

INTRODUCTION TO WATER UTILITY REGULATION

Fiscally and environmentally sustainable tariff designs from across the world

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Overview

- ▶ What's sustainable?
- ▶ Some examples of how to do it right
- ▶ Some examples of how to do it wrong
- ▶ The differences between the two
- ▶ My preferred structure
- ▶ Question and answers. . .

What's sustainable?

...roughly in this priority (to the public):

1. Customers get as much safe water as they want
2. Revenues cover operating, replacement and investment costs
3. Environment is neither depleted nor polluted
4. Service to all, without political controversy
5. Utility managers keep their jobs!

Tariffs overview

I'm not the first to speak on this today, but let's clarify. . .

- ▶ Taxes (social access) vs user charges (economic access)
- ▶ User charges can improve accountability ("*customers*")
- ▶ Fixed vs variable costs and charges
- ▶ Block rates (pros and cons)
- ▶ Externalities – pollution and scarcity
- ▶ Social tariffs work when you don't need them and fail otherwise

Doing it right – Singapore

- ▶ Residents and business pay €0.77/m³
- ▶ Heavy residential users and shippers pay more
- ▶ These prices recover costs and reflect scarcity
- ▶ Managed from rain to taps to sewers to NEWater
- ▶ Government provides subsidy to poor

More:

<http://www.pub.gov.sg/general/Pages/WaterTariff.aspx>

Doing it wrong – Las Vegas

Prices: IBRs are “wide” and “shallow”

Cheap: Residents start off facing €0.27/m³

Strategy: More supply, not less demand

Corruption: Builders want cheap prices for more homes

<http://www.aguanomics.com/search/label/Las%20Vegas> –
maybe because lvvwd.com is down!

Doing it right – Amsterdam

Dutch water abundance can be a problem. . .

Water systems are funded/managed in pieces:

Waterboards: Manage drainage and irrigation

National: Manages flood defences and navigation

Cities Charge watershed and wastewater taxes per capita

Conservation Prices (€1.24) are 5x Las Vegas's; consumption is $\frac{1}{5}$

Utilities Charge flat rate prices on use and compete via benchmarking

More: <http://tinyurl.com/p7uvngz> (VEWIN)

Doing it wrong – Los Angeles

- ▶ Residents and business pay different prices (ca. €1.56/m³)
- ▶ Larger lawns and summer use gets MORE cheap blocks
- ▶ Prices do not reflect scarcity or environmental damage
- ▶ Multiple, overlapping, conflicting water managers

CHART A

BIMONTHLY QUANTITY OF WATER IN HCF* FOR THE FIRST TIER
BY LOT SIZE CATEGORY

Zip Code	Temp Zone	Under-7,500 sq.ft.		7,500-10,999 sq.ft.		11,000-17,499 sq. ft.		17,500-43,559 sq. ft.		43,560 sq.ft and Above	
		Season**		Season**		Season**		Season**		Season**	
		Low	High	Low	High	Low	High	Low	High	Low	High
90001-90044	Medium	24	31	29	44	43	68	49	87	65	105
90045	Low	22	27	27	39	41	61	48	77	61	94
90046-90048	Medium	24	31	29	44	43	68	49	87	65	105
90049	Low	22	27	27	39	41	61	48	77	61	94
90056-90065	Medium	24	31	29	44	43	68	49	87	65	105

More: <http://tinyurl.com/new4yft>

Differences between good and bad

- ▶ Sustainable versus ecosystem-depleting
- ▶ Reliable versus interrupted
- ▶ Pro-poor vs pro-rich (if pro anyone...)
- ▶ Absorbs rather than fractures from shocks
- ▶ Common sense versus complex accounting

My “best practice” recommendation

- ▶ Build a system that can reach all residents
- ▶ Build loan repaid by user fees
- ▶ Fixed/variable charges in proportion to fixed/variable costs
- ▶ Scarcity surcharge
- ▶ Counteract “gold plating” and enhance benchmarking via “performance insurance” that frees regulator to focus on outcomes, not inputs (energy use) or outputs (RPI-x, cross-customer average weighted price, etc.)

http://kysq.org/pubs/Performance_Insurance_DZ.pdf

What about the rest of the world?

Let's talk about the utilities you know, have worked for, read about, etc.

Thank you!

Me: David Zetland (dzetland@gmail.com)

Blog: aguanomics.com

More: kysq.org for books, talks, papers, calendar, etc.

2015 Water Smarts Calendar



...because every day is a water day.