



South Carolina  
Office of Regulatory Staff

# THE WATER WELLSPRING

*A Flowing Source of Information for Water and Wastewater Utilities*

*Fall 2013*

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## Proactive vs. Reactive- Which Utility Are You?

Maintaining miles of intricate water and sewer pipes requires a lot of manpower and money to keep the lines free-flowing. With the majority of pipes underground, there is the opportunity for those pipes to break, leak, or become root-bound. To prevent a major disruption in service, pipes should be routinely inspected for potential blockages or leaks. Addressing the minor issues now will lessen, or possibly prevent, a major – and expensive - task of replacing lines and losing the revenue from your customers.

Often times it will be the customer who contacts the utility to advise of a possible problem, such as water running down the road or a foul-smelling odor from the treatment plant. Listen to your customers and investigate their concerns. They are the eyes for your utility's assets when you are not there. While the customers do pay you for the service, they can assist the utility in saving money and increasing revenues by warning of potential service issues.

Be a proactive utility rather than a reactive utility, and inspect and maintain the utility's assets. Usually a reactive response is too late and much damage has been done, thus costing the utility a lot of money. It's better to pass those savings on to the utility and the customer.

## Regional Water/Wastewater Rates

Did you know that in 2010, of four regions - Northeast, South, Midwest, and West - the Midwest had the lowest average rates for water (\$23.30) and wastewater (\$27.21)? In 2012, the Midwest still maintained the distinction of the lowest average rates at \$25.68, but the West region had the lowest average wastewater rates of \$27.90. The average combined rate increases for water and wastewater in all four regions listed above was 9.3% and 11.025%, respectively.

Cite: Craley, R., & Noyes, C. (2013). Water and wastewater rates on the rise. *Journal*, 105(8), 41-42.



# Accounting for Rate Case Expenses

## What are rate case expenses?

Rate case expenses are expenses incurred to present a rate case proceeding before regulatory commissions. These expenses include legal fees, administrative costs, printing, consultants, travel, personnel costs, etc.

## Describe the NARUC accounts used to book rate case expenses.

- For Class A and B Water and Wastewater Utilities, Account 666 is used for “Regulatory Commission Expenses – Amortization of Rate Case Expenses.” This account shall include amortization of Account 186.1 – Deferred Rate Case Expense. Costs associated with the rate cases shall first be charged to account 186.1 and then amortized as prescribed by the Commission to this account.
- For Class C Water and Wastewater Utilities, Account 665 is used for “Regulatory Commission Expenses” to include booking of rate case expenses.

## Why should rate case expenses be amortized?

- Since rate cases occur sporadically, the expenses are usually recovered over several years. A good measure of an amortization period is the average time between rate cases.
- In South Carolina, a utility is allowed to file another rate case 12 months from the previous application filing date.

## Should a utility be allowed to recover unamortized Rate Case expenses in a current case?

- A company is entitled to recover all of its approved rate case expenses. If the company files another rate case before the amortization period has expired, the company is entitled to recover any unamortized expenses.

Source: Public Utility Accounting: Theory and Application, James E. Suelflow; NARUC Uniform System of Accounts.



## From the EPA...

# Energy Audits for a Water/Wastewater Utility?

The U. S. Environmental Protection Agency (EPA) estimates that energy accounts for about one third of the operating budget for drinking water and wastewater systems. Conducting an energy audit is a first step for utilities to understand where the energy is being used in the facility.

What is an energy audit? An energy audit is an inspection and analysis of the energy usage of your facility to identify energy conservation measures that can reduce the total energy consumed without affecting the final product. Audits can range from a simple walk-through to a more comprehensive evaluation involving review of plans and specifications, the efficiency of equipment (e.g. pumps, blowers, and motors), and review of capital improvement and long-term plans. Through an audit, wasteful situations like excessive leakage from a pump (e.g. worn impeller) or operating conditions that are stressing motors unnecessarily (e.g. valve throttling) will be identified. Also, other energy-wasting practices -- as simple as lighting, heating, and air conditioning usage -- are noted.

The EPA states that prior to conducting an energy audit, there is some homework involved. Knowing how your facility is performing in terms of energy efficiency, relative to other similar facilities, is valuable information. The EPA Energy Star Portfolio Manager web site has an energy benchmarking tool that is easy to use. Inputs to this on-line tool include the facility's annual energy use, treatment processes, and average influent and effluent water quality. The tool generates an output 'score' between 0 and 100, where 0 represents the least energy-efficient facility and 100 represents the most energy-efficient facility. The majority of plants score between 40 and 60. Typically, plants with scores below 65 have easily identifiable energy-saving opportunities. This confidential tool is also used to track energy usage, flow, and greenhouse gas production. (Energy Star Portfolio Manager: [http://www.energystar.gov/index.cfm?c=evaluate\\_performance.bus\\_portfoliomanager](http://www.energystar.gov/index.cfm?c=evaluate_performance.bus_portfoliomanager))

The best time to conduct an energy audit is prior to a facility upgrade, since some energy-saving measures may be economically unfeasible on the basis of energy savings alone. An upgrade presents a unique opportunity to invest in energy-efficient equipment. Otherwise, it is a good practice to replace a piece of equipment or treatment process when it has failed or is reaching the end of its useful life with an energy-efficient replacement. Due to system changes, new technology innovations, and varying energy costs, it is recommended that energy audits be repeated every three to five years or before a major project.

The EPA strongly suggests hiring a qualified energy auditor, and this task requires some research. When selecting an auditor, seek a firm with a history of successful audits in the industry. Consider asking other neighboring utilities about their experience or references to contact. It is important that the energy auditor be an expert in energy management and drinking water and/or wastewater facility operations and design. The auditor should be able to look at lighting, air conditioning (HVAC), pumps and motors, and they should also have experience working in both the liquid and solids phases of the treatment process. Along with a good background in drinking water and wastewater operations, there are two certifications an auditor may have. The Association of Energy Engineers (AEE) administers certification programs for Certified Energy Managers (CEM) and Certified Energy Auditors (CEA). These are helpful and comprehensive certifications, but are not specific to drinking water and wastewater treatment and

pumping facilities. The utility may opt to solicit for a Request for Qualifications (RFQ). A RFQ allows for communication and planning with a selected contractor to identify plant needs and understand plant processes; a comprehensive list of upgrades that meets the current and future needs of the plant, while staying within budget, is developed.

A thorough energy audit gives plant operators the data needed to make informed decisions as to whether a measure should or should not be implemented. Follow-through to project implementation can reduce energy costs and make funds available for other needed facility improvements. The benefits of doing energy-efficient projects sooner rather than later are numerous. A decision to install more efficient energy equipment and implement related energy-saving measures is a decision to save money and environmental resources.

Citation: Guagno, J., Lawrence, C., Senf, M., Devine, T., & Gold, L. (n.d.). *Energy audits: Benifitting [sic] your drinking water and wastewater treatment facility*. Retrieved from [http://www.epa.gov/reg3wapd/pdf/pdf\\_infrastructure/Article-Energy-Audits.pdf](http://www.epa.gov/reg3wapd/pdf/pdf_infrastructure/Article-Energy-Audits.pdf)

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