Oil and Water: A Guest Post

By David Zetland

A Guest Post

Over the past few months, newspapers, blogs, and television screens have been filled with stories of two precious liquids — oil and water. Although the stories seem similar (demand outstripping supply), they report fundamentally different means and success in coping with “shortage.”

Ironically, we are coping better with scarce oil — nearly 60 percent of which we buy from abroad — than scarce water, which falls from the sky.

Why such a contrast? Because oil is bought, sold, and marketed as a commodity. Water, in contrast, is treated as a “human right” that should not be allocated by price. Because scarcer oil costs more, quantity demanded falls to equal supply. Because scarcer water does not cost more, demand exceeds supply and rationing, misallocation, and hardship result.

Put differently, we would not have water shortages if water prices rose and fell with supply and demand. But prices do not change that way.

Most water users in the U.S. pay a price for water that reflects the cost of delivery. The price of water is actually zero.
Although the fixed costs of dams, pipes, etc. and the variable costs of pumping (20 percent of California’s energy is used for “moving water”) are large in aggregate, those costs are spread across many units of water. In southern California, for example, urban water customers pay about $3 for 750 gallons of tap water, most of which is imported from hundreds of miles away.

When demand exceeds supply, water managers do not raise prices; instead, they ask customers to use less. When “voluntary” conservation fails (often), managers send water cops out to ticket those who water their lawns on the wrong day, impose mandatory rationing of 20 percent, stop issuing building permits, etc. Although such methods do have some impact, their blunt nature affects people in odd, often unfair, ways.

Mandatory rationing, for example, is based on household use in prior years, which fails to reward those water misers who used less in the past and fails to recognize that the number of people in a household can change. It is also rather ineffective: Anyone who goes over quota pays an extra $1 per 750 gallons. That’s not much.

Students of bureaucracy and monopoly will note that water managers have little incentive to manage water efficiently. They can “declare” a 20 percent reduction in demand (nice round number) without worrying about the most efficient way to achieve it. They keep their jobs no matter the cost (e.g., business closures) or ineffectiveness of rationing.

Why haven’t water managers turned to higher prices?

First, because they are used to prices that reflect costs; second, because higher prices are politically difficult to impose; third, because their “public service” mandate tends to require that prices be set as low as possible and result in zero profits; and fourth, because many in the water business think that people will not respond to higher prices.

If water managers wanted to implement conservation prices that were, say, 200 percent higher than current prices, they would need political support (most urban water is supplied by public utilities; investor-owned utilities are regulated). Politicians would be able to support higher prices if the poor were protected (e.g., by giving everyone some water for free and charging more for additional water), if “excess” revenue was rebated (per capita rebates would be progressive), and if higher prices ended shortages and rationing.

Can higher prices reduce the quantity of water demanded? Yes — just as higher prices reduced the demand for oil.

When oil (gas) was “cheap,” we didn’t pay attention to how much we used. Instead, we paid attention to how fast our cars went, how long we’d be willing to drive from an affordable home to work, where to shop for cheaper stuff, etc. When prices rose (most notably when crossing the $4-per-gallon barrier), we changed our behaviors: S.U.V. sales plummeted, total driving fell, and people moved closer to work.

If water prices were raised to levels worthy of attention, we’d see the same reactions: people would reduce water consumption in the short run (not watering the sidewalk) and long-run (installing high-efficiency appliances, ripping out lawns, moving from drier places, etc.).

Let me repeat one caveat and add another: Higher prices need not harm the poor. If everyone got x gallons of water at a low price, only those who used more would pay higher prices. Second, these price-reform suggestions are relevant to urban water management, not water users everywhere. As many readers will know, agriculture consumes 70 to 80 percent of the water in the United States, and I have addressed agricultural/urban/environmental consumption elsewhere.

**Bottom Line:** We don’t have a gas shortage because gas is expensive; we will have a water shortage until water is expensive. Want more water? Pay for it.