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Importance of Accounting in Gas Rate Cases*

BY ARTHUR W. TEELE

When one stops to consider the importance which attaches to accounting as one of the instrumentalities in the determination of a gas rate case, one is likely first to think of the three main questions which must be answered, viz:

- (1) What in the particular circumstances does it cost to make and distribute gas?
- (2) What is the amount of capital upon which a fair return should be earned by the company?
- (3) What rate of return is the company entitled to receive?

The last question is one in which accounting plays no part; the answer is usually the opinion of either some kind of a regulatory commission or some court of competent jurisdiction.

The first question can be answered by reference to the accounts, but it will of course require a considerable amount of explanatory and supporting testimony to satisfy those who are not intimate with the daily procedure in the operations and in the accounting. Nevertheless, if the company's accounts and records have been properly kept they can be relied upon to show what the cost is to the company.

The second question may be answered by reference to the accounts if it is determined that the capital upon which the return is to be calculated shall be fixed at the amount invested by the company. If it is to be on any other basis it will become largely an engineering problem, in solving which access to the accounts and records of the company will be of valuable assistance. Judge Learned Hand, in his opinion in the Consolidated Gas Company case, said in part in regard to the admissibility of the books of account: "Most of the evidence and testimony in the case at bar necessarily depended upon the records of the plaintiff contained in books of account of all descriptions supported by vouchers, books of original and secondary entry."

The acceptance of the company's accounting records as evidence in the rate cases of the Consolidated Gas Company of New

*A paper read at the annual meeting of the American Gas Association, Atlantic City, October 25, 1922.

York and the associated companies, without recourse to common-law proof of their correctness, has had the effect of making such records more important than ever before; therefore, it is very necessary that each transaction shall be accurately recorded at the time of its occurrence and the record made so complete in all its details that whoever examines it at a subsequent date will not be in any doubt as to what actually occurred, but will be convinced by the very completeness of the story and the support given by the underlying documents.

An old definition of book-keeping is "the science of accurately recording business transactions in an orderly and systematic fashion so that the results of such transactions may be readily determined." Since the day when that definition was written there have been many attempts to prescribe standard systematic methods of recording the business of groups or classes of companies having similar transactions. However, most of these so-called standard systems have resulted only in a uniform classification or nomenclature of accounts, so that when one sees the titles appearing in balance-sheets, income and profit-and-loss accounts and cost statements which have been prepared from ledger accounts set up under such a uniform classification, one infers that the figures are ranged under the titles in accordance with established definitions and a common understanding. A classification of accounts, by itself, however, does not constitute a uniform system of accounting. To produce a system of accounting one must first consider the nature of each kind of transaction, and then what is to be the initial step in recording each, and then the succeeding steps in the order of their occurrence as each transaction progresses to its conclusion. This means the classification of the transactions into groups, such as the obtaining of materials and recording the various steps from the initial requisition, through purchase, receipt, storage, distribution for use, consumption and payment; the requirement for labor, its engagement, the initial and subsequent rates paid, the work performed and the actual payment to the laborer and the discharge at the end of service; also the outside services employed ordinarily classified as expense; the sale of the product and the necessary steps to ensure the company's collecting in cash, thus completing the cycle of conversion from cash outlay to cash income.

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It would seem that all companies having the same kind of transactions could agree on the best procedure to be followed and the best standard forms to be adopted and uniform information to be recorded on such forms. Difference in volume of business is of course one reason why standard forms and rules of procedure are not more generally adopted, but this situation is easily met by providing standard modifications, as is done by some authorities creating condensed classifications of accounts for companies doing a smaller volume of business.

The advantages to be gained by the adoption of standard forms and uniform procedure, together with uniform classification of income and expenditure, and uniform cost and income statements, are that the integrity of the accounts and the reliance upon statements prepared from them is increased many fold and a comprehensive comparison of results between periods of time or between the operations of different companies may readily be made.

In the rate cases to which I referred the defendants sought by every means they could think of to discredit the accounting records and the statements prepared from them and put in evidence. Too much credit cannot be given for the carefully planned methods of accounting, and carefully preserved underlying documents, not only for one, two or three years, but for many years past, which stood the test of the critical examination made by those who were using every effort to discredit those records.

I cannot impress too strongly upon the minds of accounting officers the absolute necessity of making the daily records so complete that whoever in the future may have occasion to examine them, whether from a friendly standpoint or otherwise, will not be in doubt as to how the conclusions set forth in the entries have been reached. The necessity for clearly stated records applies particularly to public utilities because the making of rates rests so largely upon reliable accounting and engineering information, and even the latter must be incorporated in the accounts.

I cannot leave this particular point without referring to the splendid work in this direction of standard forms and uniform procedure which has already been accomplished by the Railway Accounting Officers Association. The 1922 edition of their work contains 468 pages including standard forms to the number of over 200. Of course, the railways have been forced to do this

because of the vast number of inter-company transactions, but it shows to what extent such uniform methods can go with advantage, and they are far from the end. I am also not unmindful of the work which is being undertaken by the National Association of Railway and Utilities Commissioners through its committee on statistics and accounts who have drafted a uniform classification which has been adopted by some eight or nine states and is being considered for adoption by many others. The work they have performed is along the right line and I am told will be followed by a standard form of annual report. When these two tasks shall have been successfully accomplished, it seems to me essential that their committee should then turn attention to the preparation and promulgation of standard forms and rules of procedure.

There are many accounts, particularly those kept by companies doing both a gas and electric business, which have to be distributed between two or more departments or perhaps shared by two or more companies. The basis, and the authority for it, upon which such a division is made, should be clearly set down in a book of permanent record, for it is quite reasonable to expect changes in conditions from time to time and therefore justifiable changes in division, and unless there is a permanent record provided it is too frequently carried in the memory of some individual or committed to a loose sheet of paper that sooner or later finds its way into the waste basket. It certainly would be very helpful to a witness at a hearing, or to an accounting officer who has to explain the division of the account to some unfriendly examiner, if a permanent company record could be produced bearing evidence that the matters dealt with have had careful and systematic consideration and treatment. In making divisions that are based upon the conclusions of some one other than the accounting officer, that officer should have a clear understanding of and agreement with the basis used, so that no embarrassment will arise in his explanations.

One of the most important elements of the accounting, and one which will have great influence in establishing the reliability of the records, is the manner in dealing with materials and supplies of all kinds. Companies that do their own meter repairing and deal in appliances and also undertake their installation and repair have a somewhat more complex problem than one that is

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limited to the handling of materials for making gas, installing and repairing mains and services, repairing plant, etc. From the moment when authority is given for purchase down to installation, consumption or (if a sale is made) receipt of cash, the recording of each step must be provided for, and the stock records of materials received and issued must be so arranged that inventories can be readily checked and differences satisfactorily accounted for.

The movement of meters and appliances in and out of stock rooms, or in and out of repair shops, is not difficult to follow, and forms should be provided on which proper records can be made; then the physical inventory of these at any time can be easily verified or discrepancies reconciled. In pricing these inventories, however, certain distinctions must be made. The meters will probably always be a part of the company's permanently invested capital and should be taken at cost, and while the appliances may be a part of the invested capital and should then be similarly valued, it is more likely they will be a part of the working or trading capital, and pricing should then follow the general rule for merchandise inventories, that is, cost or market, whichever is lower.

Shop inventories, such as pipe, fittings, lead, oakum, etc., can be quite readily priced at average cost if stock accounts are kept in detail, as they should be, not only to account for the materials purchased, but so that the quantities of stock on hand can be controlled and requirements anticipated.

When stocks and inventories of coal and oil are to be dealt with there is a somewhat different problem and difficulties arise because the inventory in both cases has to be estimated and the quantities which are billed at time of purchase are not those actually received. The coal that is received was weighed on the car at the mine, but has since traveled many miles exposed to the elements and in some cases has been subject to rehandling and perhaps to pilfering. It is often stored in stock piles in the open for long periods and the quantity used is commonly estimated on the basis of the average weight contained in the coal buggies used.

Oil is measured at the shipping point and transported in tank cars or barges, pumped into storage tanks and used under various conditions of temperature and after more or less precipitation

of foreign substances to the bottom of storage tanks. The quantity used is calculated by measuring the quantity in the storage tank at regular stated times, the difference between two consecutive measurements giving the quantity used, taking into account, of course, any additions to the tank. These determinations are made by the works superintendent, or under his directions, and it is probably safe to say that every one of them knows that sooner or later an adjustment will have to be made when the tanks are cleaned out and also is bearing in mind that now and then a wild day in the works may have to be taken care of on the cost sheet. The quantity purchased is computed and paid for on a fixed temperature basis. However, in computing the quantity used, temperature is seldom taken into account. Meters on the generator floor, and sometimes at other points in the feed line, furnish measurements which when compared with the calculations from tank contents give some protection against too wide a discrepancy.

Regular routine in making these measurements and setting them down in a systematic fashion in a bound book, so that they may be effectually preserved, will go far toward convincing any one who has occasion to refer to them that the company endeavored to make true records, and when large adjustments are made, if they are fully set forth in such a book, there is not the question about them that arises when records of this nature are carelessly put on loose sheets with inadequate explanations, especially if some of the sheets are missing when the time comes for the company to justify its statements.

If coal can be stored in bins or piled so that lots can be kept separated then the stock accounts can be kept to correspond with the lots in storage, and as each lot is cleared up the actual difference between the billed tons and the issued tons can be adjusted with a degree of certainty not obtainable in any other way.

In some operations credit is taken for residuals as produced; in others only as they are disposed of. In the first case, of course, inventories have to be taken into account and these must be estimates based upon tank measurements, giving probably as accurate statement as any method that could be adopted. The important point is that whatever reports of measurement or calculations are made they should be carefully dated and signed by the man who makes them, and if he has no official authority they should subsequently be approved by some one with such authority.

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Other gas-making materials and purification supplies are of such small amount that they are relatively of slight importance; however, the company accountant whose records are not what they should be would better put his house in order in the small matters as well as the large ones, for a clever opponent may find the weak spot and use the opportunity in an effort to discredit something he knows he cannot otherwise disturb.

When one considers what are the best records to substantiate the expenditure for labor, it will be found very necessary to go behind the well-prepared and certified payroll which serves only to justify the cash payments made by the paymaster. At the works there should be kept a record to show for each day the attendance or absence of each employee and his occupation, and this should be signed daily by the official having jurisdiction over them. From this primary record the payroll can be prepared and also the statement showing to what account or accounts each employee's time is to be charged. The rates of pay may be set down in the primary record or they may only appear on the payroll, but wherever the initial record is made it should bear the signature of the one having authority to fix the rates of pay. Where one man works in several different occupations during the day or week, so that his time is chargeable to different accounts, the record should be clear so that the distribution of the payroll when finally made up can be checked against the record at any time thereafter. A primary record of attendance, occupation and rate of pay is necessary in every department and is particularly so in the shops. A daily slip for each man which provides printed descriptions of standard jobs performed and can be signed by the workman and approved by his foreman forms a basis for both payroll and distribution of charges which it is difficult to dispute successfully. A record thus made from day to day is infinitely more convincing than the strongest testimony based on memory.

Whenever any of these labor charges are to be made to fixed capital accounts, the approval and the signature of the engineer having jurisdiction over the work performed should be upon the statement of distribution of payroll. When it comes to wages of office and sales department there should be some record provided wherein the daily attendance can be noted and from which the payroll can be prepared, and also the distribution of the charges. Here, again, the one in authority should record his

approval and signature on the statement showing the distribution of charges as well as on the payroll. The company accountant should bear in mind that it is primarily a part of his responsibility to see that the underlying data, from which the bookkeeping entries are to be formulated, are complete and that they bear evidence on their face of having been before some one having jurisdiction who approves the record so far made.

Under an order, effective January 1, 1918, the then public service commission for the first district of New York provided a uniform method of dealing with so-called fixed capital accounts to the end that the capital accounts shall at all times disclose the cost of all property in service and also that the cost of property retired, whether replaced or not, may be readily ascertained. Whatever objections or criticisms may be offered to the detailed instructions contained in the order no one can successfully contend that the accounting records provided are unsound in principle; probably the most vigorous objections arise from those whose accounts satisfy their own company officers and where information can be obtained when desired by doing a lot of digging. The best time to dig is when making the initial entries, and the time to make the best analysis is when the current entries are coming through and all necessary facts are ascertainable. Then if the record as first made is not complete and satisfactory those who know and can furnish the necessary information are at least get-at-able. Some company accountants have a shyness about putting new accounts on the ledger and if specific accounts are required by commission regulations the addition of supplementary accounts may seem disturbing in some cases, but it is not necessarily so. If you want to limit the accounts and titles to those prescribed there is nothing to prevent arranging your ledgers to have as many columns in one account as may be convenient or useful, or you may keep a supplemental record in which the prescribed ledger accounts are sub-divided to furnish any analysis, and if you post direct from vouchers or journal entries it makes little difference whether the account in which the posting is to be made is one in one hundred or one in one thousand; but when information is wanted it is far easier to look at one account and find there in one group the items wanted than it would be to search through a ledger account with many various items entered in it and have to look at all before being able to select

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those required. Then, again, the items appearing on the cost sheet will not be identical with the prescribed accounts, but it is not difficult to sub-divide those accounts by using columns as above suggested so that the figures appearing on the monthly cost statement can be found in the ledger accounts. The accountants for the commission, whoever they may be, will not find fault, inasmuch as whatever information they may require will be easily obtained from your records, and, what is of more account, your own staff will not be forced to work so many nights of overtime when some special report is gotten out to answer some well or ill-considered question. Whatever is done with respect to analytical ledger accounts, be sure that the vouchers, journal entries or pay-rolls from which your postings are made bear the endorsement of approval of the officer authorized by the company to approve the expenditure, and, if material is received, that the officer or employee designated to receive it certifies to its receipt, either upon the vendor's invoice or upon a separate report form, and when this material is issued that some one responsible for its use knows that it has been issued and gives evidence of it by written approval.

All that I have said with regard to the accounting is really along the lines of the procedure which is necessary to the substantiation of the accounts. If a prescribed classification is used it creates a presumption of a certain order and significance in the accounts, but if the accounts are to be finally justified all the entries must be supported by full, clear, authoritative, underlying documents.

When accounts are properly built up in accordance with a prescribed classification under a regulatory commission, they have a significant value to the company making them. If the classification in use were standardized in all states and amplified by the adoption of standard rules of procedure and forms, the companies' position would be greatly fortified and the public authorities would have all the more assurance of the integrity and reliability of the results produced, the careful and honest consideration of which at any time should enable them to determine whether or not a revision of rates were necessary.

As it is today, the opinion of the supreme court of the United States, in the case of the Consolidated Gas Company, says:

“These books were kept in the ordinary course under general supervision of the commission, appeared free from suspicion of dishonesty, were submitted to appellants’ experts and were the only readily available sources of detailed information concerning the company’s affairs. In the circumstances we think no harm resulted from admitting them as prima facie evidence.”

Is it not of especial significance that in a given case accounts well kept, supported by documentary evidence honestly prepared and carefully filed for reference when necessary, not only convinced the master hearing the case, but also the district judge and the highest court in the land, that they could be relied upon?