Working Solutions

Long-Term Capital Financing Needs

by Ed Cebron

Utility systems are planned, designed and constructed to last for extended periods of time, often as long as 50 to 75 years. And while there are Roman aqueducts still in use after 2,000 or so years, such expectations may be a bit optimistic for 20th century transmission and distribution mains. The absence of 2,000 year useful lives for modern systems begs the question: How prepared is your utility for the cost burden of system renewal?

In this article I outline one way to estimate your long-term capital replacement liability as well as address financial approaches to meeting that long-term need, including establishing a funding level, administering the program, and selling the program.

Plan NOW for Future Needs

Most utilities would not accept a philosophy, which assumes that service must be provided for 20 years, or perhaps 50 years, and beyond that, the utility might just as well close up shop and cease operation. However, by failing to address long-term renewal needs, this is exactly the implication of many utility capital strategies. The real world result is an enormous unfunded liability, which ultimately will require unacceptably high rate increases — increases expressed in multiples, rather than percentages.

Don't be caught off guard! Take this simple test to get a rough idea of where your utility might stand:

1. From a recent financial statement balance sheet, identify the total plant-in-service for your utility. This should be the "gross" plant, the original cost before depreciation is deducted. Next, identify the total accumulated depreciation from the same document. Finally, in the income statement portion of the financial statement, find the annual depreciation expense.

2. Divide the annual depreciation into the cumulative depreciation. The resulting number is an estimate of average system age in years.

3. Using the System Aging Table, to the right, find the cost multiplier that is closest to the average age, or interpolate between entries. (These are derived from the ENR Construction Cost Index.)

System Aging Table

System Age	Cost Multiplier
5	1.2
10	1.4
20	1.8
30	3.3

4. Multiply the annual depreciation by the cost multiplier. This represents a conservatively low estimate of the annual investment needed to maintain long-term system viability. If debt funding were to be used, double this number to allow for added interest cost.

5. To determine your ability to meet long-term needs, compare your current annual capital funding from rates to the annual requirement.

6. If you have been funding well below this annual level, or have not been regularly replacing assets or reserving funds, then actual future costs will be even higher due to past unfunded liabilities.

Rate Equity Issues

Another interesting aspect of this topic is the issue of rate equity. A common concern is that it is unfair to charge current customers for both the existing system (through rate funding of projects and debt service) along with funding toward replacing those same assets. A key point here is that current customers often pay for only a fraction of the cost of the system. To get a peek at this relationship, look again at the utility balance sheet, this time under utility equity or net assets.

Before compliance with GASB 34, the entry titled "contributions-in-aid-of-construction", or something similar, represents outside donations, either from grants or developers. Hopefully, you still keep subsidiary ledgers for this information. Divide this number into the plant-in-service (see step #1) to determine what percentage of the cost of your system is excluded from current rates. In many cases this represents 70 to 80% of total assets, meaning that ratepayers have provided only 20 to 30% of the assets, which you are now responsible for replacing. In the long-run, this number will become 100% since the utility will be responsible for the full cost of system replacement.

Establishing a Funding Level

From an economic and financial perspective, many rate payers of municipal utilities do not pay their full cost of service. This is because, from a profit/loss perspective, most utilities operate at a loss. Depreciation expense is a non-cash operating expense representing depletion (or consumption) of system fixed assets. Even if those assets were donated, such as by customers or developers, their depreciation still is a cost borne to serve existing customers. This is particularly true given the utility's obligation to sustain the system. At the same time, the utility may be generating funds to reduce utility liabilities, such as principal repayment, which provides an offsetting future benefit. Funding levels, which truly reflect these costs of service, can range from depreciation expense less principal repayment up to the equivalent replacement value of the assets consumed. Once such a target is identified, two additional considerations are important: a phased approach to reaching it; and a strategy to integrate cash funding with other funding sources, such as debt.

Administering the Program

A consequence of the long-term perspective is that current funding levels often differ from immediate funding needs. A rational approach to this divergence typically includes: a system for funding short-term deficiencies through other resources, such as connection charges or new debt; and a system for reserving short-term surpluses for longer-term needs, such as through a construction or R&R fund. The key is to dedicate and restrict the funds to capital purposes in order to meet long-term objectives.

Selling the Program

Few Boards or Councils relish rate increases, particularly for "discretionary" purposes. However, most have a strong sense of mission, or stewardship, which extends to concern for the condition in which they leave their utilities for future policy-makers. The concept of sustainable utility systems and commitment to long-term needs, coupled with a series of modest rate increases, can be embraced.

Elected officials can be reassured that program intent will be met by using restricted funds, ordinances, and even bond ordinances to implement it. Finally, this program can result in lower long-term rates and a financially healthy utility with a higher bond rating. Ultimately, the question of affordability becomes whether you can afford not to address long-term needs.

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