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Priority Cost of Service, Rate & Regulatory Support

THE PROBLEM WITH RATE DESIGN BY OBJECTIVE

By: Larry Feltner and Martin Blake

There sure are some strange ideas about electric utility rates that are making the rounds these days. One theory, often referred to as rate design by objective, is that the cost of serving a customer doesn't matter in designing rates as long as the rate induces the desired customer behavior. This theory is usually put forward by those who want rates that will help them to achieve a given objective, but for which there is no cost support. The problem with this behavioral approach to rate development is who is to say that your objective is better and more worthy than my objective. The reason that rates are based on the cost of serving customers and reflect cost causation is that utilities are monopolies and customers have no viable options for obtaining the power they need. Since customers have no options for purchasing their power, it is critical that rates reflect the cost of providing service, and to the extent practical, charge customers according to the cost they cause the utility to incur. Customers should not be put in a position where they have to pay a rate to support a particular utility or public agenda and that does not reflect the cost of service, especially one with which the customer may not agree. Likewise, no customer should be the beneficiary of paying a rate below the cost of providing service in order to achieve a particular agenda. Customers who are served by a monopoly should reasonably expect that rates will be determined based on what it costs to provide service, and not arbitrarily determined based on what will elicit a particular behavior. Allowing Rate designs to prioritize a particular agenda in place of the cost causative approach to rate development is poor public policy and does a disservice to customers.

There is considerable regulatory and legal support for this reliance on cost causation in developing rates. In *Colorado-Ute Electric Association, Inc. v. Public Utilities Commission of the State of Colorado*, the Colorado Supreme Court found that "one of the fundamental principles of electric power rate design is that rates charged should accurately reflect the utility's actual cost of providing service, including both capital costs and operating expenses." In Administrative Case No. 203, the Federal Energy Regulatory Commission stated that "(r)ates charged by any electric utility for providing electric service to each class of electric consumers shall be designed, to the maximum extent practicable, to reflect the costs of providing electric service to such class." In that case FERC went on to state that "(o)ne of the least disputed propositions advanced during the cost of service hearings was that the conservation, efficiency, and equity purposes of PURPA, as well as the additional objectives of the Commission—

adequacy and stability of revenue for the utilities, minimization of economic dislocations from rate changes, acceptance and understanding of rate structures by consumers—are best served by rates that track costs." Regarding the equity purpose of PURPA, FERC stated that "(t)his purpose envisions the promotion of equitable rates for consumers of electricity. The Commission believes that rates based on costs will achieve this purpose, and that payment for the cost consequences of consumption decisions avoids wasteful subsidies among consumers."

In a free market situation, companies can price their product any way they choose and can promote any agenda they see fit because they assume the market risk for their decisions. If customers find alternatives they like better, or if customers do not support the agenda of the company, they can change providers and the company suffers for its decision. However, if a utility wants to promote a certain agenda, the utility's position as monopoly provider makes it impossible for customers who do not support that particular agenda to take their business elsewhere. Market risk is an important factor the free market uses to regulate the behavior of companies. Absent market risk, as is the case for monopoly providers of electric utility service, rates should be determined fairly and equitably and should be based on cost causation.

All rates send price signals and provide incentives for customers, and a utility may want to use rates to provide incentives for customers to take certain actions that would decrease the cost of serving them. However, any rate the utility offers should be based on the cost of providing service to customers, not arbitrarily determined just for the purpose of inducing a behavior from the utility's customers. Cost based rates can send very strong, and more importantly, accurate and equitable price signals to customers. Rates that are designed to elicit a certain behavior, without considering the cost, may produce the desired behavior, but are also likely to result in subsidies paid by some customers and received by other customers. As FERC noted in Administrative Case No. 203, payment for the cost consequences of consumption decisions by basing utility rates on the cost of providing service to customers avoids wasteful subsidies among consumers. When rates are designed based on the cost of providing service the utilities and customer's economics are aligned. When they are not based on cost, the interest of the utility and the interest of the customer will not be aligned.

Rates arbitrarily designed to encourage a particular behavior also result in inefficient utilization of resources and can cause customers to make uneconomic decisions that raise their cost. When goods and services are priced according to the cost of providing that good or service, those resources are used in relation to their relative cost. Lower cost resources are used first and higher cost resources are used last. Customers benefit because they use resources in a manner that is the lowest cost to achieve the benefit the individual customer desires from the use of the resource. When costs are ignored in order to achieve some desired behavior, resources are used in a manner that may be inefficient and may increase the cost for consumers. Public policy should be concerned with fairness and equity for customers, but should also be concerned with using resources that are the lowest cost alternatives for customers.

The tool used to determine whether rates are fair, equitable and based on cost causation is a cost of service study. Absent a cost of service study, there is no way to determine whether customers are being charged fairly or whether customers are receiving or paying a subsidy. A cost of service study is based on cost causation and provides the information necessary to develop cost based utility rates. Such a study begins by organizing the utilities costs according to what is causing the utility to incur those costs. This process is called functionalization and classification. The study first groups costs according to what utility function it supports. For example, does the cost relate to primary conductor, secondary conductor, meters, customer service, etc. Classification further organizes cost into what is causing the utility to incur the costs of each of these functions. It groups costs by whether they are related to the amount of kWhs the utility sells, the capacity of the equipment the utility must install to meet the customers load requirements, or the number of customers it has to serve. The cost drivers used in classifying each function are based on the principle that if a customer causes a cost to be incurred by the utility, the customer should pay that cost. Each of these classifications correspond to a specific rate component and in order for a rate to be fair and equitable, the various rate components must be determined from the functionalized and classified costs. Cost based rates continue to reflect in the rate design process the functional assignment, classification and allocation from the cost of service study.

A cost that varies with the amount of kWhs a utility sells to customers should be billed based on the amount of kWhs that each customer uses. This aligns the utilities recovery of cost with what the customer pays and ensures that the customer only pays the cost of what the customer actually uses. If energy related costs were recovered, for example, through the fixed monthly customer charge, customers who use a lot of energy would pay less than the costs that they cause the utility to incur. Customers who use a small amount of energy would pay more than the costs that they cause the utility to incur. The same can be said for the other cost components. Demand related costs driven by the generation, transmission and distribution capacity necessary to serve the customer, should be recovered from customers through a demand charge, while customer related costs should be recovered through a customer charge. Recovering functionally assigned and classified costs through a rate component billed using the same cost driver used to make the classification insures that each customer on the system pays his, or her, fair share of the costs. Rates designed to induce certain behaviors, such as time-of-use rates, can be designed based on the underlying cost differences which still keep the utilities interest and the customer's interest in alignment. These rates will also be fair and equitable because they will charge customers an appropriate amount based on the costs they cause the utility to incur. It is not necessary to jettison cost causation to develop rates that provide price signals and incentives to take desired actions, and any rate that does not reflect cost causation is likely to result in subsidies among customers and should be avoided.

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