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*Priority Cost of Service, Rate & Regulatory Support*

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## WHY ARE UTILITY COST OF SERVICE STUDIES IMPORTANT?

By Dr. Martin J. Blake, Principal

Although there are a number of considerations in determining the level and structure of the rates that a utility should charge its customers, there are two basic principles of fairness used in designing utility rates that stand out above all of the others. *The first principle of fairness is that customers should pay the costs that they impose on the system.* It is generally recognized by both experts and non-experts alike that utility rates should reflect the cost of providing service. A cost of service study helps to determine what it costs to provide service to a class of customers so that this first principle can be applied. *The second principle of fairness is that all customers should pay their fair share of the utility's margins.* A cost of service study is prepared using standard methodologies for allocating costs that have been approved by regulatory commissions and the courts and that determine as accurately as possible what it costs to serve a class of customers. While it is sometimes necessary to consider the *value of service* and the *competitiveness of service*, the starting point in assessing the reasonableness of the rates to be charged by a utility is to evaluate the *cost of service*.

Designing rates that reflect the cost of providing service helps ensure that customers pay their fair share of the utility's costs and margins. In other words, implementing cost-based rates helps ensure that one class of customers does not subsidize another class of customers. From the perspective of inter-class subsidies, cost-based rates are more equitable.

Aside from *equity* considerations, it is important for a utility's rates to send the right price signals to customers so that they can make informed decisions regarding their energy usage. Customer usage patterns have a direct impact on a utility's costs, which in turn have a direct impact on the utility's rates. Therefore, with cost-based rates, customers are provided a proper price signal that reflects both the utility's costs and the results of their own purchase decisions. With cost-based rates, customers can make informed decisions based on the actual cost structure of the utility. When rates reflect the cost of providing service, the economics of a customer's decisions to purchase more or less of a utility service are aligned with the utility's economics, thus creating greater economic and engineering efficiencies for both the utility and its customers.

Another important reason for adopting a cost of service standard when designing rates is that cost-based rates are supportable and have more credibility before regulatory, legal or other authorities having jurisdiction over utility rates. With rates supported by a well-reasoned cost of service study, it is difficult for any party to successfully advance arguments that the utility's rates

improperly subsidize certain groups of customers. Regulatory agencies and courts tend to view rates that are not supported by a cost of service study as "arbitrary and capricious."

On a more pragmatic level, a cost of service study is an important analytical tool for a utility. For example, a cost of service study can tell the management team whether the revenue collected from a particular rate class is at least covering the fully-allocated cost of providing service to that rate class. Utility management and regulatory agencies will generally want some assurance that all classes of customers are at least covering the cost of providing service. A cost of service study is an excellent analytical tool for tracking whether each customer class is making at least some contribution to utility margins or profitability.

Additionally, individual rate components that accurately reflect the cost of providing service can help to reduce the volatility of utility margins as well as the volatility of customer energy bills. For example, a rate design that shifts a significant portion of a utility's fixed costs and margins from the fixed customer charge to the variable per-kWh energy charge results in customers with high levels of kWh usage paying more than their fair share of the utility's costs and margins and customers with lower consumption paying less than their fair share. It also results in high margins for the utility when weather is extreme and the utility is selling large amounts of kWh. High volumes of energy sales also mean that customers are paying more fixed cost and margin than the utility actually needs, and this is reflected in higher customer bills. Conversely, a rate design that shifts a significant portion of a utility's fixed costs and margins from the customer charge to the energy charge results in low margins when weather is mild and energy sales volumes are low. Low sales volumes also mean that customers are paying less fixed cost and margin than the utility actually needs, and this is reflected in lower customer bills. Here the utility is actually making "weather wagers" which create the negative effect of increased volatility in both utility margins and customer bills. This can be avoided by adopting a rate design with components that more accurately reflect costs, placing the costs that do not vary with consumption into a fixed charge and costs that do vary with consumption into a variable charge.

Finally, a cost of service study is an important analytical tool for identifying specific cost components of providing service to customers. The ability to identify specific components of the costs incurred by the utility for various functional services allows for the design of innovative cost-based rates – e.g. Time-Of-Use rates, Real-Time Pricing rates, seasonal rates, high-load factor rates, weather-normalized rates, and other schedules. The cost of service study supports the development of fixed carrying charges for new types of services, the development of utility line extension policies and the benchmarking of one utility's costs against another.

For these reasons, a cost of service study is one of the most effective analytic tools that a utility can rely on for designing rates that equitably assign cost responsibility to each customer rate class, to the mutual benefit of both the utility and its customers.

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