

real economic need to the individual and to the nation. The possibilities for further use of appliances are very great. In their homes people want conveniences and light.

The great portion of refinements in service are occasioned by the residence customers. They are in the majority. In the last analysis they are ultimately in control. In many cities the residence users pay only a small proportion of the revenue of the electric utility. In one large city the proportion of revenue is as follows:

Residence Customers	18%
Commercial Lighting	36%
Commercial Power	23%
Railway Power	23%

As a general rule the smaller the city or town the larger the proportion of total revenue that comes from residence users. Obviously if there is no manufacturing in the city or town and if no power is furnished for street railways the residence portion of the utility's revenue is necessarily much larger.

The residence rather than the commercial customers are hardest to please. They want the lowest possible rates and the best possible service. They are unquestionably entitled to both if not carried to a point where it is against their best ultimate interest. If, for instance, residence rates are forced so low and quality of service forced so high that substantially all residence customers were served at a loss, the commercial and industrial customers might temporarily bear the extra burden. A part of the cost of the electric service for residences would then appear in increased price of provisions, clothing, amusement and so on. Furthermore, this extra burden would mean that some industrial and commercial customers might then install independent plants and the electric utility would certainly not be able to get so many new wholesale customers. This would mean less revenue, less profits and certainly less chance for reduction in retail rates, if not an increase in retail rates. In a considerable number of instances state public utilities commissions have found it necessary under such circumstances to raise retail rates. In those cases the forcing of retail rates too low and of service too high has been directly against the best interest of the residence customers and of the community whose credit standing and integrity have thereby been impaired.

In many cases state commissions have encouraged and even directed the electric utility to lower its wholesale rates with a view of increasing the volume of its business, and by this means finally to get into a position where it would be possible to reduce retail rates.

In communities where there is no manufacturing or street railways or where the electrical energy for such purposes is secured from some other source the cost of electric service to residence users must eventually be higher because no use can be made of expensive generating and other equipment except during lighting hours. It is, therefore, for the best interest of every retail user and of every other user of electric service that additional customers be secured by the electric utility. This is true, first, from the standpoint of increasing the density of customers and thus converting unprofitable blocks into more profitable blocks, and second from the standpoint of additional income from any other customer served at a profit.

The supplying of all utility service needed for every purpose in any community or area from a single utility organization, in other words a natural monopoly properly regulated has been demonstrated again and again as being the correct economic solution. Every thinking person knows that two telephone systems, two gas systems, two electric service systems or any other two public utilities in a single community, where one system will answer means needless duplication of equipment at great

expense and which is ultimately paid by the public in one form or another. The greatest single problem remaining is the promulgation of mutual confidence and understanding. Engineers, business men and educators are capable of carefully analyzing conditions, problems and possibilities. They can do much for their respective communities. Is it then not their duty to analyze, to understand and to take a firm position in favor of what is right and sound from a broad economic standpoint?

Southwestern Convention to Be Held in Dallas.

At a recent meeting of directors of the Southwestern Electrical and Gas Association, held in Dallas, Texas, for the purpose of considering plans for holding the third annual convention of the association, it was decided that the convention shall be held in Dallas, on April 26, 27 and 28. It is the purpose of the directors, as stated at the meeting, to prepare a splendid program for the occasion and to make the convention an educational one in all respects. The subjects to be treated and discussed will embrace pertinent problems in the various fields embraced by the membership.

The meeting was attended by the following directors: R. J. Irbine, vice-president and general manager of the San Angelo Electric Company; O. K. Shannon, general manager of the Fort Worth Gas Company; J. W. Carpenter, general manager Corsicana Gas & Electric Company; F. S. Fletcher, assistant general manager Texas Power & Light Company; J. C. Kennedy, general manager Brenham Compress & Oil Manufacturing Company; R. Meriwether, superintendent of the Dallas street car lines; George H. Clifford, general manager North Texas Traction Company; W. A. Sullivan, vice-president and general manager Shreveport Railway Company; D. A. Hedarty, president Texas Gas & Electric Company; David Daly, general manager Houston Electric Company, and H. C. Morris, vice-president and general manager Dallas Gas Company.

Illinois Electric Railways Association Holds Annual Meeting.

At the annual meeting of the Illinois Electric Railways Association, held January 19, in Chicago, the following papers were presented: "The Effect of Low Voltage on Railway Motors," by G. M. Woods, of the Westinghouse Electric & Manufacturing Company; "Headlights," by K. W. Mackall, of the Ohio Brass Company; "How Trainmen Are Developed Into Motormen on the Chicago Elevated Railroads," by M. J. Feron, general superintendent. A. P. Jenks, of the General Electric Company, exhibited a motion-picture film entitled "King of the Rails," showing the electric locomotive construction and the electrification of the Chicago, Milwaukee & St. Paul Railroad.

Officers were elected for the ensuing year, C. F. Handshy being chosen president; D. E. Persons, first vice-president; Frank J. Baker, second vice-president, and W. V. Griffin, re-elected secretary-treasurer.

Cleveland Section, A. I. E. E. Discusses Telephone Problems.

The American Institute of Electrical Engineers, Cleveland Section, held its regular monthly meeting on January 15 in the Electrical League Rooms at the Hotel Statler. The session was devoted to a discussion of telephony and Norman Anderson, traffic superintendent of the Cleveland Telephone Company, discussed the construction and operation of America's great talking service—the Bell System.

About 60 members of the Cleveland Section were in attendance and an interesting discussion followed the telephone talk.