water and wastewater services show that water is cheap in Canada—too cheap.
- Canadians pay significantly less for water than countries with comparable lifestyles. Germany, for example, charge residents 3 – 5 times as much.
- Around 25 per cent of customers in single-family homes in Canada still receive flat rate water bills and therefore have no incentive to conserve.
- While three-quarters of Canadians do pay for water used in the home based on volumetric-based charging, the prices are not high enough to significantly affect their behaviour.
- Canada's water prices are the lowest, according to a 2010 study by the Organisation for Economic Co-operation and Development (OECD) that compares average per unit prices for water and wastewater services, including taxes, for household across 20 OECD and non-OECD countries (including South Korea, Poland and Hungary).
- Canadian water utilities do not collect enough from water bills to cover cost of providing water services. In 2007, Canadian water agency revenue was just 70 per cent of what was spent on providing water services.
- Under-pricing is causing a major infrastructure deficit (estimated across Canada at \$31 billion for upgrading the existing deteriorated assets and another \$56.6 billion for new needs) and a dependency on senior government programs such as federal stimulus funding.
- Metering is a key component to measuring water consumption but as of 2006; only 63.1 per cent of customers living in single-family dwellings in Canada were metered. One-third of Canadians are not.
- In British Columbia, 32.6 per cent of residential customers are metered. In Quebec, 16.5 per cent of residential customers are metered. In Newfoundland, only a fraction of one per cent of residential customers has meters.
- Yet, universal metering is commonplace and expected in all other utility sectors such as electricity or natural gas.
- Comparatively, two-thirds of OECD member countries meter more than 90 per cent of single-family houses.

Examples of Conservation-Oriented Water Pricing

- The Halifax Water Utility in Halifax, NS is a self-financed utility. In 2007 the utility services merged making it the first regulated water, wastewater and stormwater utility in Canada. While the total cost for a typical residential water bill is not particularly high the utility integrates the management of all aspects of the urban water cycle and is working towards full costs accounting.
- In Seattle, Washington, the public utility introduced volumetric charging decades ago and in 1989 were the first in North America to introduce seasonal surcharge. A drought surcharge was added to bills in 1992, and included a strong rate penalty for excessive water use. In 2001, the utility introduced an increasing block rate tiers for single family residential customers. Since introducing peak usage charges there have been significant and sustained reductions in water use and while rates have gone up the average customer bill is not increasing because less water is being used.
- Further examples:
 - City of Guelph, Ontario p.30 of report.
 - District of Tofino p. 35 of report.
 - Regional District of Nanaimo p 35 of report.
 - Capital Regional District p. 35 of report.
 - San Antonio Water System, Texas p.26 of report.

Worth Every Penny: A Primer on Conservation-Oriented Water Pricing, can be viewed at www.poliswaterproject.org.