Tariff Turmoil

How Utilities Can Swim, Not Sink When Raising the Price of Water
Money Makes the (Water) World Go Around

In the first of a series of new articles designed to give water utilities practical advice, the politically charged topic of tariffs is addressed head on. David Zettland discusses why water, money and politics are intrinsically linked and the importance for water managers to remain transparent. Case studies will show success in Australia and challenges in Las Vegas.

R
also your hand if you want to pay less for things – loss for beer, bread, shoes, fuel. Anyone? Everyone? Do you lose your money at pay less. Everyone wants to pay less. Lower prices leave more money for other good
ies, for other necessities, for unexpected expenses that arise sooner or later. Now
raise your hand if your local merchant wants to charge you more – for beer, bread, shoes, or gasoline. Any one? Everyone?

So now that we’ve agreed on the obvious, let’s get to the interesting question: how is it that we manage to buy goods when we want to pay less and merchants want to charge more? It’s because we have choices of where to shop and what to buy and our freedom forces merchants to compete for our custom. Clever, hard
water managers operate like businesses. We buy them because we feel competitive prices are fair, we buy from them be
cause our valuations exceed their prices.

THE RIGHT PRICE OF WATER REFLECTS LOCAL CONDITIONS

The price for sustainable water services that deliver clean pressurized drinking water to your home and remove wastewater for disposal should include the cost of building, financing, operating and maintaining the water and wastewater networks; the cost of water supplies that vary from cheap, clean groundwater in Scandinavian countries to expen
dive, polluted seawater in the Gulf states; and the cost of treating wastewater to local standards before directing it to the environment or re
use. These costs will be the same when production uses the same technologies, chemicals and energy sources but vary with the local costs of labor, land and – most important – regulations (Zettland and Gasson, 2012).

But what about the benefits of cheap water? Frankly, there are none. Customers pay less attention to service quality and use more commerce, socially and environmentally sustainable?

TRANSPARENCY BUILDS CREDIBILITY

Water utilities that want to show they are delivering high-quality ser
dices at the lowest possible cost need to allow their customers and regulators to audit them continuously. In the same way that co-ops or open book businesses do (Economist, 2012). Such transparency would make it easier for managers to recover costs, since they would be able to show they were not wasting customers’ hard-earned cash on padded payrolls, featherbedded expenses and gold-plated sys
tems.

Customers who understand costs will accept increases or de
creases in prices. This idea may seem redundant to those who as
sume regulators are going to stand up to the public and make it seem inevitable to managers who dislike the idea of outsiders auditing their books or watching their workers, but it’s neither. Regulators have a negotiated relationship with utilities, setting prices based on a limited set of semi
audited, semi-useful data. Water monopolies can lose secrets to non
existent competitors or make more or less than targeted returns in the long run (Zettland, 2011). Water utilities must move from a world in which professional en
ghines manage meters to a world in which the people behind those meters can observe every move they make. Put the bills, and they are not going to pay less, for anything unless they trust their priorities are respected and money well spent.

SUCCESS IN SANTA BARBARA

Most water managers qualify and competently go about their busi
ness – pipes sealed, machines whirring and water flowing – but some
cases that wreck their plans. It’s at these times that customers see
why their regulators are professional. But what do they do when

Consider the situation after four years of drought in Santa Barba
ra, California. Falling water levels in the reservoir threatened to dry out the wealthy coastal town. There was no time to build a desalination plant or connect to canals on the other side of the hills. There were too
many people to serve with trucks or ships. Demand had to fall so managers pursued a two-pronged strategy of raising prices and education consumers to use less.

Increasing block rate tariffs tripled from one tier to the next (up to a maximum of $9.90 per m³) and block-widths were reduced. Local talkers on conservation and regulated water levels got high. Rightly, people were told how to reuse greywater, and brown lawns symbolized community solidarity.

Demand dropped by 50% relative to pre-drought levels (Loaiciga and Ranalan, 1997). When rains returned, prices and restrictions fell, but demand returned only to 60% of pre-drought levels.

More important for managers, citizens had seen the light: they allocated money to connect to the State Water Project and build a desalination plant. Although this plant was later decommissioned as surplus (demand destruction can be surprisingly persistent), the fact that it was appropriately tested and built with people’s money, under discussion with customers that trusted managers.

A variation of this story took place in Australia’s major east coast cities during their recent decade of drought. Public communication and community responsibility reduced demand dramatically. Billion dollar desalination plants were built.

Although these plants are controversial at the moment (they have been described as “white elephants” without returning rain-reflecting reserves), there is no doubt that they were approved and built only after people believed it was better to be safe than sorry in predicting the return of rains. These examples are not textbook cases of success from a finan
cial planning perspective, but they were successful to managers and citizens: water supplies were not cut off; demand and supply were managed transparently, everyone paid to keep the system going and it continued despite disruptive droughts.

AND NOT SO SUCCESSFUL IN LAS VEGAS AND RIYADH

Many examples could be cited of where poor water management has damaged customer health and happiness, randomized business opening hours and increased conflict among neighbours chasing scarce water.

Many of them occur in poor countries where a lack of money and “capacity” might be blamed for problems. These excuses are harder to make in places like Riyadh and Las Vegas in the US. The problem in Riyadh is clear: water is available only one day in seven or ten) because prices cover only 1%. This outcome cannot

out customers when water has been ordered to sell water for next to nothing. Speaking of deserts, we have to consider the ongoing failure to provide sustainable services to the people of Las Vegas, where water is notoriously cheap – only $0.31 per cubic meter for the first 0.84 m³ per day – and scarcity is a big problem.

Pat Mulroy has managed water in Las Vegas for 20 years and she

and her managers claim that a shortage of water has forced them to spend nearly a billion dollars difference: a “third straw” into their local reservoir (Lake Mead). Such an expense allows them to withdraw water as levels drop below their existing intakes but does nothing to expand supplies.

Other plans – pipelines to take neighbors’ groundwater, a desal
ination plant in Mexico in exchange for Colorado water rights, even a pipeline sucking water from the Mississippi – are just as costly and desperate. Are such attempts in the interest of exist

ing customers? Are those customers willing to pay more without an improvement in reliability? We’ll never know because they have not been asked. Mulroy tells them that their future depends on growth and cheaper water. Such an eagance is one that land developers and political boosters like to hear.

“Regulators have a negotiated relationship with utilities, setting prices based on limited data”

It’s ironic that these same boosters were responsible for Vegas’s recent improvement in water reliability: demand dropped when the housing bubble popped and unemployed workers left behind a glut of vacant houses. But water management in Vegas is neither logical nor sustainable from an economic perspective.

Cheap water has led excess demand for lawns, pools and power showers. The supply-side “solution” to the resulting scarcity promis
to raise water rates by a considerable amount. Moving even a por
on of those costs onto the variable price of water is likely to reduce the quantity of water demanded, perhaps by an amount sufficient to make additional supplies unnecessary. But such an outcome would be too late: money, once spent, will have to be repaid over decades. It would have been easy to avoid that waste by raising prices to reduce demand (and retaining excess revenues). Such an option was not what land developers and politicians wanted: they benefit from promises of cheap water luxury in the desert - not reliable water ser
vice to existing customers.
Utility Management: Tariffs

PAYING THE PRICE OF SUSTAINABILITY

Prices below the cost of service require subsidies, borrowing, or capital and operational outlays. Subsidies have strings attached, loans drain cash and defer attention; undercapitalization reduces long-run service quality; undermaintenance leads to annoyance and sick customers. What about the benefits of cheap water?

Frankly, there are none. Customers pay less attention to service quality and use more water. Do they save money? Perhaps, but that money is spent on less important goods, such as food, heating, shelter and other necessities.

Of course customers would prefer to pay less for good quality water, just as they would prefer to pay less for mobile phones, clothes, and so on, but they pay the full price for those goods because they see value in them. It’s the same for water: people will pay for value.

Activists espousing a human right to free water do not like these ideas but their position is weak. A “right” to water is worthless without a strong rule of law (Zetland, 2011a). Managers are unlikely to expand systems and costs for zero revenue – and they are unlikely to get funds from strained municipal budgets. There’s no point in providing free water in developed countries when people already spend less than 3% of their income on cheap water.

Many people in developing countries spend time and cash fetching dubious water from informal vendors or natural sources, but they are willing to pay when clean drinking water will save them time, money and sickness (Das et al., 2010). Most activists would think again if they had to live with the consequences of their convictions.

WILLPOWER WILL DELIVER

Nobody wants to pay more for water but nobody wants an unreliable, unsafe water supply. Water managers around the world have the power to deliver their services efficiently and cost-effectively. The reality is that there is no single simple path. The ultimate job of steering, doing and coping with the future.

Politicians and regulators have the power to push managers towards either path. The ultimate job of steering, doing and coping rests with managers who have the expertise and standing to deliver the right results at the right price.

“Activists espousing a human right to free water do not like these ideas but their position is weak. A “right” to water is worthless without a strong rule of law”

PAYING THE PRICE OF SUSTAINABILITY

It’s not hard to deliver value for money or charge full cost prices; it’s hard to show customers that the days of cheap abundant water are over and that they need to pay for reliability. Increased education will take effort, patience and an unusual degree of transparency.

That education and the customer engagement that follows will deliver decades of economically-, environmentally-, socially-, and politically-successful water service. WWI

Table 1. As can be seen from the data below, costs for water services vary greatly globally. A quick cross reference between service costs in Denmark and Saudi Arabia show a considerable difference

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<th>Region/Continent</th>
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<th>Wastewater ($/m³)</th>
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*Data source: GWI*

Author’s note: David Zetland (dzetland@gmail.com) is a senior water economist in the Department of Environmental Economics and Natural Resources at Wagening University in the Netherlands. He blogs on water, economics and politics at www.aguanomics.com and is the author of The End of Abundance: economic solutions to water scarcity (2011).

REFERENCES


