Cost Finding for an Electric Utility[1]

A Case of Precise Cost Finding in a Most Difficult Industry

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A system for determining accurate costs is one of the outstanding tools of management. As the underlying principles of good cost accounting are pretty much the same irrespective of the product being manufactured, the story of the development of a clear cut case of exceptional cost finding technique, in perhaps the most difficult industry in which such accounting has been used, must have a wide interest.

I. Introduction

THE DATA used in the setting of electric rates have always been somewhat of a mystery, both to the user of light and power and to the public service commissions charged with the regulation of electric service companies. The formulae used for computing the monthly charge for electric service can readily be understood, the results obtained by the use of the formulae can be easily checked, but the figures used for creating the formulae have seldom, if ever, been furnished to the consumer or to the utility commissions.

The public service commissions who guarantee an adequate return on capital investment in the utilities which they regulate should insist that the public is entitled to know the detail as to charges rendered to it for service. When power and light rates are based so as to yield a fixed return upon either actual capital investment or upon the replacement value of the plant, both the value of the investment and the operating charges pertaining thereto and applicable to each class of service rendered, should be given. This procedure would help to clear away the cloud of suspicion that now exists regarding the fairness of rates.

Fixed return, however, means far more than a fixed return upon investment or replacement value. The basis of fixed return is arrived at after operating and maintenance expenses have been deducted. Therein lies the joker that not only protects the utility against inefficient management but also should make certain a fixed profit on all classes of service. Under the present type of cost accounting a power and light company can render certain classes of service at a loss and have this loss made up by an excessive charge to other classes.

A buyer is entitled to know the basis of the payments exacted from him. Therefore, a public service commission acting as the neutral body, between the utility and the public, should, in all justice to the public, insist not only that the invested capital be allocated to class of service, but also that the same be done with the operating and maintenance charges. Until this is done the public, especially the small consumers who cannot employ an engineer to analyze their bills, will continue to look with suspicion not only upon the utility but also upon the commission.

With the limited information available on the actual cost of power and light service, a rate case presents a difficult problem to a utility commission. Without the proper information on actual costs, rate problems cannot be fairly decided by any commission, regardless of its desire to be fair to both sides involved in a rate controversy. Without actual service costs available, precedent and certain established rules must be followed in arriving at a decision.

Under the present methods used for utility cost keeping, the utility has a distinct advantage in a rate hearing. It knows that while the figures it presents on service costs cannot be proven by its cost records, it is safe in presenting them, because the figures cannot be disputed by either the customer or the commission, due to the limited knowledge possessed as to actual service costs.

It should not be inferred from this that utilities consistently use operating figures to suit the convenience of each rate hearing. Power and light companies, efficient though they may be from a technical and operating standpoint, as a rule cannot give the actual cost of serving each of the

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several classes of customers. This situation is due to their persistency in following a system of cost accounting that shows the total cost for all customers and not that of each class of service rendered. Were the utility companies forced to justify each individual rate at one time, instead of the particular rates associated with the individual cases that happen to be brought before a commission, the current type of cost keeping would quickly be discarded.

The correct charge for service rendered should be based upon a classification of accounts that will permit a comparison of revenue to operating and investment charges for each class of service furnished by the utility. Each community should be considered as a separate unit of revenue and expense, even though certain costs are incurred for two or more communities or for the property as a whole. These joint costs can readily be allocated to the individual community and class of customer by a fixed predetermined proration.

When considering the limited amount of actual cost data presented by either side in a rate controversy, one may be well justified in asking the question: "What is it all about?" The question would be a fair one. The customer cannot present figures to prove his claim, and the evidence offered by the utility is as a rule simply a brief prepared for the particular case. The brief is seldom, if ever, supported by a complete statement that will show the revenue and expense for each individual class of customer served.

The utilities are clearly within their rights in using the type of accounting, based upon the classification of accounts prescribed by the various state commissions, which shows expense only by departmental classification. If the commissions would go a step further and direct the utilities to follow the prescribed classifications in a manner to permit the segregation of costs to class of service, the information thus obtained would be of great assistance to any commission seeking to arrive at a just decision on an intricate rate problem.

In justice to the utilities it should be understood that they follow the classification of accounts as required by the various state commissions. Should an individual utility desire to use actual costs of service to assist it in setting fair and equitable rates, it should have a reasonable guarantee that all discrepancies discovered in its existing rates would be adjusted in a manner that would not be embarrassing to the financial status of the utility.

The part played by power rates on rate making, and their effect upon the question of basing rates upon costs of service, need to be considered. In the first place, there is doubt in the minds of those familiar with power rates whether, generally speaking, a proper return is secured from large power users served by central stations. Although utilities of today are protected from competition of similar utilities, there still remains, however, the competition of the private plants of large power users who can generate their own current at a comparatively low cost and consequently often get preferential contracts for power. Such rates are open to the public but are only advantageous to the large users.

It is argued, erroneously I think, by utilities that, although an adequate return from a direct earning standpoint may not be secured from large power customers, that class of business is a great help in keeping the load factor on a straight line, and, at the same time, such business absorbs a considerable portion of the general overhead as well as operating and investment charges.

The rates charged large power users exert a considerable influence on the question of basing rates on cost of service. It is feared by utilities that if actual costs were known, regulating bodies would force up rates on large power users and thus cause the utility to lose a portion of its business.

But let us consider the argument. During the process of building up a uniform load, almost every light and power company entered into certain power contracts that were not profitable to them. The time has gone by when any operating company has anything to gain by retaining an unprofitable customer. It would seem that the most practical thing to do would be to analyze the cost of each class of service rendered and revamp the rates to suit present conditions. The mere fact that there is considerable doubt as to an adequate return being secured from the large power users should act as a spur to the utility to secure correct costs for every service rendered. Any deviation from an adequate return from each class of service rendered should be made only when such deviations serve as a distinct benefit to all classes of customers or to the community as a whole.

If state-wide systems, with their large generating