THE POTENTIAL AND PROMISE OF WATER PRICING

Collins A. Ayoo and Theodore M. Horbulyk

The claim is often made that more effective use of pricing and various water charges can remedy or completely solve problems of water scarcity, shortage or overuse. A common view is that users pay too little for water and, as a result, they use too much. The public or private agencies that supply water to users could levy higher prices willingly, or the regulatory agencies that manage and oversee water resources could enforce higher rates. Implementing these approaches in developing countries may present special challenges due to the high costs involved or due to inadequate resources to assign, monitor and enforce diverse rights to water use. However, are there reasons that other countries, not so constrained, have not implemented effective water pricing strategies? Is this pricing prescription really so straightforward?

Economists, engineers and others have played a lead role in these policy debates, and economists continue to write volumes about many aspects of the issue. The purpose of this article is to review current approaches to effective water pricing and to examine the gap between these academic prescriptions and the current state of water allocation policy and practice. To what extent are more complex or comprehensive systems of water charges likely to fulfill the growing challenges of water scarcity? What steps are needed to bring theory into practice?

The main conclusions reached here are that in many jurisdictions, schemes of administered prices may represent an attractive policy approach to promoting the overall efficiency of water use. The attainment of appropriate or efficient usage levels is synonymous with encouraging conservation and reuse, with investment and innovation in new technologies and practices and with achieving expected levels of water quality and security of supply. It is also consistent with capturing as fully as possible the many beneficial consumptive uses of water in situations where water is relatively abundant or inexpensive. Unlike the allocations that might be reached in some private market transactions for water use, an advantage of administered pricing is that it offers the ability to include, as part of the prices charged, society's best estimates

Journal of International Affairs, Spring/Summer 2008, vol. 61, no. 2.

of social costs related to downstream or future users, instream flow uses, and so on. Unlike private market outcomes, administered pricing also offers the ability to make the water pricing program revenue-neutral. A carefully designed rebate program can leave the average water user's annual household or business income unchanged, even while providing strong financial incentives to conserve.

These issues and arguments are explored in the following sections. The discussion starts by examining the concept of water pricing and its rationale, focusing attention on those pricing approaches that promote the efficient use of water resources. The concluding sections highlight pricing issues that require further attention. Some brief illustrations of the state of water pricing in Canada and elsewhere show that despite initial steps toward policy reforms, considerable action is still required to harness the potential gains of effective water pricing.

The Meaning of Water Pricing

Various systems of water rates, water fees and user charges are employed around the world as a means of influencing the processes by which water is provided and used, and as a means of cost recovery or revenue generation. In some places, these water prices are the principal form of water allocation. In other places, these prices are combined with various forms of licenses, permits, quotas, restrictions and other practices and customs that dictate how much water is used, where and at what cost. Where pricing is used, there may be a range of apparent price levels since, in practice, water systems have a number of stages in the supply chain. There might be prices assigned for bulk water withdrawals from a surface water or groundwater source that differ from other prices further along the supply chain. Specific prices might be assigned once the water has been successively transported, stored, treated and distributed for final use by residents, industries, irrigators, public works and so on, and these prices may vary by time, place or purpose of use.

Economists have occupied themselves for centuries exploring the role and behavior of prices in influencing decisions about the production and use of all manner of goods and services. Long before economists became involved, people had experience with barter and trade in town and village markets everywhere. It was readily apparent that markets could function with varying degrees of effectiveness for a wide range of transactions. At their best, markets—and the price signals they generate—are capable of coordinating the independent decisions of vast numbers of producers and traders and of allocating scarce supplies of goods and services across diverse consumer groups. It is also the case that markets work more effectively at allocating some types of goods and services than others. Historically, markets have not been the principal means of allocating the use of fresh water in most parts of the world.