

Cost-to-serve Rates - Part I



Every water system should want “cost-to-serve” utility rates. Really, you do. Cost-to-serve rates are adequate and fairly structured. Who can argue with that? Well, some will. But the math of cost-to-serve rates heads off most of those arguments.

This is the essence of cost-to-serve rates: If a customer causes the utility to incur a cost, that customer should reimburse the utility for that cost. Simple concept. Not so simple to execute.

The calculations to arrive at cost-to-serve rates has two phases: cost “classification” and cost “allocation.” This article will cover classification. Allocation will come along next time.

A classification primer

Costs for a targeted future time period, adjusted so they will be “typical,” need to be classified by their nature: “fixed,” “variable,” “capacity to serve” or some combination of the three. There may be other, usually minor classifications to do, too. And, capacity to serve can be broken down further, but let’s not get into the weeds.

After classifying costs, add up the categories to arrive at total fixed costs, total variable costs and so on.

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That is the heart of classification. In practice, classification is more complicated. But, covering that takes a workshop, not an article for do-it-yourselfers in simple rate setting situations.

With that primer done, let’s get started.

Classification steps

Preferably in a spreadsheet, list every cost of the utility by name and amount.

You will probably start by using your budget and that is Okay. But, be sure to adjust for expected inflation. And, add to the list other costs for things that are needed, but that were not budgeted. Here are a couple of examples:

- ◆ If the utility has no reserves or reserves are too low, figure an annual payment to build reserves to their proper levels.
- ◆ If the utility needs more repair and replacement than the current rates

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Working Together: To Get Great Rates

Setting proper utility rates is like a team sport. The mayor or board chairman could twist some arms and push through a set of rates. But, would they be adequate? Or, fairly structured? Not likely. Oh, they would try. But, successful rate setting takes a team.

Attend the rate setting preconference session at the KRWA 2018 Conference to learn about how to set rates fairly. Attend if you are involved in:

- ◆ Adopting new rates
- ◆ Data gathering or doing rate calculations for rate adopters
- ◆ Designing, funding, planning or assisting on something that affects rates

You should come away with an understanding of how all the positions need to be played so the team can reach the goal: great rates.

When you register for the conference, mark the preconference session of your choice so that adequate seating and materials will be available.

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plant. They needed more capacity to serve rapid growth. The resulting debt payments will be the same every year for 20 years. Accounting tells us that debt is a fixed cost, recoverable from every customer equally. But, the existing customers did not cause that cost to occur. The “newbies” did it (or will). They should pay. If this debt service amounts to a total fixed cost increase of 50 percent, using the accounting notion of a fixed cost, all minimum charges should go up by 50 percent. Not fair to the existing customers!

Ideally, this cost would be recovered through system development fees (on newbies). Thus, the upsizing would have no effect on the already-existing customers’ rates. System development fees and capacity surcharges will be

will fund, figure out what is really needed and include the annual share of that cost in the table.

You get the idea. Appropriate rates should be designed to recover all the costs that will be needed in the near future by a sustainable utility, not just those costs that were put into a budget.

Now that all costs are in the spreadsheet, you must classify them by their nature. This is where most folks go wrong. It is one of the main reasons

I am gainfully employed as a rate analyst.

Accounting, and logical thinking, lead us to believe that “fixed” costs do not change (much). That works for accounting and logic. It does not always work for *rate structuring purposes*. Sometimes, that logic leads to a rate setting disaster. Consider this example:

The Town of Mount Ratemore spent millions upsizing its water treatment



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Sometimes lenders require borrowers to recover debt service in the minimum charge.

discussed in a future article. An interesting and frustrating side note: Sometimes lenders require borrowers to recover debt service in the minimum charge.

Back to classification, the table will result in a column of fixed costs, another column of variable costs and perhaps, a third column of capacity-related costs. There could be other cost columns, too. (A warning: If you are not a rate analyst but you venture into the rate analysis realm, you are engaging in risky behavior. Do that and sure as a world, you will be called on the carpet by a sharp ratepayer, or their attorney, to explain your reasoning, methods, math and how the systems bills will be affected by the rates you recommended. That may not end well.

As a funny guy likes to say, “I’m just sayin’.”)

The final step to basic cost classification is simple math. You add up the fixed cost column to get the total fixed costs. Do the same for other cost classifications and you have completed the classification phase. These totals will be used in the allocation phase.

If you got the idea that rate analysts do the hard math of comprehensive rate analysis and you should stick to the simpler calculations, applicable in simpler situations, mission accomplished. Actually, it’s more nuanced than that. To fulfill the various needs, the Association and GettingGreatRates.com teamed up to initiate the Kansas RATES Program <http://krwa.net/TECHNICAL-ASSISTANCE/Rate-Reviews>. It works like this:

- ◆ Utility staff, maybe you, do calculations if your conditions are basic – no help needed from anyone
- ◆ If conditions are a bit more complex than that, Kansas Rural Water Association can help you

- ◆ If conditions call for a comprehensive rate analysis, I do those, and
- ◆ The Association, or I, or sometimes both of us together, train folks in rate setting

Closing

Cost classification puts costs into categories. In a cost-to-serve rate structure, fixed costs should be converted to a minimum charge, variable costs converted to a unit charge and capacity costs converted to some combination of system development fees and surcharges to the minimum charge. That phase – allocation – will be covered in the next article.

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