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## ELECTRIC UTILITIES IN THE SOUTHWEST

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If you are one of an estimated 2,950,000 consumers in the Southwest who turn a switch to light a room, make your coffee, heat your oven, or operate hundreds of other electric appliances, you have at your disposal the product of a billion dollar industry which in 1952 commanded the services of approximately 23,000 employees and received an estimated \$350,000,000 operating revenue. The electric utilities of the Southwest and of the Nation comprise one of our largest service industries. In few other businesses are the rewards so small and public responsibility so large. The people of the Southwest have learned to use electric energy and are most vocal in their complaints if that energy is not delivered when and as they desire it. Though the industry is important from the standpoint of providing employment and payrolls, it is primarily important because of the service which it renders. Consequently, it is the service characteristics of the industry which are to be discussed in this article.

The choice of the area covered in this article was dictated by the availability of data from the Fort Worth Regional Office of the Federal Power Commission and the desire to conform as closely as possible to the limits of the Eleventh Federal Reserve District. Because of a lack of complete data, the Arizona section cannot be given as thorough treatment as the rest of the territory, which is referred to as the southwestern area.

### The Companies and Their Plants

Within this southwestern area as defined above, there are 75 operating utilities and 25 industrial companies owning generating plants which are tied into the public supply system. Of the 75 utilities, 49 are municipally owned, 17 are privately owned, 6 are Federal or state projects, and 3 are cooperatives. There are, of course, many more cooperatives which produce no electric energy but, instead, buy all required energy from other utilities.

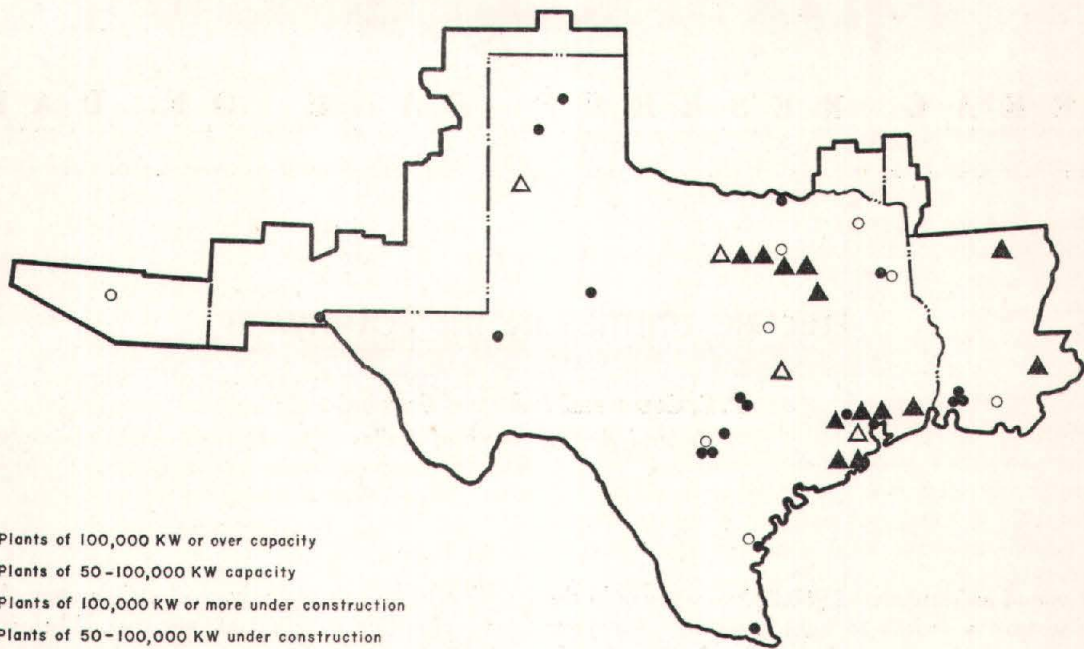
Fourteen of the 17 private electric systems have operating revenues of over \$1,000,000 per year. When combined, these 14 systems had a total net utility plant, less reserves, worth \$1,013,512,776 in 1951. Their total capitalization was \$1,017,000,000, of which \$555,789,000, or 55 percent, was in long-term debt. The net income for these 14 systems in 1951 was \$50,285,312, or 5 percent of the total investment. Comparing 1951 to 1950, their total investment had increased 12 percent, total capitalization had risen 14 percent, and net income went up 4 percent. One company had a net plant investment of over \$150,000,000 in 1951.

The importance of these 14 systems can hardly be over-emphasized. Not only are they the largest utilities — they conduct nearly 88 percent of the total electric business in the area — but they are also the backbone of all industrial activity in the area. These utilities in 1952 employed 20,451 workers and paid them \$74,172,357. This represents a 17-percent increase in payroll since 1950. There are also two large municipal systems and one large state electric system which provided employment for an additional 1,586 workers and payrolls of \$5,471,150 in 1952.

As of June 30, 1952, the 100 utilities and electric generating industrial companies of the Southwest operated 199 generating plants with a total rated capacity of 5,016,083 kilowatts. In addition, there are 19 more plants under construction, which will have a rated capacity of 1,385,520 kilowatts. In all, then, the total rated generating capacity of the 218 plants will be 6,401,603 kilowatts. It must be emphasized that the actual capability of such plants is usually about 15 to 25 percent above rated capacity, although no fixed percent can be applied. Experience alone shows the capability of a plant.

Electric energy is produced by one of three major methods. It may be produced by falling water (hydroelectric), by steam generation, or by internal-combustion plants. Hydroelectric plants produce electricity by use of turbines which are

## LARGE ELECTRIC GENERATING PLANTS IN THE SOUTHWEST



rotated by the force of water hitting their blades. To create this falling water force, dams are constructed on rivers and lakes, and penstocks carry the water to the power house and, thus, activate the turbines, which turn the electric generators coupled to them. Because of the necessity of constructing costly dams to impound large quantities of water used in the operation of such plants, the installed cost per kilowatt of capacity is much greater than for other types of electric generation. Furthermore, these plants ordinarily do not provide a dependable source of power because of a lack of a constant water runoff, which is necessary in their operation.

In the southwest area, steam generating stations, which offer a more dependable source of power and which take advantage of the cheapness and availability of natural gas and lignite as fuels, are in general use. Moreover, the cheaper building costs by use of an outdoor type of construction have contributed further to the economy of such plants. In steam generating stations, electricity is generated by heating water to steam and using this steam pressure to turn the generators. The steam pressure acts in the same capacity as the falling water pressure for hydroelectric plants.

Internal-combustion generating plants use a gasoline or Diesel engine to turn the generators. Such plants were much more popular 30 years ago. Today, their use is restricted to areas of small loads, i.e., less than 10,000 kilowatts, and to stand-by plants for meeting sudden demands for energy over a short period of time. The higher costs of operation and restricted size of units preclude use of this method for large plants. Conversely though, the cheaper construction costs for plants where small amounts of energy are required make

internal-combustion plants adaptable for some industrial and small community uses.

Of the 199 plants in service as of June 30, 1952, 89 are steam plants with a capacity of 4,395,387 kilowatts, 87 are internal-combustion plants with a rated capacity of 251,266 kilowatts, and 23 are hydroelectric generating plants which have a rated capacity of 369,430 kilowatts. The ratio of steam, internal-combustion, and hydroelectric capacities is an interesting characteristic of the southwestern area. While over 88 percent of all generating capacity in this area comes from steam plants, only 72 percent of the United States generation comes from that source. Of the capacity of the new plants under construction, 95 percent will be steam electric, 4 percent will be hydroelectric, and 1 percent will be internal combustion. On the basis of ownership, the 17 private utility systems accounted for about 93 percent of the total capacity on June 30, 1952. There are 44 plants in operation or under construction in the area which have a rated generating capacity of more than 50,000 kilowatts each.

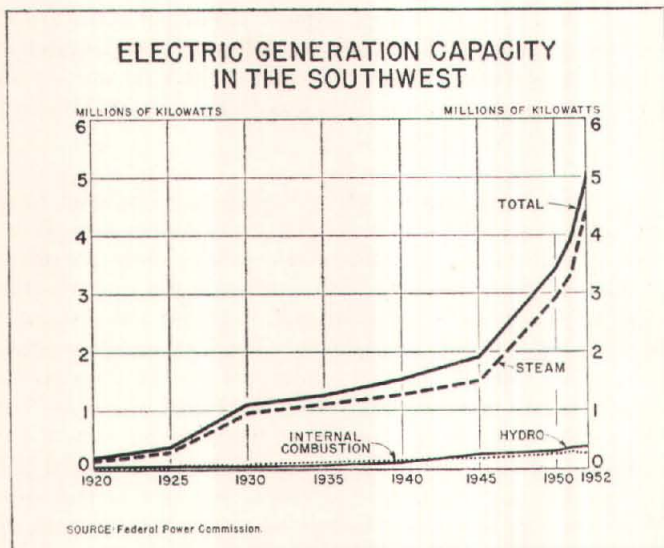
Indicative of the growth of electric facilities in this area are the changes in the rated generating capacities since 1920. Total plant generating capacities increased 628 percent from 1920 to 1930. From 1930 to 1940, this capacity increased 39 percent; and in the next decade, generating capacity increased 127 percent. However, the stimuli of greater industrialization and increased population spurred plant construction in this area so that from 1950 to 1952, generating capacity increased 46 percent. Thus, from 1920 to 1952, generating capacity increased 3,258 percent. It is interesting that of the 5,016,083 kilowatts of capacity in service on June 30, 1952,

only 30 percent was constructed before 1940 and 68 percent before 1950.

As of December 31, 1952, the 14 major private utilities operated generating plants with total rated capacities of 3,845,066 kilowatts, of which 346,525 kilowatts were leased or purchased on a firm contract basis from other utilities in the area. The total generating capacities of the plants of these 14 utilities have increased 14 percent above their 1951 total. In 1951, the companies' plants comprised 86 percent of the entire generating capacity of the area. The two large municipal utilities and the state electric system provided an additional 378,228 kilowatts. The total for all systems reporting over \$1,000,000 revenue in 1952 was 4,050,566 kilowatts of capacity.

In the part of the Arizona section of the District pictured on the map, which is excluded from the southwestern area, there were seven electric systems in operation in 1952. Of these, three are private electric systems, one is an industrial system, two are cooperatives, and one is a Federal system. Of the three private systems, there are two large electric utilities, with 1951 net incomes of \$1,902,481 and total net utility plants worth \$38,821,577.

The total rated generating capacity in this area of Arizona in 1952 was 127,547 kilowatts, of which 66 percent was steam capacity and 34 percent was internal-combustion capacity. There are a total of 16 plants in operation. Private utilities own seven plants with 44 percent of the total capacity, an industrial company owns five plants totaling 46 percent of the area's capacity, and four publicly owned plants account for the remaining 10 percent.



### Distribution and Consumption of Electric Energy

The generation of electric energy is only part of the task of getting electricity to the consumers. From the generating plants, high-voltage transmission lines take the energy to the market areas. From these lines it is fed into substations, where step-down transformers lower the voltage for local distribu-

tion. Further step-down distribution transformers on city poles convert the electricity to the correct voltage for home use. From the substation, distribution lines take the electricity to all parts of the city.

Recently, the loop system of distribution lines has found considerable emphasis. Under this system, a city or area is served from a loop of high voltage lines which encircle the area. Alternate sources of power are connected at points in this loop so that in the event of a plant breakdown or a break in transmission wires the area of blackout is minimized. Of course, the larger the system or cooperating systems, the more numerous will be the alternate sources available for emergency interconnection. More will be said of this cooperation at a later point.

Thus, from this intricate system of generating plants, transmission lines, substations, and distribution lines, the electricity is finally available to the customer for his use 24 hours a day. Of course, the charge for the service depends upon the type and size of the customer's load. Most electric utilities divide their consumers into five major classes: rural, residential, commercial, industrial, and other (includes street railways, street lighting, municipal use, etc.). How important each of the classes is, relative to the total, depends upon the measurement used. To obtain a full picture of the importance of each, it is necessary to consider these classes from the standpoint of number of customers, kilowatt-hour sales, and dollar sales. To the utilities, both of the latter measures are of major significance.

While the number of consumers may mean little in the sales of electric energy, it does give an indication of utility distribution and accounting costs and the growth and usage of such energy. In the Southwestern area in 1951, there were approximately 2,791,000 customers, of which 69 percent were residential; 16 percent, rural; 10 percent, commercial; and 5 percent, all other classes. Since the end of World War II, the number of residential customers has increased 59 percent, the number of rural customers has increased 143 percent, and the number of commercial customers has risen 52 percent.

### ELECTRIC UTILITY CUSTOMERS IN THE SOUTHWEST

Year	Rural	Residential	Commercial
1951.....	498,652	1,935,526	343,928
1950.....	498,621	1,815,940	331,569
1945.....	205,498	1,218,726	226,529

SOURCE: Federal Power Commission, Fort Worth Regional Office.

In Texas alone, the number of residential consumers rose from a 1940 total of 769,768 customers to a total of 1,045,356 customers in 1945 and an estimated total of 1,703,000 customers in 1950. This reflects a greater percentage increase than the growth in Texas population from 6,414,824 people in 1940 to 7,711,194 people in 1950.

For the southwestern area under discussion, the number of residential customers is, of course, the largest of any class of customers. The number of industrial customers is the

least of any of the major classifications. The 14 major utilities in this area served 1,611,000 customers in 1947 and 2,146,000 in 1951. These 14 companies, therefore, accounted for 77 percent of the 2,791,000 customers in the southwestern area.

In order to gain a further insight into the relative importance of the separate classes of customers, it is necessary to trace the development and relative importance of these classes as to consumption of electric energy and percent of total revenue which each provides.

In analyzing the information on sales, it is apparent that the industrial consumers not only have taken the greatest amount of the sales of electric energy but also have shown the largest increase in the use of electric energy. In the 1950-51 period, residential sales increased 20 percent; commercial sales, 14 percent; rural sales, 19 percent; and industrial sales, 28 percent. The net energy for all systems in the southwestern area increased 94 percent from 1945 to 1950 and 19 percent from 1950 to 1951.

Considering the total net energy for all systems in 1951, industrial customers consumed 42 percent; residential customers, 15 percent; commercial customers, 19 percent; rural customers, 4 percent; and all others, 7 percent. Losses accounted for the remaining 13 percent. Thus, for the southwestern area, industrial sales are, indeed, a large percent of the total. It must be remembered, however, that industrial sales are more or less important to a system, depending upon the development within its territory. One large utility system's report for 1951 shows industrial sales to be 68 percent of its total kilowatt-hour sales, while another company's report indicates its industrial sales only 28 percent of the total sales.

A division based on kilowatt-hour sales, however, overemphasizes the importance of the industrial load. The revenue from the industrial sales may be less than from the residential sales, even though the kilowatt-hours consumed are much greater. In one company reporting industrial sales of 28

percent of total kilowatt-hour sales, the revenue from those sales was only 14 percent of the total revenue; whereas, in the same report, residential sales amounting to only 31 percent of kilowatt-hour sales provided 47 percent of the total revenue. This anomaly may be explained by the fact that industrial sales are usually at a lower average rate than residential sales because larger quantities of energy are consumed per customer in this class. Electric utility rates are designed so that the average price per kilowatt-hour is lower as the amount of energy consumed and the load factor are increased. In other words, the industrial consumer uses his potential demand for electricity a greater percentage of the time than does the residential or commercial customer. In quite a few instances where three shifts are employed in a particular industry, the daily load factor may go as high as 70 to 80 percent. It is almost needless to point out that the average residential consumer seldom uses his maximum demand. As will be seen, this very point is the main cause of one of the most difficult problems which faces some of the electric companies of the Southwest at the present time. Moreover, the possibility of an industry installing its own power generating facilities also tends to keep industrial rates at a lower level.

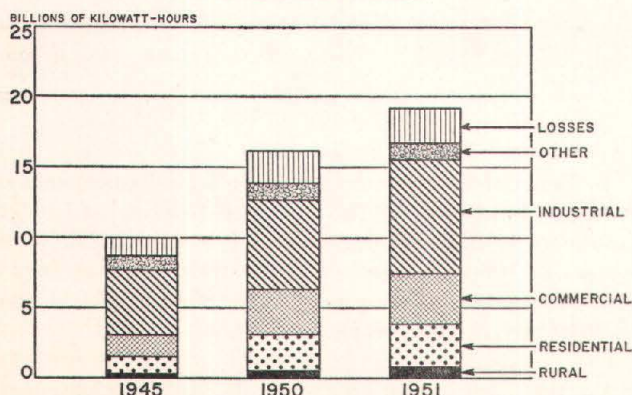
To emphasize this division of sales, it is of interest to consider the 1952 sales record of the 14 largest private utility companies in the area. A comparison of the percentages and the actual sales figures shows the industrial customers to have far exceeded the kilowatt-hour use of the other classes but to have reached only third place in importance on the basis of sales revenue. Total kilowatt-hour sales of these companies increased 16 percent this past year. The industrial load has shown the greatest increase, with residential and commercial sales also showing considerable gains.

In addition, in 1952 the two large municipal systems and the state system sold 1,682,578,000 kilowatt-hours of electric energy for a total of \$26,204,031. Thus, the total sales of all large systems in the area in 1952 was 21,454,928,000 kilowatt-hours for \$330,573,866.

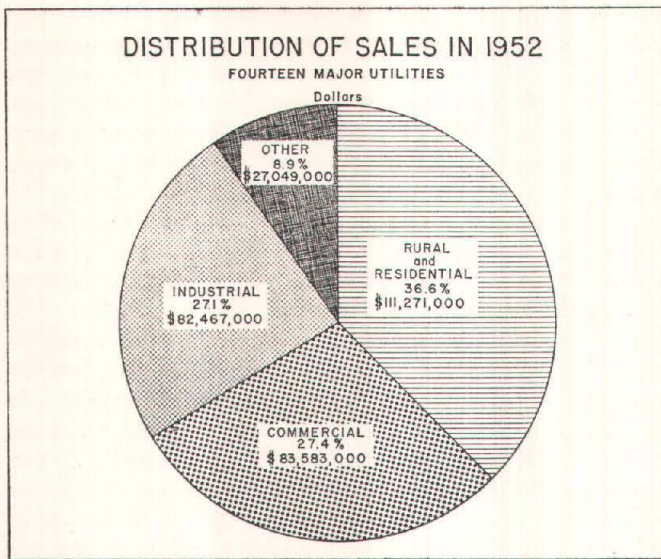
In the Arizona section under discussion, industrial sales are not nearly so important as in the southwestern area. However, private industrial companies own a much larger share of the total capacity in this section than in the southwestern area. In Arizona, kilowatt-hour sales to residential customers in 1951 accounted for 11 percent; rural sales, 14 percent; commercial sales, 40 percent; industrial sales, 6 percent; all other sales, 13 percent; and losses, 16 percent. From 1945 to 1951, total kilowatt-hour sales in the Arizona section increased 72 percent, while the commercial sales increased 224 percent, the largest increase of any of the customer classes. Moreover, commercial customers increased their percent of the total sales from 21 percent in 1945 to 40 percent in 1951.

One other point should be considered in the division of total energy, i.e., the losses of the electric systems in the area. Losses are averaging approximately 13 percent of the net energy for the systems. While this is not excessively high, it does represent a fairly large proportion of the total and, in fact, nearly equals the total energy use by all residential consumers and exceeds the combined energy use of rural con-

ELECTRIC ENERGY SALES  
IN THE SOUTHWEST



SOURCE: Federal Power Commission.



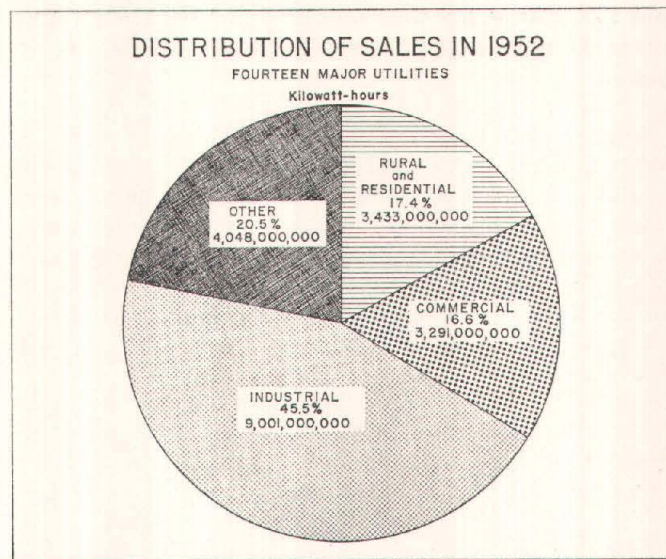
sumers and those in the "other" category. The long distances involved in transmitting electric energy in this area account for most of these losses.

No discussion of electric facilities in an area could be considered complete without reference to the rural electric cooperatives which have developed during the past 17 years. Under the stimulus of their development, the percent of farms electrified in Texas increased from 2.4 percent in 1935 to 78.5 percent in 1950 and to nearly 90 percent in 1952. There are 78 rural electric cooperatives in Texas, of which only one generates any electric energy. The remaining 77 buy all energy requirements from the other utilities in the area. As of June 30, 1952, the 78 cooperatives in Texas operated 123,446 miles of line and served 296,922 customers. Their total revenue for the year ended June 30, 1952, was \$21,393,235.

The rural electric cooperatives have been an important adjunct to the electric systems of the area and have been particularly effective in bringing electric energy to those farmers beyond the more thickly settled areas. The privately owned utilities in the State have extended their systems to farm areas, where economically feasible, but credit for serving the remaining areas should be given to the cooperatives. Moreover, many of the private utilities were instrumental in the development of the cooperatives, through the help which they gave on engineering, construction, and supply of their necessary power and energy. The cooperative development will continue and probably will expand as long as there are farms without the benefits of electric energy or as long as farmers continue to increase their use of electricity.

### Regulation

One of the peculiarities which sets the electric industry apart from all other industries, except other public utilities, is the regulation to which the industry is subjected. Private electric companies operating in Texas are regulated by the individual cities in which they do business. Regulation takes the form of a restriction on the percent return which may be



earned on property value and, indeed, on many other operating phases of the industry.

While Texas utilities are regulated by their city councils, the private electric utilities of the other states in the Southwest are subject to the jurisdiction of public utility commissions. Regulation of utilities under each method is approximately the same, but a more favorable rate of return has been allowed under the Texas system as compared to the commission systems of the other states. By statute, Texas utilities have been allowed a maximum of an 8-percent rate of return on valuation, whereas the commissions of the other states have advocated a 6-percent rate of return. It must be remembered that the mere allowance of a specific rate does not guarantee that the utilities will, in fact, make that amount. Instead, as noted before, the average returns have been nearer 5 percent for the major utilities of this area.

Furthermore, at least six of the major private systems operate in more than one state and, thus, are subject to the regulations of the Federal Power Commission. Some state authorities have jurisdiction over cooperatives and municipally owned utilities. These utilities, though performing the same function as their private companions, are not regulated in some states with regard to rates, service, or operations. City regulation of municipal utilities, of course, is effected through ownership and operation of those utilities, but cooperatives are generally exempt from such stringent regulations.

There is also another Federal commission concerned with the operations of some of the major private electric systems. The regulatory powers resting with the Securities and Exchange Commission stem from the Public Utilities Holding Company Act of 1935. Under this Act, uneconomic or non-integrated utility holding companies are to be dissolved and control is to pass to a broader group of investors. Of the 14 major private systems operating in this area, 13 were formerly members of utility holding companies, and one has always been independent. Of the 13 formerly under holding company control, two were in the Engineers Public Service Company system, three were Community Power & Light Com-

pany subsidiaries, five were associated with the Electric Bond & Share Company, and three were in the Middle West Utilities system.

After years of court battles and reorganization plans submitted to the Securities and Exchange Commission, the five holding companies represented so strongly in this area moderated considerably their utility holdings. In other words, the control of the operating companies has now been returned to a level close to the area of operations. Today, it is still possible to see the influence of holding company control in the organization of seven of the major private electric utilities of the area. Three of these utilities are associated with the Central & Southwest Corporation, three are members of the Texas Utilities Company, and one is a subsidiary of the Middle South Utilities Company. The remaining seven major systems are independent of any holding company control.

Probably as a result of membership in such holding company systems, most of the utilities still under such control operate as integrated, interconnected systems. There are three such formal systems now in operation in the southwestern area. The North Texas Interconnected System, the Middle South System, and the El Paso Power Pool are all formal, interconnected systems. There are eleven utilities in these three power pools, of which six are major utilities of the southwestern area. Formal agreements and reports are filed by some of these pools governing their operations and determining the price which one utility must pay another for the interchange of energy. There are other informal operating pools in the southwestern area, but central-load dispatching and formal price agreements are not used by these informal pools.

The function of these pools is to improve service in the area in which the members operate. They were developed to effect savings in the construction and use of generating plants. When peak loads occur in one area, energy from the other systems may be purchased to meet the demand. Similarly, when a new and more efficient plant is placed in operation by one company in the pool, it is kept operating at full capacity to replace and supplement the operations of the less efficient units elsewhere in the pool. Other advantages stemming from this close cooperation come from the availability of results from research projects and the possibilities of financial cooperation on joint projects. Although the latter has not been exploited, it may be a real advantage if generating units can be built to capacities of 500,000 kilowatts or more. Similarly, the long-line, high-voltage transmission line development also may offer new possibilities. Especially would this appear feasible if further tests reveal it to be commercially possible to construct 500,000-volt transmission lines.

### Problems

The electric companies of the Southwest currently are faced with some rather intricate problems. One of the foremost is the problem of a declining annual load factor and how to get the customers to use a more constant amount of electricity. Illustrative of this problem are the difficulties confronting those utilities whose major loads are residential and

in whose territories industrial possibilities are comparatively small. The increasing use of electricity for air conditioning in this area has pushed the peak demand in the summer months to extreme heights. It is estimated that for each room air conditioner placed in service, the electric company serving that customer must install one kilowatt of generating capacity. This, in itself, is not objectionable, because the company then sells more of its product—electric energy. The difficulty is that such air conditioning is used only a few months of the year. The rest of the year this new generating equipment must stand idle, replace obsolete equipment on the line, or provide a backlog to allow repairs. Of course, the last two uses take precedence. Eventually, though, construction could be so large that even new plants might stand idle in the wintertime. The effective use of the equipment for some of the companies on a yearly average is already below 50 percent. To the consumer this must mean higher rates to pay for fixed charges on equipment which is called into use by the customer only 3 to 4 months of the year, unless other loads can be assumed during the winter months.

The 1952 operations of the 14 major private utilities in the area show annual load factors ranging from 45.4 percent to 72.3 percent. Peak loads for these 14 companies aggregate nearly 3,960,300 kilowatts. A load factor below 50 percent must cause some concern, especially if this percent is declining.

So the problem is to find a business or home use for electric energy which is exclusively a winter use. In other words, the companies must find a load which could be placed on the line in the winter and reduced or cut off in the summer. One of the most obvious answers is in household heating. For some time now, the electric industry has been working to develop an electric heating method which would be competitive in price with other methods now in use. If a heat pump or other electric device could be made commercially feasible for home use, it would add a winter load consistent with the air conditioning load in the summertime. Another solution is increased industrialization to give stability to the load factor. Obviously, where large industrial plants are served, their steady demands for electric energy greatly improve the average use of capacity.

Some utility executives have seen the peak load shift from summer to winter and back to summer again. They say it is just a matter of time until new uses will bring the winter load back into line with the present summer one. This "wait-and-see attitude" may be a reasonable outlook for those whose utilities are well fortified with a large industrial load. However, for the utility which has no such load, the problem may indeed become serious.

A second major problem of the electric industry in the Southwest is the difficulty of rising costs and slow rate adjustments. Throughout much of the past 15 years, the average price of a kilowatt-hour of electric energy has decreased, even though most other prices have doubled or tripled. The key to this price stability is to be found in the great increases in demand for electricity and in the actions of the utilities in reducing costs and improving the efficiency of their oper-

ations. With the quantity of energy sold increasing so rapidly, the necessary profit per unit has declined. Nevertheless, continually rising costs have gradually eaten into this margin so that recently some companies have been forced to ask for rate increases. In Texas the rate adjustments may be fairly rapid, because individual cities control such requests. In other states, though, a central commission governing all utilities must approve the rate adjustments. This procedure is often very slow and occasionally is so delayed as to make another request necessary even before the first is granted. A few utilities have city franchises in which rates are adjustable on a sliding scale when changes in certain types of taxes, fuel costs, or commodity prices occur. These contracts may obviate the necessity for requesting rate increases to cover such changes in costs.

An adequately trained supply of labor is another vexing problem confronting the electric utility industry of the Southwest. Even though stability and security benefits are high, it is a continual battle to keep trained personnel on the electric companies' payrolls. The time necessary to train some of the skilled labor used by an electric company means a considerable investment on the part of the company. To lose that man to another industry at the end of his training period is certainly a real loss. Part of the answer to this problem may lie in the education of young men to work toward a career with an electric company.

Competition with other fuels is also gradually gaining attention from utility executives. In each case where energy is required, the question arises as to the use of coal, oil, gas, or electricity. For many jobs, such as lighting, electric energy has pre-empted the field. For other industrial and household uses, electricity must compete with the other fuels. This competition depends primarily upon the relative prices, availability, dependability, and convenience of the various fuels. If electric energy is to improve its competitive position, continued research for new appliances, steady prices, and increased availability will be necessary. The electric utilities of the Southwest are doing an excellent job toward meeting these requirements. For example, the development of a more modern method of using low-cost lignite has recently reintroduced this fuel as a means of generating electric energy.

Another type of competition is of more concern to the private electric utilities of the Nation but might trouble those of this area in the future. This competition is from municipal, state, and Federally owned facilities. The problem has not been serious in the Southwest, as a whole, because of a lack of large publicly owned facilities. In other parts of the United States, such as the Pacific Northwest, the problem is much more acute. In some ways, the pressure for lower rates and the publicity attendant to the lower rates sometimes charged by municipally owned utilities have caused all private utilities considerable concern, although rate comparisons are meaningless without comparable costs, especially tax liabilities. Nevertheless, there seems to have developed a rather close cooperation between the municipal, state, and private utilities of this area.

Another one of the foremost problems of an electric company is the difficulty of forecasting the growth in its territory for a period of 4 to 5 years in the future. This has been especially so in the Southwest during the past decade or more. Because construction of major generating facilities is a slow process and because equipment orders for turbines must of necessity be placed at least 2 years in advance of construction, the need for intelligent forecasting is obvious. An error in constructing too much is nearly as serious as constructing too little. Because regulatory authorities will allow a utility to earn a return only upon that equipment used or useful in its operations, a surplus of capacity beyond that necessary for the near future and/or reasonable reserves might be disallowed. Also, to retire older equipment for obsolescence before its useful life has been completed is a policy disturbing both to the investors of the company and to the regulatory authorities.

To underestimate the growth of its territory would leave a utility short of needed capacity. Lacking any alternate means of supply, the company might have a serious shortage of power. This, of course, would create bad public relations and, if carried to the extreme, might be the cause of cities within its territory revoking the franchise and condemning its property. Thus, an intelligent estimate of future growth is necessary, and the utility executives must indeed be familiar with all economic characteristics of their territories. The official might be correct in his estimates of population growth and, yet, err in his estimates of the industrial development. A mistake on either of these major customer classes would place the utility in a difficult position.

Finally, the general problems of regulation are always present in the life of an electric company official. The increasing number and complexity of required reports and the necessity of defending its position relative to rates and service keep an electric company constantly aware of its unique position. Furthermore, even if the above were not enough, the strict control of the amount of return allowed is a real reminder of the regulation to which these companies are subjected. The overriding necessity for regulation of an industry essentially monopolistic in its own field is the only real justification. This, however, is sufficient, as the abuses and discriminatory policies which could occur without regulation are more serious than are the difficulties which regulation poses for the utilities. By a more uniform treatment of individual utilities and by reducing the bookkeeping procedures for the reports, some relief probably could be granted without destroying the effectiveness of the regulation.

### The Future

The future for electric utilities in the southwestern area is, of course, inseparably interlinked with the economic and population growth of the area. In terms of kilowatt-hours sold, the future industrial development is most important. In terms of revenue, the population and, therefore, the residential demand are of paramount interest. Included in the latter are the possible changes in customer usage and the number and types of electric appliances available in the

future. The companies of the Southwest already have made their forecast through 1956 in the form of new generating capacity on order, although their decisions are not irrevocable; most such orders can be cancelled, or partially so (as per prior agreement), with payment for work only up to the time of cancellation.

#### PROPOSED EXPANSION IN GENERATING CAPACITY<sup>1</sup>

(In kilowatts of nominal name-plate rating)

Year	Steam	Internal combustion	Hydro	Total
1952.....	180,000	13,000	—	193,000
1953.....	766,700	5,000	61,500	833,200
1954.....	832,500	—	35,000	867,500
1955.....	582,000	—	—	582,000
1956.....	292,000	—	28,600	320,600
Total.....	2,658,200	18,000	125,100	2,796,300

<sup>1</sup> As of June 30, 1952.

SOURCE: Federal Power Commission, Fort Worth Regional Office.

The accompanying table indicates the future which the utility executives believe to be in store for this area. By 1956, the scheduled expansion in electric facilities of 2,796,300 kilowatts will be a 56-percent increase over the 1952 capacity in service. As indicated before, there are already under construction plants whose aggregate capacities will reach 1,385,520 kilowatts. Their completion alone will raise the Southwest's generating capacity to 6,401,603 kilowatts. The additional 1,410,780 kilowatts planned for construction before the end of 1956 will boost the area's capacity to 7,812,383 kilowatts.

Evidently, the officials of most of the electric utility companies are expecting a substantial growth in the area. Whereas the combined expansion in generating capacity from 1951 to 1952 was 1,075,056 kilowatts, or a 27-percent increase, these utilities are now planning an expansion of 1,893,700 kilowatts, or a 38-percent increase, by the end of 1954. Undoubtedly, a considerable part of this expansion is planned to take care of the air conditioning sales in the next few years. Another major cause for expansion is probably an anticipated increase in industrial loads, especially in those areas where defense plants either have just been completed or are under construction.

The 14 major private companies alone are planning the construction of plants aggregating 2,625,250 kilowatts by 1956. This will be a 68-percent increase over the combined capacities of these companies as of December 31, 1952, and represents 94 percent of the scheduled expansion for all utilities.

In addition, the two major municipal utilities are planning the construction of plants totaling 180,000 kilowatts capacity by 1956. Combining these with the 14 private utilities means an expansion of 2,805,250 kilowatts. As these figures are based on year-end 1952 reports, it would seem that even greater construction is now envisaged than was planned in July of 1952. Truly, these 17 systems could be called the electric industry of the Southwest.

In the section of Arizona not included in the above southwestern area, plans for generating capacity expansion indicate the construction of 27,000 kilowatts capacity in 1953 and an additional 50,000 kilowatts by 1954, raising the kilowatt capacity of the area to 204,547 kilowatts by 1955. This is 60 percent above the present capacity of 127,547 kilowatts.

The future development of electric utilities is always tied to the population growth in the area. During the past three decades, population in the southwestern area under discussion rose from 7,447,000 people in 1930 to 8,276,000 people in 1940 and 9,774,000 people in 1950. On a percentage basis, these gains were 11.1 percent from 1930 to 1940 and 18.1 percent from 1940 to 1950. In the same periods, the capacity of electric generating plants in the area increased 39 percent from 1930 to 1940 and 127 percent from 1940 to 1950. Population estimates for 1955 range from 10,100,000 to 10,600,000 people for this area. Furthermore, a careful study of census figures would indicate that the rate of gain was largest from 1945 to 1950 and particularly from 1949 to 1950. If this rate continues, the higher estimate is likely to be correct.

All of the above discussion serves to point out some of the problems in forecasting consumer loads. It also shows some of the bases for the increase in generating capacity planned for construction by 1956. Within the limits and difficulties of forecasting, it is fairly clear that the electric utilities of this area have tried to provide for its future growth. How well their estimates will be fulfilled is a matter which only time can determine.



## REVIEW OF BUSINESS, AGRICULTURAL, AND FINANCIAL CONDITIONS



Sales at reporting department stores in the Eleventh Federal Reserve District during the first 2 weeks of March were 7 percent above a year earlier; sales from January 1 to mid-March showed the same year-to-year gain. Charge accounts receivable at the end of February were up 6 percent from a year earlier, and instalment accounts outstanding, up 51 percent; department store inventories showed a year-to-year gain of 9 percent. Sales during February at reporting furniture stores were about the same as a year ago.

Moderate to heavy rains over the District during March greatly improved the immediate outlook for agricultural production this year. Prospects for winter wheat production are fair to excellent in north Texas but unfavorable in the principal producing counties of the northwest. Cotton planting is complete in the Lower Rio Grande Valley and is making good progress in south central Texas.

Ranges and pastures in the eastern half of the District are providing ample grazing, while prospects for reviving ranges in the western sections were improved by recent rains. Live-stock are making rapid gains in eastern areas. Cattle marketings during March were above a year ago. Farm commodity prices in the District generally held steady or increased during March.

Between February 18 and March 18, loans of weekly reporting member banks in the District declined slightly, due partly to seasonal repayments. Investments declined somewhat during the 4 weeks. Total deposits of these banks rose, reflecting principally expansion of deposits of individuals and businesses. Gross demand deposits of all member banks in the District averaged somewhat lower in February than in January but higher than in February 1952.

Daily average crude oil production in the District during the first 3 weeks of March was at the lowest level in 7 months, reflecting principally the cutback in Texas allowables for that month. Crude oil stocks are sharply above a year ago, while stocks of major refined products have been running below year-earlier levels for several months. Drilling activity is below a year ago.

The number of nonagricultural wage and salary workers in the District in January was 4 percent above a year earlier. Manufacturing employment was up 6 percent, while employment in finance and government showed gains of 7 percent and 5 percent, respectively.

The value of construction contracts awarded in the District in February was 10 percent above January and 21 percent above a year earlier. The January-February total was 25 percent above a year ago, with residential awards up 43 percent.



Sales at reporting department stores in this District during the 2-week period ended March 14, 1953, were 7 percent above the comparable 2-week period in 1952. Total sales from January 1 through March 14, also were 7 percent above the same period last year.

During the month of February, sales at these stores totaled 4 percent more than in February 1952, despite one less business day, but were 7 percent below January sales. Percentage-wise, the year-to-year gain was highest in some of the durable lines. The homefurnishings departments registered an increase of 8 percent in sales volume; principal gains in this group were in the sales of major household appliances, which showed an increase of 35 percent over a year ago, and television sets and radios, which together rose 21 percent. Sales of nondurables in February were 1 percent above a year earlier. Large percentage gains were recorded among the major wearing apparel lines, e.g., sales of women's and misses' suits, up 16 percent; girls' wear, up 18 percent; and men's and boys' wear, up 7 percent.

At department stores doing both charge account and instalment account business, the ratios of cash sales and of charge account sales to total sales declined 1 percentage point each from a year earlier to 35 percent and 50 percent, respectively. The proportion of instalment sales rose from 13 percent to 15 percent of total sales.

Charge account collections during February were approximately the same as during February 1952. End-of-month charge accounts receivable, however, showed a year-to-year gain of 6 percent. Instalment account collections compared

## RETAIL TRADE STATISTICS

(Percentage change)

Line of trade by area	NET SALES			STOCKS <sup>1</sup>	
	Feb. 1953 from		2 mo. 1953 comp. with 2 mo. 1952	Feb. 1953 from	
	Feb. 1952	Jan. 1953		Feb. 1952	Jan. 1953
<b>DEPARTMENT STORES</b>					
Total Eleventh District.....	4	-7	5	9	9
Corpus Christi.....	7	-7	13	26	15
Dallas.....	3	-4	3	7	8
El Paso.....	10	-6	11	6	9
Fort Worth.....	#	-9	1	8	7
Houston.....	7	-11	9	13	9
San Antonio.....	6	-7	2	7	10
Shreveport, La.....	8	-7	10	15	12
Waco.....	-3	-9	4	5	8
Other cities.....	1	-6	3	8	5
<b>FURNITURE STORES</b>					
Total Eleventh District.....	#	-8	—	-6	1
Austin.....	56	12	—	11	-1
Dallas.....	4	-15	—	-9	1
Houston.....	-2	7	—	—	—
Port Arthur.....	11	-12	—	-30	-4
San Antonio.....	-20	1	—	—	—
Shreveport, La.....	12	-9	—	-2	#
<b>HOUSEHOLD APPLIANCE STORES</b>					
Total Eleventh District.....	10	-19	—	—	—
Dallas.....	21	-12	—	—	—

<sup>1</sup> Stocks at end of month.

# Indicates change of less than one-half of 1 percent.

WHOLESALE TRADE STATISTICS  
Eleventh Federal Reserve District  
(Percentage change)

Line of trade	NET SALES <sup>p</sup>			STOCKS <sup>1p</sup>	
	February 1953 from		2 mo. 1953 comp. with 2 mo. 1952	February 1953 from	
	February 1952	January 1953		February 1952	January 1953
Dry goods.....	— <sup>#</sup>	—4	2	22	5
Grocery (full-line wholesalers not sponsoring groups).....	3	—7	5	—4	8
Hardware.....	—4	8	—8	1	5
Industrial supplies.....	—4	8	—4	—9	—10
Metals.....	—13	—62	22	8	—12
Tobacco products.....	—2	—6	—7	—8	1
Wines and liquors.....	7	12	10	—34	—9
Wiring supplies, construction materials distributors.....	—27	18	—32	14	5

<sup>1</sup> Stocks at end of month.

<sup>p</sup>—Preliminary.

<sup>#</sup> Indicates change of less than one-half of 1 percent.

SOURCE: United States Bureau of the Census.

with a year ago were up 1 percent, although instalment accounts outstanding had risen 51 percent. Based on the ratios of collections during the month to receivables at the beginning of the month, the average pay-out period on regular charge accounts was 66 days — virtually the same rate as a year earlier. The average collection period on instalment accounts during February was 16 months, compared with 11 months during February 1952.

INDEXES OF DEPARTMENT STORE SALES AND STOCKS

(1947-49 = 100)

Area	UNADJUSTED				ADJUSTED <sup>1</sup>			
	Feb. 1953	Jan. 1953	Dec. 1952	Feb. 1952	Feb. 1953	Jan. 1953	Dec. 1952	Feb. 1952
SALES—Daily average								
Eleventh District.....	101	101	215	93	125	129	130	115
Dallas.....	101	98	206	94	119	127	127	111
Houston.....	112	115	248	100	143	148	148	128
STOCKS—End of month								
Eleventh District.....	132 <sup>p</sup>	122 <sup>r</sup>	120	121 <sup>r</sup>	133 <sup>p</sup>	135 <sup>r</sup>	130	122

<sup>1</sup> Adjusted for seasonal variation.

r—Revised.

p—Preliminary.

Department store inventories rose seasonally 9 percent during February and at the end of the month were 9 percent greater than a year earlier. The inventory position is not considered by department store management to be excessive in terms of sales or in relation to inventories a year ago. A prudent buying policy continued to be reflected, as stocks on order at the end of February were 3 percent lower than at the same time a year earlier and 9 percent under those reported on order at the end of January.

Furniture store sales during February at reporting stores in the District declined 8 percent from January but were about the same as in February 1952. Accounts receivable at the end of the month were 24 percent higher than on the same date last year, while the volume of collections rose 5 percent. Inventories, although 1 percent higher than at the end of January, were 6 percent lower than a year earlier.



As a result of moderate to heavy rains during March in virtually all sections of the District, moisture conditions are greatly improved and in many sections are adequate for immediate needs. Farmers in the Low Rolling Plains and Edwards Plateau of Texas are now preparing land and expect to plant normal acreages of spring crops. In northwestern counties, rainfall has been generally light, but for the most part it has been timely. In some central, northern, and eastern counties of Texas and in northern Louisiana, farmers need more open weather to dry fields and permit completion of corn and sorghum planting operations.

Farmers in the District have indicated that they will plant slightly higher acreages of sorghums and rice than were seeded in 1952, according to a recent report of the United States Department of Agriculture; acreages of oats, barley, and flaxseed also are higher. The Department's first estimate of cotton acreage will not be released until July 8.

Prospects for winter wheat production in north Texas are reported fair to excellent. Recent rains provided enough moisture to carry the crop well along toward maturity. In the principal producing counties in the northwest, however, the condition of the crop continues unfavorable. Showers have improved the color of the crop and some fields are starting to grow, but more rain is needed to maintain growth and to permit full development.

Cotton planting has been completed in the Lower Rio Grande Valley. Irrigation water in that area is still short, but general rains during March provided ample surface moisture and the crop is reported to be making satisfactory growth. Cotton planting permits were not required in the Valley this year; hence, there is no accurate indication of the total acreage planted. Private estimates are below the 1,000,000 acres that had been anticipated. Planting is nearing completion in the Corpus Christi area and is making rapid progress in south central Texas counties and in the irrigated sections of New Mexico and Arizona.

Developments in the commercial vegetable areas of Texas were generally satisfactory during March, although rains temporarily interrupted field work. The early crops of cantaloupes and watermelons in the Lower Rio Grande Valley are showing promise of maturing by late April or early May. Sweet corn harvest is expected to start the first week of April, and an early tomato harvest is anticipated. Considerable acreage of the late spring tomato crop in east Texas has been transplanted. Planting of onions and potatoes is under way in the Panhandle vegetable-producing area.

Ranges and pastures are reported to be producing green feed in eastern sections of the District. In northwest Texas, wheat fields provided some pasturage during March. In western areas, however, grass is still very short, although March rains improved the prospects for reviving the ranges.

LIVESTOCK RECEIPTS

(Number)

Class	FORT WORTH MARKET			SAN ANTONIO MARKET		
	February 1953	February 1952	January 1953	February 1953	February 1952	January 1953
Cattle.....	42,874	25,195	52,613	18,836	19,385	21,467
Calves.....	11,112	12,229	20,743	8,814	13,053	12,420
Hogs.....	50,109	88,776	87,728	1,773	6,311	—
Sheep.....	43,008	34,615	42,696	11,257	17,448	18,832

<sup>1</sup> Includes goats.

Livestock are making rapid gains on the improved feed supplies, and supplemental feeding has been discontinued in all but a few sections of west Texas where ranges and pastures are only now recovering following early March rains. Shearing of sheep and goats is in progress in the Edwards Plateau counties of Texas. Marketings of cattle during March were larger than a year ago, partly reflecting the increased numbers of cattle and calves on farms and ranches. A substantial number of "distress" cattle have been marketed as a result of an outbreak of "X" disease, reported to have resulted from the use of a contaminated feed.

Total wool production in the United States in 1952, is reported by the Bureau of Agricultural Economics at 265,973,000 pounds. This is 6 percent above production in 1951 and the largest since 1948. Production in the district states was down 3 percent, primarily as a result of a decline in Texas. Louisiana, Arizona, and New Mexico showed some increases.

FARM COMMODITY PRICES

Top Prices Paid in Local Southwest Markets

Commodity and market	Unit	Week ended		
		March 24, 1953	Comparable last week	Comparable last year
COTTON, Middling 15/16-inch, Dallas.....	lb.	\$ .3275	\$ .3275	\$ .4145
WHEAT, No. 1 hard, Fort Worth.....	bu.	2.68	2.66½	2.77
OATS, No. 2 white, Fort Worth.....	bu.	1.05½	1.04½	1.15¾
CORN, No. 2 yellow, Fort Worth.....	bu.	1.88	1.86¼	2.16¼
SORGHUMS, No. 2 yellow milo, Fort Worth.	cwt.	3.08	3.21	3.18
HOGS, Choice, Fort Worth.....	cwt.	22.25	21.50	17.75
SLAUGHTER STEERS, Choice, Fort Worth...	cwt.	23.00	23.00	34.00
SLAUGHTER CALVES, Choice, Fort Worth...	cwt.	23.00	24.50	34.00
STOCKER STEERS, Choice, Fort Worth.....	cwt.	22.00	23.00	33.00
SLAUGHTER LAMBS, Choice, Fort Worth...	cwt.	24.00	21.50	27.00
HENS, 3-4 pounds, Fort Worth.....	lb.	.23	.20	.20
FRYERS, Commercial, Fort Worth.....	lb.	.29	.27	.28
BROILERS, south Texas.....	lb.	.30	.25	—
WOOL, 12-months, west Texas.....	lb.	11.70	—	11.55
MOHAIR, kid, west Texas.....	lb.	1.16½	—	1.25

<sup>1</sup> Clean basis, delivered Boston.

Prices received by district farmers for most products held relatively steady or increased during March. Reports from commodity markets show that cotton prices advanced seasonally to the highest level since early December, while moderate increases were recorded for broilers, hogs, lambs, and grains, except sorghums. Prices of cattle and calves fluctuated within narrow limits, showing a slight net decline during the 4 weeks ended March 24.



Between February 18 and March 18, cash assets and deposits of the weekly reporting member banks in the District rose. Loans and investments declined. Reflecting principally the net effect of these changes, total resources rose slightly to \$4,661,899,000.

Loans declined \$10,666,000, or less than 1 percent, during the 4 weeks, with commercial, industrial, and agricultural loans more than accounting for the total reduction. Commodity dealers, grain and milling concerns, and food and liquor establishments reduced outstanding bank borrowings during most weeks. The decrease reflects, in part, seasonal repayments. Retail and wholesale trade establishments, sales finance companies, and manufacturers of metal and metal products increased the amounts of their indebtedness to these commercial banks.

Other changes in loans during the 4 weeks ended March 18 include increases of \$7,138,000, or 1.9 percent, in "all other" loans (a category which includes consumer-type loans) and \$4,313,000, or 3.3 percent, in real estate loans. Loans for financing security transactions rose, while loans to banks declined. Between March 19, 1952, and March 18, 1953, "all other" loans of these banks rose \$83,836,000, or 28 percent, a rate of increase which is more than double the expansion of total loans. The sharp increase in this category reflects principally the strong demand for consumer-type financing.

Investments of the weekly reporting member banks declined \$4,778,000, or slightly, to a total of \$1,375,658,000. A rather sharp reduction of Treasury bills and smaller de-

CONDITION STATISTICS OF WEEKLY REPORTING MEMBER BANKS IN LEADING CITIES

Eleventh Federal Reserve District

(In thousands of dollars)

Item	March 18, 1953	March 19, 1952	February 18, 1953
Total loans (gross) and investments.....	\$3,173,467	\$2,892,957	\$3,188,911
Total loans—Net <sup>1</sup> .....	1,779,152	1,565,310	1,789,771
Total loans—Gross.....	1,797,809	1,581,675	1,808,475
Commercial, industrial, and agricultural loans.....	1,186,815	1,097,744	1,203,212
Loans to brokers and dealers in securities..	10,627	7,915	11,452
Other loans for purchasing or carrying securities.....	71,699	58,993	68,361
Real estate loans.....	135,341	116,933	131,028
Loans to banks.....	9,950	549	18,183
All other loans.....	383,377	299,541	376,239
Total investments.....	1,375,658	1,311,282	1,380,436
U. S. Treasury bills.....	129,158	185,541	139,913
U. S. Treasury certificates of indebtedness..	149,640	167,464	152,993
U. S. Treasury notes.....	210,383	180,211	218,233
U. S. Government bonds (inc. gtd. obligations).....	707,196	610,701	693,043
Other securities.....	179,281	167,365	176,254
Reserves with Federal Reserve Bank.....	595,079	597,589	605,349
Balances with domestic banks.....	456,111	493,927	412,063
Demands with Federal Reserve Bank.....	2,540,786	2,433,314	2,460,490
Demand deposits—adjusted <sup>2</sup> .....	516,285	459,112	506,163
Time deposits except Government.....	79,644	76,873	122,852
United States Government deposits.....	843,136	799,709	850,576
Interbank demand deposits.....	16,500	0	35,150
Borrowings from Federal Reserve Bank.....	—	—	—

<sup>1</sup> After deductions for reserves and unallocated charge-offs.

<sup>2</sup> Includes all demand deposits other than interbank and United States Government, less cash items reported as on hand or in process of collection.

NOTE: Beginning with the report week of March 11, an additional bank's figures are included in this series; year-ago and month-ago figures have been revised accordingly.

creases in holdings of Treasury notes and certificates of indebtedness were offset, in part, by an increase in holdings of Government bonds. Investments in municipal and other non-Government securities rose somewhat less than 2 percent.

Between February 18 and March 18, deposits of the weekly reporting member banks rose \$46,775,000, or 1.1 percent, to a total of \$4,292,800,000. This expansion is approximately the same as that reported during the comparable period last year. Demand deposits of individuals, partnerships, and corporations increased \$68,055,000, or 2.7 percent. Demand deposits of states and political subdivisions rose, although decreases in demand deposits of banks and of the United States Government were more than offsetting. Time deposits rose \$10,132,000, or 2.0 percent, reflecting a further increase in the time accounts of individuals and businesses.

GROSS DEMAND AND TIME DEPOSITS OF MEMBER BANKS  
Eleventh Federal Reserve District  
(Averages of daily figures. In thousands of dollars)

Date	COMBINED TOTAL		RESERVE CITY BANKS		COUNTRY BANKS	
	Gross demand	Time	Gross demand	Time	Gross demand	Time
February 1951...	\$6,108,995	\$648,772	\$2,951,883	\$395,551	\$3,157,112	\$253,221
February 1952...	6,567,846	721,578	3,030,813	395,992	3,537,033	325,586
October 1952...	6,828,512	770,099	3,262,180	420,233	3,566,332	349,866
November 1952...	7,025,207	780,156	3,338,376	421,427	3,686,831	358,729
December 1952...	7,090,304	784,739	3,380,098	422,356	3,710,206	362,383
January 1953...	7,109,145	798,393	3,387,726	428,928	3,721,419	369,465
February 1953...	6,850,152	808,429	3,223,325	433,931	3,626,827	374,498

Gross demand deposits of all member banks in the District averaged \$6,850,152,000 during February, as compared with \$7,109,145,000 in January. This reduction of 3.6 percent reflects principally a decline in deposits of the reserve city member banks. In contrast with the decrease of demand deposits, time deposits rose 1.3 percent, with the reserve city and country member banks sharing approximately evenly in the increase. The expansion of time deposits in February marks a continuation of a trend which had prevailed in most months over a 2-year period.

Between February 15 and March 15, gold certificate reserves of the Federal Reserve Bank of Dallas rose \$17,228,000, while total earning assets declined \$29,840,000. The reduction of earning assets reflects principally a decrease of \$28,180,000 in discounts for member banks. Holdings of Government securities declined \$1,705,000. On March 15, Federal Reserve notes of this bank in actual circulation amounted to \$726,500,000, reflecting a decrease of \$2,479,000 during the month.

CONDITION OF THE FEDERAL RESERVE BANK OF DALLAS  
(In thousands of dollars)

Item	March 15, 1953	March 15, 1952	Feb. 15, 1953
Total gold certificate reserves.....	\$ 682,812	\$ 714,742	\$ 665,584
Discounts for member banks.....	21,000	3,000	49,180
Industrial advances.....	0	20	0
Foreign loans on gold.....	990	0	945
U. S. Government securities.....	1,151,613	1,064,166	1,153,318
Total earning assets.....	1,173,603	1,067,186	1,203,443
Member bank reserve deposits.....	1,087,035	1,080,563	1,081,871
Federal Reserve notes in actual circulation....	726,500	676,112	728,979

## ANNOUNCEMENT

## REVISION OF BANK DEBITS SERIES

Beginning with the report for March 1953, the monthly bank debits series, which measures the extent to which depositors are using their checking accounts, will be revised to increase its statistical value. The revised series will comprise debits only to demand accounts of individuals, partnerships, and corporations and of states and political subdivisions; debits to United States Government accounts and to time deposit accounts will be eliminated.

The elimination of debits to Treasury Tax and Loan Accounts and to accounts of collectors of internal revenue at commercial banks will remove debits which are not representative of economic activity. The elimination of debits to time deposit accounts will have little effect on the volume of debits, since time deposits are rather stable, but it will improve the significance and comparability of rates of deposit turnover.

In the aggregate, the volume of debits on the revised basis will be lower than the present series by only a small percent; figures for some individual centers, however, will be affected more than others. Estimates are being made on the revised basis for each reporting center for the months of 1952 and for January and February 1953. Thus, year-ago figures will be comparable with current figures.

BANK DEBITS, END-OF-MONTH DEPOSITS  
AND ANNUAL RATE OF TURNOVER OF DEPOSITS

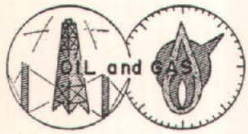
(Amounts in thousands of dollars)

City	DEBITS <sup>1</sup>			DEPOSITS <sup>2</sup>			
	February 1953	Percentage change from Feb. 1952	Jan. 1953	Feb. 28, 1953	Feb. 1953	Annual rate of turnover Feb. 1952	Jan. 1953
ARIZONA							
Tucson.....	\$ 107,005	19	-13	\$ 118,333	10.9	10.1	12.6
LOUISIANA							
Monroe.....	45,415	6	-20	53,134	10.3	10.4	12.5
Shreveport.....	189,451	#	-22	203,443	11.2	11.4	14.2
NEW MEXICO							
Roswell.....	24,455	12	-13	29,336	9.6	9.1	10.4
TEXAS							
Abilene.....	46,845	-3	-17	58,329	9.7	10.7	11.6
Amarillo.....	126,341	-10	-14	120,791	12.6	15.1	14.4
Austin.....	166,540	#	-24	122,780	16.3	17.2	20.8
Beaumont.....	124,909	2	-12	103,892	14.3	14.8	16.0
Corpus Christi.....	137,396	5	-16	117,509	14.2	15.2	16.6
Corsicana.....	12,245	-3	-24	22,511	6.5	6.7	8.3
Dallas.....	1,497,390	12	-16	1,103,741	16.3	15.7	19.1
El Paso.....	205,171	17	-16	175,161	14.3	14.2	16.8
Fort Worth.....	486,283	3	-15	421,909	14.2	15.1	16.4
Galveston.....	72,409	-3	-13	103,493	8.4	8.8	9.6
Houston.....	1,554,897	4	-14	1,189,669	15.6	15.8	17.8
Laredo.....	21,204	-1	-16	26,296	9.7	11.3	11.5
Lubbock.....	118,040	5	-19	115,458	12.0	13.0	14.0
Port Arthur.....	43,140	-1	-14	43,457	11.9	11.8	13.6
San Angelo.....	33,583	-17	-13	52,523	7.7	9.2	8.5
San Antonio.....	347,713	-7	-13	402,291	10.3	11.5	11.8
Texarkana <sup>3</sup> .....	18,478	-10	-13	27,078	8.2	10.1	9.1
Tyler.....	52,732	3	-14	57,688	10.9	11.4	12.4
Waco.....	70,449	6	-10	85,616	9.6	9.0	10.0
Wichita Falls.....	80,638	-1	-11	107,458	9.0	9.2	9.8
Total—24 cities.....	\$5,582,729	5	-15	\$4,861,896	13.8	14.0	16.0

<sup>1</sup> Debits to deposit accounts except interbank accounts.<sup>2</sup> Demand and time deposits, including certified and officers' checks outstanding but excluding deposits to the credit of banks.<sup>3</sup> These figures include only one bank in Texarkana, Texas. Total debits for all banks in Texarkana, Texas-Arkansas, including two banks located in the Eighth District, amounted to \$34,640,000 for the month of February 1953.

# Indicates change of less than one-half of 1 percent.

Debits to deposit accounts reported by banks in 24 cities of the District declined 15 percent in February as compared with the total for January. The reduction in the volume of spending which these figures reflect was common among all reporting cities, with decreases ranging from 10 percent to 24 percent. Although the smaller number of business days in February as compared with January accounts for part of the decline, other seasonal factors also contributed to the decrease. Charges to deposit accounts in February were 5 percent above the total reported for February 1952. The annual rate of turnover of deposits was 13.8 in February, as compared with 16.0 in January and 14.0 in February of last year.



Daily average crude oil production in the Eleventh Federal Reserve District during the first 3 weeks of March was at the lowest level since last August, when production was

held down for the purpose of reducing excessively heavy stocks accumulated during the oil strike a few months earlier. The 3,135,000-barrel production per day through March 21 averaged 94,000 barrels less than during February and 108,000 barrels less than during the same period a year earlier. March production reflects the cutback in Texas allowables for that month, which was the third in a period of 4 months. Moreover, a further cutback in the Texas allowables of a little over 119,000 barrels has been announced for April by the State's conservation agency; Louisiana and Oklahoma also have announced reductions. Large stocks, together with an anticipated seasonal decline in demand, have been the immediate factors dictating the most recent cuts in allowables.

The shutting in of production of wells in the Spraberry trend was ordered by the Texas Railroad Commission, effective April 1. This action was taken to eliminate the flaring of large quantities of gas occurring in conjunction with the oil production. Since the daily allowables of the Spraberry wells prior to the shutdown averaged around 82,000 barrels, the closing of these wells will accentuate the reduction in district oil production.

The decline in this District more than accounted for the decrease in the Nation's daily average crude oil production during the first 3 weeks of March. National production averaged 6,460,000 barrels per day, which, although down from February, is 46,000 barrels more than a year earlier.

District stocks of crude oil rose significantly during February but then showed a moderate decrease in the first half of March. Stocks on March 14, at 145,000,000 barrels, were 13,400,000 barrels higher than on the corresponding date last year. National stocks also increased over a year ago.

Refinery activity in the District during February and early March continued at a high level for the seventh consecutive month. Crude runs to refinery stills in February averaged 2,110,000 barrels a day, the same as in January and within about 50,000 barrels of the average in each of the previous

## CRUDE OIL PRODUCTION

(Barrels)

Area	February 1953		Increase or decrease in daily average production from	
	Total production	Daily avg. production	Feb. 1952	Jan. 1953
<b>ELEVENTH DISTRICT</b>				
Texas R. R. Com. Districts				
1 South Central.....	1,029,000	36,750	3,688	-671
2 Middle Gulf.....	4,687,550	167,413	-2,358	457
3 Upper Gulf.....	13,924,050	497,287	-1,349	-2,367
4 Lower Gulf.....	7,472,150	266,862	526	2,875
5 East Central.....	1,464,050	52,288	-10,234	-615
6 Northeast.....	10,963,750	391,563	-7,635	-1,972
East Texas.....	7,277,200	259,900	-11,248	-2,745
Other fields.....	3,686,550	131,663	3,613	773
7b North Central.....	3,120,600	111,450	23,084	-763
7c West Central.....	5,000,450	178,588	36,700	2,830
8 West.....	27,219,150	972,112	-33,152	17,366
9 North.....	5,276,250	188,437	26,077	455
10 Panhandle.....	2,129,400	76,050	-7,121	-3,803
Total Texas.....	82,286,400	2,938,800	28,226	13,792
New Mexico.....	4,894,750	174,812	18,879	468
North Louisiana.....	3,221,050	115,038	-12,831	1,275
Total Eleventh District...	90,402,200	3,228,650	34,274	15,535
OUTSIDE ELEVENTH DISTRICT...	92,510,600	3,303,950	144,979	14,088
UNITED STATES.....	182,912,800	6,532,600	179,253	29,623

SOURCE: Estimated from American Petroleum Institute weekly reports.

6 months. February crude runs were 7 percent larger, however, than in the same month of 1952. Crude runs in the Nation averaged 7,005,000 barrels per day, which was down 1 percent from the previous month but was 6 percent higher than a year earlier.

Stocks of major refined products in this District have been running below year-earlier levels for the past several months, and this situation may account for the sustained high level of refinery activity in the District. In the week ended March 21, district stocks of the four major refined products were 4 percent less than on the same date a year ago. Meanwhile, stocks of major refined products in the Nation as a whole have shown substantial increases over year-earlier levels in each of the past several months; in the week ended March 21, these stocks totaled 283,400,000 barrels, or 9 percent higher than a year earlier. With the major portion of the heating season having passed, national stocks of distillate fuel oils were 19 percent higher than a year ago. Gasoline stocks stood at a record high, 3 percent above a year earlier.

While imports of crude petroleum and refined products have continued for several months at a daily rate exceeding 1,000,000 barrels, they have declined from the peak level in early January. Imports during the 6 weeks ended March 14 averaged 1,035,000 barrels per day, or 158,000 barrels higher than in the same period last year.

No major or widespread changes in prices of either crude petroleum or refined products occurred in this District in the first month following the elimination of price controls. The same situation prevailed in the rest of the Nation, with the exception of the increases on the West Coast and for Pennsylvania Grade crude in the Appalachian area noted last month.

Drilling activity in the Nation during the first 12 weeks of this year was off from the peak level reached at the end of last year and has been running substantially lower than in

the same period of 1952. The total number of active rotary rigs in the week ended March 23 was 2,510, which is 338 less than the December high and 212 less than a year earlier. Most of this year-to-year decrease occurred in the west Texas area and reflects the contraction in drilling activity in the Spraberry trend.

Proved reserves of crude oil and natural gas liquids of the four producing states lying wholly or partly within the Eleventh Federal Reserve District — Louisiana, New Mexico, Oklahoma, and Texas — amounted to more than 24,000,000,000 barrels at the end of 1952, according to estimates released by the American Petroleum Institute and the American Gas Association. This figure represents a net increase of about 350,000,000 barrels over the level of estimated proved reserves of the previous year. This increase was achieved despite the record production of more than 1,700,000,000 barrels during 1952.

The increase in reserves of crude oil and natural gas liquids in district states in 1952 was smaller than in any previous year since 1946. Moreover, the net addition to reserves in relation to the number of wells drilled and to the footage drilled, both of which reached all-time highs, was appreciably smaller than the average of the past 10 years. The Southwest's share of the Nation's proved reserves showed a small decline from 73.6 percent at the end of 1951 to 72.9 percent at the end of 1952.

Considerable variation existed among the four district states with respect to the changes in proved reserves of crude oil and natural gas liquids during 1952. Estimated proved reserves in Texas declined 151,000,000 barrels, or about 1 percent, the first decline this State has experienced since 1943 when the war curtailed drilling activity. There are indications that a substantial downward revision in the estimated reserves of fields in the Spraberry trend is largely responsible for the failure of Texas to make a better showing during the past year. On the other hand, New Mexico experienced the largest net increase in its proved reserves in over 10 years, with a gain of 143,000,000 barrels, or 19 percent. Meanwhile, proved reserves in Louisiana were up 10 percent, and in Oklahoma, up 3 percent.

#### CRUDE OIL AND NATURAL GAS LIQUIDS ESTIMATED PROVED RESERVES

(In millions of barrels of 42 U. S. gallons)

Area	Reserves Dec. 31, 1951	New supplies developed in 1952			Reserves Dec. 31, 1952	Changes in reserves in 1952
		Extensions and revisions	Dis- coveries	Production in 1952		
Louisiana <sup>1</sup> .....	2,970	455	111	264	3,271	302
New Mexico.....	742	188	24	70	885	143
Oklahoma.....	1,788	237	33	215	1,843	55
Texas <sup>1</sup> .....	18,192	791	222	1,165	18,041	-151
Total Eleventh District states....	23,692	1,672	391	1,714	24,040	348
United States....	32,193	2,728	578	2,542	32,957	765

<sup>1</sup> Includes off-shore reserves.

NOTE: Detail will not necessarily add to total, due to rounding.

SOURCES: American Petroleum Institute,  
American Gas Association.

#### NATURAL GAS: ESTIMATED PROVED RESERVES

(In billions of cubic feet)

Area	Reserves Dec. 31, 1951	New supplies developed in 1952			Net change in under- ground storage	Net production in 1952	Reserves Dec. 31, 1952	Changes in reserves in 1952
		Extensions and revisions	Dis- coveries	Production in 1952				
Louisiana <sup>1</sup> ....	29,005	2,176	1,540	—	1,270	31,452	2,447	
New Mexico...	11,590	2,669	217	4	442	14,039	2,449	
Oklahoma.....	11,804	548	200	14	801	11,765	-40	
Texas <sup>1</sup> .....	105,653	1,460	2,950	2	4,330	105,733	80	
Total Eleventh District states.	158,053	6,853	4,908	18	6,843	162,988	4,936	
United States.	193,812	8,934	5,411	199	8,640	199,716	5,905	

<sup>1</sup> Includes off-shore reserves.

<sup>2</sup> Less than one.

NOTE: Detail will not necessarily add to total, due to rounding.

SOURCE: American Gas Association.

Estimated proved reserves of natural gas in the four producing states in the District increased almost five trillion cubic feet, or 3 percent. This increase is somewhat smaller than in each of the previous 5 years. At the end of 1952, total proved reserves of these states amounted to 163 trillion cubic feet, which is 82 percent of the Nation's total. Most of the increase in proved reserves among district states occurred in Louisiana and New Mexico. Texas showed only a very slight increase, while Oklahoma reported a small decrease.

Marketed production of natural gas in the producing states lying wholly or partly within the Eleventh District showed a substantial seasonal increase during the fourth quarter of 1952 to reach a record high of 1,676 billion cubic feet. The 12-percent gain over the previous quarter was slightly larger than in the corresponding period of 1951. As compared with a year earlier, marketed production in the fourth quarter was 9 percent higher.

#### MARKETED PRODUCTION OF NATURAL GAS

(In millions of cubic feet)

Area	Fourth quarter 1952	Fourth quarter 1951	Third quarter 1952	Year 1952p	Year 1951
Louisiana.....	324,200	278,600	279,800	1,135,000	1,054,199
New Mexico.....	92,100	83,200	83,100	354,600	300,169
Oklahoma.....	154,500	145,800	134,100	644,800	538,756
Texas.....	1,105,200	1,025,300	998,100	4,168,700	3,781,136
Total.....	1,676,000	1,532,900	1,495,100	6,303,100	5,674,260

p—Preliminary.

SOURCE: United States Bureau of Mines.

While marketed production of district states for the entire year 1952 was up 11 percent over that of the previous year, this relative increase was significantly less than in the preceding 2 years. Production in 1951 rose 22 percent and in 1950, 17 percent. Restrictions on the addition of new customers in some northeastern states and relatively mild weather during the winter heating season were among the factors tending to hold down the expansion in the marketed production of natural gas. The district states experiencing the larger increases in 1952 production were Oklahoma and New Mexico, with gains of 20 percent and 18 percent, respectively. The increase in marketed production in Texas amounted to 10 percent and in Louisiana, 8 percent. These four states accounted for 79 percent of the Nation's production in 1952, as compared with 76 percent in 1951.



The total number of nonagricultural wage and salary workers in the five states of the District in January was 3,815,500, or 4 percent above January 1952, according to state employment commission reports. It is believed that subsequent reports will show that total nonagricultural employment increased to about 3,817,000 workers in February and 3,829,000 workers in March, resulting from increased trade activity during the Easter buying season and from increases in employment in service establishments. Moreover, prospects are good for a continued increase in nonfarm employment in these states during the spring months.

One of the major changes in nonfarm employment in district states in January occurred in the number of manufacturing wage and salary workers. However, the seasonal decline from 725,600 workers in December to 716,200 in January was considerably less than a year earlier, and the January figure is 6 percent above a year ago. Employment in this category has already shown signs of a spring rise, with defense-related industries leading the way. Manufacturing employment is estimated to have risen to 719,000 workers in February and 720,000 in March.

## NONAGRICULTURAL EMPLOYMENT

Five Southwestern States<sup>1</sup>

Type of employment	Number of persons			Percent change Jan. 1953 from	
	January 1953p	January 1952	December 1952	Jan. 1952	Dec. 1952
	Total nonagricultural wage and salary workers..	3,815,500	3,657,100	3,918,200	4.3
Manufacturing.....	716,200	678,300	725,600	5.6	-1.3
Nonmanufacturing.....	3,099,300	2,978,800	3,192,600	4.0	-2.9
Mining.....	231,600	223,700	229,800	3.5	.8
Construction.....	282,300	270,700	286,600	4.3	-1.5
Transportation and public utilities.....	408,400	407,400	416,200	.2	-1.9
Trade.....	967,200	924,700	1,021,900	4.6	-5.4
Finance.....	143,400	133,600	143,900	7.3	-3
Service.....	439,800	424,100	441,700	3.7	-4
Government.....	626,600	594,600	652,500	5.4	-4.0

<sup>1</sup> Arizona, Louisiana, New Mexico, Oklahoma, and Texas.

p—Preliminary.

SOURCE: State employment agencies.

Of the seven major nonmanufacturing employment categories, as outlined in state reports, only mining showed an increase in January over the December total. The most impressive increases in January over a year earlier were in finance and government, which show gains of 7 percent and 5 percent, respectively.

In January, only Dallas and Houston among the major labor market areas of the District were placed in a category of a balanced labor supply, according to a Department of Labor report. The other 13 markets remained areas of moderate labor surplus.

The value of construction contracts awarded in the District in February, estimated at \$108,920,000, was 10 percent

## VALUE OF CONSTRUCTION CONTRACTS AWARDED

(In thousands of dollars)

Area and type	February 1953	February 1952	January 1953	January—February	
				1953	1952
ELEVENTH DISTRICT.....	\$ 108,920	\$89,944	\$ 99,325	\$ 208,245	\$ 166,134
Residential.....	49,555	33,782	48,404	97,959	68,512
All other.....	59,365	56,162	50,921	110,286	97,622
UNITED STATES <sup>1</sup> .....	1,021,310	885,206	1,075,868	2,097,178	1,787,297
Residential.....	418,568	396,438	460,036	878,604	734,159
All other.....	602,742	488,768	615,832	1,218,574	1,053,138

<sup>1</sup> 37 states east of the Rocky Mountains.

SOURCE: F. W. Dodge Corporation.

above the total for January and 21 percent above that for February 1952. Both residential and nonresidential awards showed increases over year-earlier levels. For the first 2 months of 1953, the value of construction contracts awarded in the District rose 25 percent above the same months of 1952, compared with a gain of 17 percent for the United States. Residential awards in the District in the 2-month period were up 43 percent from a year earlier, while the corresponding gain in the Nation was 20 percent.

## BUILDING PERMITS

City	February 1953		Percentage change in valuation from		2 months 1953		Percentage change in valuation from 2 months 1952
	Number	Valuation	February 1953		Number	Valuation	
			Feb. 1952	Jan. 1953			
LOUISIANA							
Shreveport....	324	\$ 1,517,958	13	-40	651	\$ 4,049,585	64
TEXAS							
Abilene.....	121	817,039	138	47	230	1,373,704	43
Amarillo.....	375	2,077,000	-21	9	653	3,979,836	-11
Austin.....	230	2,373,747	-30	-15	466	5,175,438	6
Beaumont.....	164	501,020	-40	-63	397	1,865,179	-7
Corpus Christi..	333	3,499,552	186	27	791	6,247,894	156
Dallas.....	1,691	8,226,083	1	-25	3,219	19,125,179	34
El Paso.....	321	1,377,693	-64	-34	570	3,463,328	-26
Fort Worth....	812	4,463,519	56	23	1,649	8,083,649	38
Galveston.....	81	1,410,048	365	47	157	2,370,339	361
Houston.....	917	7,813,960	4	-18	1,943	17,367,169	#
Lubbock.....	285	1,452,616	-11	-31	559	3,556,854	29
Port Arthur....	110	413,933	136	81	233	642,065	48
San Antonio... 1,942	3,953,543	6	15	3,743	7,390,067	8	
Waco.....	228	838,003	-62	40	431	1,434,554	-59
Wichita Falls.. 51	1,110,437	-66	101	125	1,664,112	-82	
Total.....	7,985	\$41,846,151	-5	-9	15,817	\$87,788,952	6

# Indicates change of less than one-half of 1 percent.

Construction contracts awarded in Texas during January and February provide for 8,898 dwelling units in new residential buildings. This compares with 6,319 in the same months last year and 11,120 units 2 years ago. In terms of value, private contracts accounted for 98 percent of the January-February total. Contracts for nonresidential building in Texas in this period also were ahead of a year ago by 43 percent, due to increased activity in the construction of commercial, industrial, educational, religious, public, and social and recreational buildings. The total value of contracts for buildings in Texas in the 2-month period was up 45 percent from a year ago; contracts for construction of public works and utilities were lower.