



Q&A: Designing Water Rate Structures for Conservation and Revenue Stability Webinar

March 19, 2014

1. Should declining rates be used for commercial customers?

Declining rates are typically used by utilities that charge all types of customers (residential, commercial, industrial, institutional) the same rate. The AWWA M1 Manual states that “the declining block rate structure offers a mechanism to recover cost differences based on class water use and demand characteristics in a fair and equitable manner” under the assumption that larger customers have lower demand factors (which may or may not be true). There is a transition in the industry away from this rate structure. The average unit price (water bill/consumption) for water at 200,000 gallons per month was lower than the utility’s average unit price for water at 10,000 gallons for 374 of the 505 (74%) Texas municipal utilities. A portion of these results is likely attributable to the presence of a base charge, but many others, are likely charging a lower unit price for non-residential customers whether through a declining rate structure for all or separate rate structures for different customer classes.

2. Why would anyone use a declining rate structure?

See above.

3. Should we as rate professionals move away from land use terms such as residential, commercial, industrial, etc. and focus on meter size pricing?

This is a very good point, especially when considering the water use discrepancy between “mcmansions” and a small insurance office. We do see many in the industry that charge a fixed charge against meter size, rather than ‘customer type.’

4. Is Marginal Price really an effective tool over time? For basic utilities, the public may not receive the pricing signal, or at least they quickly adjust and continue their previous usage patterns. We've seen a tremendous increase in gasoline prices over the past three decades, and every spike is followed by a brief decline in use, however each time miles driven increases. Won't the same thing happen with domestic water use?

Another great point. The ‘marginal price’ as economists define it is the change in the total costs that arises when the quantity increases by a unit. This nuance is likely lost on many customers, especially when they are utilizing service like automatic bill pay. Our “marginal price” analysis was the change in the total costs that arises when the “service” increases by a unit (Under the rough assumption that 5,000 gallons per month is indoor/fundamental service and 10,000 gallons per month starts to speak to outdoor/discretionary service). These price signals are more readily detected by customers. But certainly, we do see a ‘numbing’ effect on water use behavior to a certain point. At some point, however, increasing prices can drive structural changes in water use (e.g. purchasing a new HE washing machine or replacing turf with Xeriscape).

- 5. One of the impacts of rural utilities is the lack of taxing authority that many municipalities have.**

Preferably, this does not have an impact on the finances of an enterprise fund.

- 6. The first polling question is confusing. Total water use is increasing, however GPCD is decreasing.**

Yes – there is a difference, isn't there. This speaks to one of our recommendations and considerations to really understand, update, and integrate demand projections. If water use across-the-board is increasing, then this should not pose as serious revenue problems, if the trends are detected and incorporated into budgets.

- 7. How does a utility that purchases water under take-or-pay contracts set up a rate structure that sends conservation signal without undermining stability?**

Very good point. The scenario used in the report assumed a volumetric contract. Under a take-or-pay, the utility does not see any immediate financial benefit if their community's consumption falls below the minimum threshold. However, with many utilities seeing an increase in overall consumption, it would be interesting to see how many utilities are actually at that point.

- 8. Does the dashboard include water providers in other states besides Texas?**

The EFC has developed dashboards for several other states, you can find them here:

<http://www.efc.sog.unc.edu/project/utility-financial-sustainability-and-rates-dashboards>.

At this point in time, our benchmarking tools do not allow for interstate comparisons. We are updating our technology for allow for that in the future.

- 9. Since there are many water districts in Texas, did you compare pricing of the various MUD's?**

Unfortunately we did not. We would love to look at that data, but the analysis we did was using the Texas Municipal League data which only focuses on municipal systems. We have worked with a few MUDS and seen lots of similarities with their approaches, but we don't have large data sets.

- 10. Where can I get a copy of the presentation and the report?**

You can access the report, the webinar recording, and a PDF of the slides through the EFC website at <http://www.efc.sog.unc.edu/event/webinar-designing-water-rate-structures-conservation-revenue-stability>

- 11. What if I have more questions?**

Please send your questions to Mary Tiger at mwtiger@sog.unc.edu.