

E I P R E Electric Customers Expense
IP Division No. 1, District P
R Residential Customers

Symbols for *electric customers' expense* were not used by the operating departments, but were used in the accounting department for accumulating the total expenses incurred by the operating departments for the various classes of customers.

Types of Expense

It was found that expenses could be grouped under three general classes.

1. Expenses incurred for the property as a whole: items such as general office, purchasing, generating, etc., which could be prorated, based on the type or quantity of service rendered.

2. Expenses incurred for one or more districts or divisions; items such as transmission, standby plants, etc., which could be prorated to the divisions served, based on the service rendered. Likewise, expenses incurred in district offices; items such as commercial, new business, store keeping, planning, etc., which could be prorated, based on the service rendered to each division in the district.

3. Expenses incurred for specific classes of customers in one division, which could be charged directly; items such as the whole of utilization and such items of distribution as renewal of services, etc.

Classes of expense such as 1 and 2 necessarily had to be broken up into individual types of service rendered so as to secure the proper distribution. The manner of distributing the costs of each class can easily be followed if the three general classes of expense are kept in mind: (1) expense incurred for all customers of the entire property, district or division; (2) expense incurred for all classes of customers on part of the property, that is, one or more divisions; (3) expense incurred for specific classes of customers in one division.

It is obvious that the problem of allocating the costs of the several departments was somewhat different. Therefore, the approach was based entirely upon the type of service rendered by each department.

It is not necessary to go into details of each item of expense of any of the general departments. It is my intention rather to select one division and show the distribution of costs, first, to the division, and, second, to the classes of customers.

In selecting "EIP," that is, the number one division of District "P," (for location, see arrow on Figure 1, page 90), we can eliminate all distribution, commercial, new business, utilization, and certain general costs incurred for other districts. Also such costs as standby plants serving other specific communities, and the expense of transmission lines not serving this district can be eliminated.

It was an easy matter to secure the revenue for each class of customers in each division. Also, it was relatively easy to charge certain direct costs to departmental divisions. In certain instances it was possible to charge costs directly to class of customers in their respective division as illustrated by the utilization expense which is incurred for specific classes of customers in each division, and such items as reconnecting services, testing meters, and other direct distribution department costs.

The problem that had to be met was to discover how to make a fair allocation of expense that was incurred either for all customers on the property, such as general and production expense, and for such expenses as were incurred for all classes of customers in a certain district or division, such as that incurred by transmission, distribution lines, district commercial and new business offices, and like items.

To put the problem in another way, the distribution of costs of "C" (Electric Operating Expense) not chargeable directly to a specific division of "E" (Electric Customers' Expense) had to be allocated first to all classes of customers in each division and then to individual classes of customers, where in each instance it would be combined with the expense charged directly to that class of customers.

Planning Department

The first problem to be solved was how to secure accurate detailed charges. Although it was recognized that the tabulation of detailed costs secured was purely an accounting function, the problem of the old feud between the operating and accounting departments had to be faced. It was realized that costs secured and tabulated for accounting purposes only were not always beneficial and sometimes proved embarrassing even to a conscientious operating engineer. Therefore, it was necessary to sell to the operating departments the idea that true

costs properly secured and tabulated would eliminate the constant criticism of expensive operating directed toward the operating department. By this statement is meant that proper accumulation of costs, combined with a practical working budget, could and would put the operating department in the position of knowing just what was expected of it. Any improvement in the performance of the task allotted to the operating staff would in each instance be reflected in the monthly statements.

Following the practice of industrial concerns, the connecting link between operating and accounting was made by creating a planning department, the function of which was to relieve the operating engineers of the mass of detail previously handled by them.

Such work as time keeping; ordering, receiving and issuing of stores; planning of work; progress on construction jobs; operation of the conveyances; the machine shop; testing laboratory; proper allocation of the charges of labor and material, etc., came under the jurisdiction of the planning department. The personnel of this department was necessarily of a composite type, composed of men experienced in cost and statistical work and practical operating. This department, although following the methods laid down by the accounting department for tabulation of costs and by the operating department for order of work and methods of operation, came under the direct supervision of the general manager of the property. This procedure effectually eliminated the constant friction frequently noted between the accounting and operating personnel.

As we are not discussing operating methods, we can eliminate all work performed by the planning department, excepting that part pertaining directly to the accumulation of direct detail costs. Costs were accumulated under three main headings: labor, material and sundries—for operation, maintenance and construction. To facilitate the tabulation of costs, store issues, time cards, and sundry costs (voucher charges) forms were used in connection with the tabulating machines. (See Figures 3, 4 and 5 on this page). To eliminate the objection that the cards were not original records, the standard card was changed so that part of it was descriptive, showing all required information, such as dates, employees' numbers and rates, stores symbols, etc. The other part of the card was used for

Date	Quantity	Cost	Charge Symbol	Description
JAN 3-16	12.90	44	64	72
JAN 5-16	11.70	44	64	72
James O'Brien				
336	.60			
L.F.	.72			
U I P M B B				
Replacing burnt				
cut lamps				

Figure 3
Stores Issue

1—date, 2 & 2A—quantity, 3 & 3A—cost, 4—charge symbol, 5—stores symbol (for stores records only), 6—description of operation. The above illustrates how the original record was incorporated with tabulating records used for cost accounting purposes. From the information punched on the card any combination of costs could readily be secured.

Date	Time Operation Finished	Time Started	Name of Employee	Employee Number	Hourly Rate	Hours on Operation	Cost of Operation	Charge Symbol	Description of Operation
JAN 3-16	12.90	44	64	72					
JAN 5-16	11.70	44	64	72					
James O'Brien									
336	.60								
L.F.	.72								
U I P M B B									
Replacing burnt									
cut lamps									

Figure 4
Time Card

1—time operation finished, 2—time started, 3—name of employee, 4 & 4A—employee's number, 5—hourly rate, 6 & 6A—hours on operation, 7 & 7A—cost of operation, 8—charge symbol, 9—description of operation.

Date	Quantity	Cost	Charge Symbol	Description
JAN 3-16	12.90	44	64	72
JAN 5-16	11.70	44	64	72
James O'Brien				
336	.60			
L.F.	.72			
U I P M B B				
Replacing burnt				
cut lamps				

Figure 5
Sundry Costs Card

tabulating purposes.

All material used was taken through stores, although it may have been purchased for and delivered direct to the point where it was to be used. Tabulating cards were cut for each item charged out on a voucher, regardless of the nature of the expense. With these three classes of expense taken care of, the costs accumulated by the cost department could be tied in directly with the general ledger accounts corresponding to them.