

have heretofore been satisfied to hold their accounting as a species of auditing, capable of showing what dividends the company can pay after leaving some surplus as the result of any year of operation, and they have failed to erect it into a statistical structure which will afford indications of the relative reasonableness of their different rates. The hesitancy of company management to enter upon full statistical records and study of its business, when not compelled to do so by the influence of keen competition, such as exists in some branches of manufacturing, is perhaps not unnatural, but it is a hesitancy that needs to be overcome for the joint good of the public and the serving companies.

As a basis of determining the reasonableness of rates, the following factors must be taken into account:

(1) The annual cost entailed by the investment which is needed to care for the subscribers' wants, which investment depends not only on the cost of the plant required to connect the subscribers to the exchanges, but also on the amount of traffic which is handled over the subscribers' lines; and (2) the cost per message entailed in caring for the subscribers' traffic.

The property required for each class of service must be maintained day by day, and also must be replaced as it depreciates from any cause below an efficient condition; interest must also be earned upon the investment. These should not be apportioned among the classes of service directly in proportion to the number of subscribers in the classes, but should be apportioned in proportions depending jointly on the numbers of subscribers, the character of the plant required, and the amounts of traffic in the several classes. The annual cost entailed by the investment which is needed to pay for the subscribers' wants, therefore, depends upon two things. One is the mere fact of his taking telephone service, and therefore requiring the company to furnish equipment, whereby it may be ready to serve him—the cost of which equipment is affected by the kind of line he subscribes for, as special line, two-party, private branch exchange, etc. The other is the extent of his traffic, since a large amount of service originated by a subscriber calls for a larger investment in certain portions of the plant, than would be requisite to care for the wants of a subscriber with a similar line but smaller traffic thereover.

The costs over and above the return on the investment are made up of (a) an operating cost; (b) the costs of general expenses (including taxes), superintendence, advertising, current repairs, instrument rentals, messenger expense, conduit, pole and roof rentals, sublicense expenses, and the like; and (c) the depreciation charge.

The investment required per subscriber in the various classes of service is a complex quantity. For instance, each subscriber requires one substation and one drop wire, regardless of the character of service; special line subscribers each require one subscribers' telephone circuit with switchboard connection; party-line subscribers are each chargeable with a part of the cost of one subscriber's line and switchboard connection, etc.

Interest and depreciation (renewals) carry a larger influence in the affairs of a public service company than in average business affairs, particularly because the total income of a public service company is a fraction of the actual money invested instead of being a multiple thereof. It is, therefore, manifest that a detailed knowledge of the cost of producing the property required for sustaining the public service is one of the features of prime importance in the problem of arriving at rational rates. This points to ap-

praisals of the property of the telephone companies, as done in Massachusetts and Wisconsin, since the companies themselves seldom have adequate records of either property units or property costs. The apportionment of investment and annual expenses between classes of service for the purpose of testing the reasonableness of existing rates or fixing new ones, requires the assumption of factors and the utilization of averages, which the old type telephone man may criticize, but such criticism may be captious, rather than just. The whole fabric for instance, of charges for insurance depends upon careful actuarial computations founded on the use of averages, and it works out advantageously for both the insurer and the insured. A careful insurer would have a profound distrust of an insurance company which failed to gather, record, and use all pertinent statistics in connection with its rate making.

One of the difficulties of the situation is to devise a test of the equitableness of rates, which, as a test, will be satisfactorily applicable to all cases. It is being urged in some quarters that cost of specific performed service shall be determining. In other quarters, it is urged that the "value of the service" to the subscribers shall be determining. The latter seems but another way of proposing to make charges according to "what the traffic will bear," when that phrase is used in its objectionable sense of taking as much as the subscribers will give up. This phrase, "what the traffic will bear," however, has a meritorious significance which differs from its popularly accepted meaning of taking all that the customers will pay. According to its meritorious and correct meaning, it signifies that the charges made for service are adjusted as between the company and each of its customers, so that the company finds the dealings profitable with each, when the full situation is considered, and each customer receives services which, as nearly as practicable, meets his requirements and costs a price which makes the service advantageous to him, while no unjust discriminations between customers are allowed.

In passing, I will make a note that the last phrase does not involve equal prices to all customers, but does involve the treatment of all customers so that they obtain from the company relatively, a full return for their money.

It seems to me that the test of the reasonableness or equitableness of the rates maintained by a public service corporation is found in: (1) The effectiveness and simplicity with which the schedule classifies the customers, so that the total required income is collected in a manner which secures the same rate for all customers of a class obtaining approximately like service, though customers belonging in different classes may be subject to quite different rates, because they obtain service with differences of character which essentially affect the cost per unit; and (2) the certainty with which the rates secure from each class of customers the full annual operating cost of the service in that class and such a proportion of the reasonable return on the investment as the customers' traffic can afford. It then becomes a matter of public policy to determine whether a company receiving a public grant shall be privileged to take a larger proportion of profit from one class of customers than from another; the word profit being used to signify the aggregate return on the investment. This is a relatively new question in public policy, and the ultimate limitations of the policy must rest with experience and the future expressed judgment of our most judicial minds. It would be a manifest injury to the nation if the policy became so circumscribed

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