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# CITY PUBLIC SERVICE BOARD

OF SAN ANTONIO, TEXAS



# 28th annual report

FISCAL YEAR ENDED JANUARY 31,

# 1970





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## ABOUT THE FRONT COVER

Three graphic video terminals like the one pictured on the cover will be used to monitor the gas and electric systems. The operator has a large scale picture of the system on one screen. On the other he can get specifics of any detail with a light pen which can also be utilized to make adjustments or correct trouble at any point in the system. The alpha numeric video cabinet at right gives print-out information.

CITY PUBLIC SERVICE BOARD  
*"Partners with You for Better Living"*





# HIGHLIGHTS OF THE YEAR

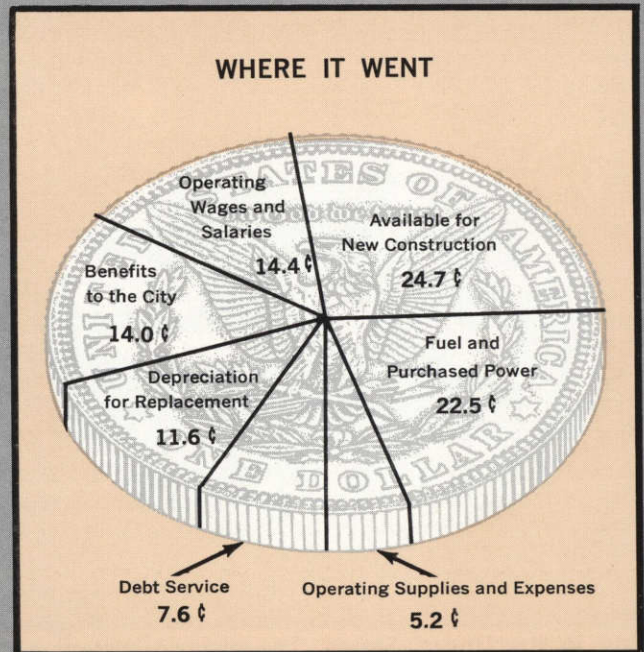
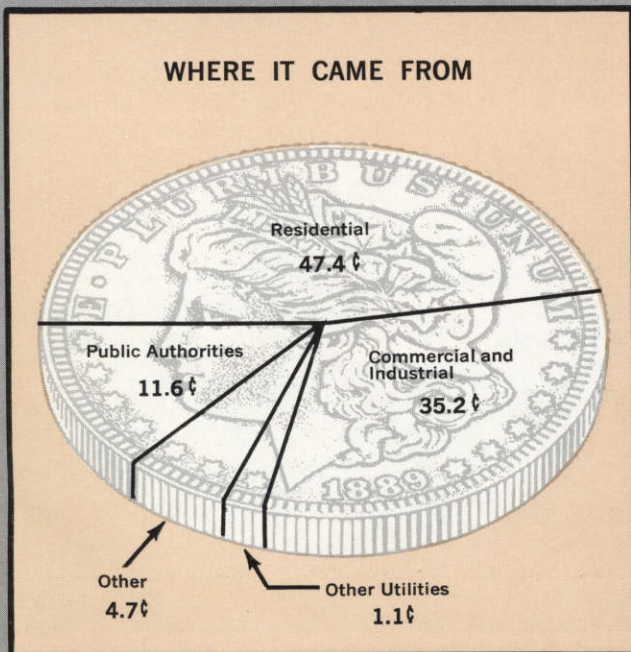
Gross Revenue increased \$7,457,779 to . . . . .	\$79,507,875
Maximum Electric System Load increased 166,000 KW to . . . . .	1,107,000
Distribution Substations added 235,200 KVA to total . . . . .	2,100,949
44.3 Miles of Transmission Lines were added to total . . . . .	529.4
6,001 Electric Customers were added to total . . . . .	234,565
4,831 Gas Customers were added to total . . . . .	201,397
72 Miles of Gas Mains were added to total . . . . .	2,422

## SUMMARY OF APPLICATION OF REVENUE AND SOURCE OF FUNDS FOR IMPROVEMENTS

Gross Revenue for 1969-70 . . . . .	<u>\$79,507,875</u>
Application of Revenue:	
Purchase of Gas and Electricity . . . . .	\$17,875,557
Other Operating and General Expenses . . . . .	11,636,858
Maintenance of the Systems . . . . .	3,897,605
Benefits to the City . . . . .	11,131,102
For Debt Requirements . . . . .	6,073,776
Allowances for Depreciation . . . . .	9,248,364
Balance from Operations . . . . .	<u>19,644,613</u>
Total . . . . .	<u>\$79,507,875</u>

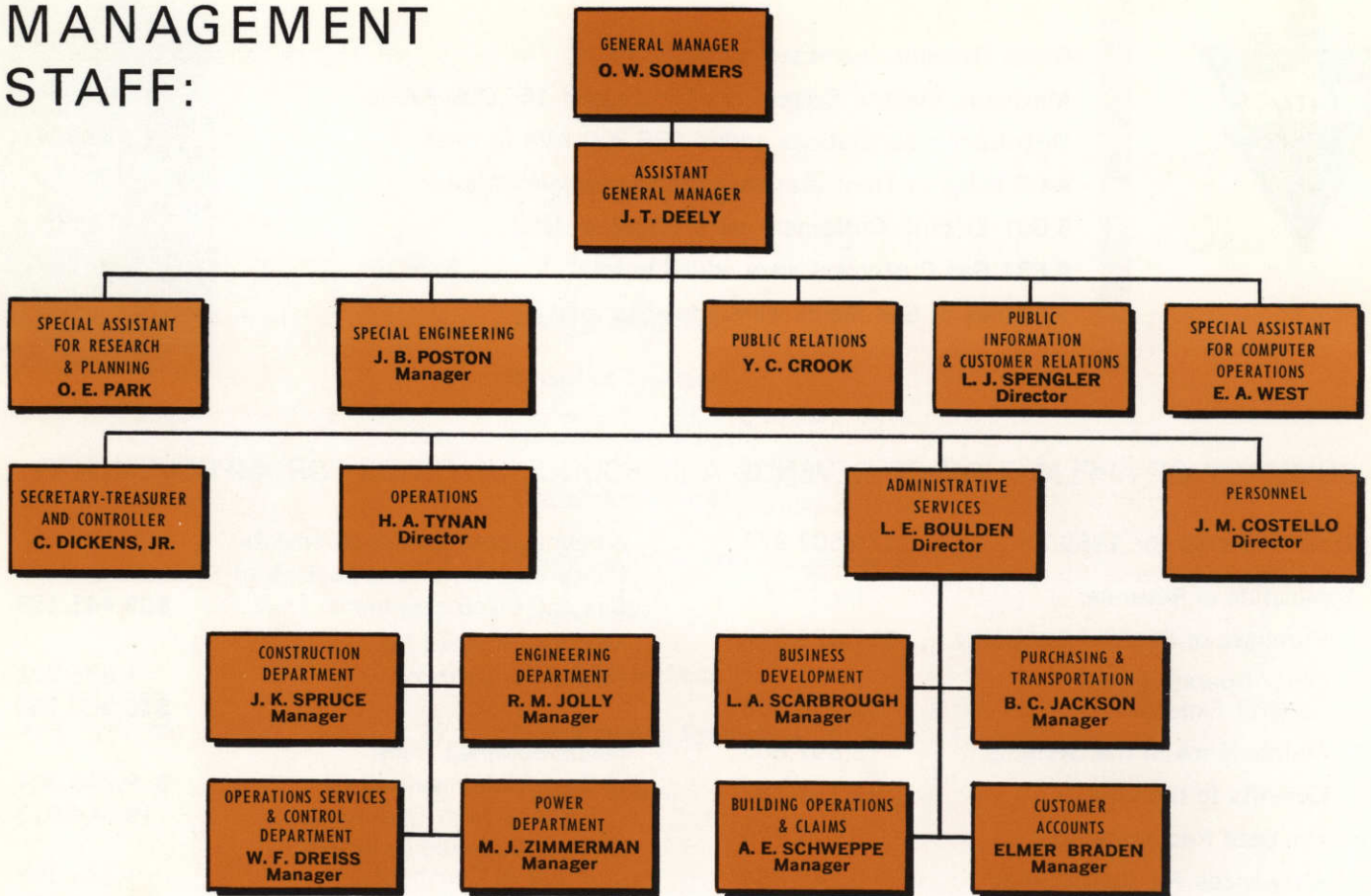
Amount Spent for Replacements, Improvements, and Expansion of Gas and Electric Systems . . . . .	\$39,445,159
Amount Provided for Future Construction . . . . .	1,535,001
Total . . . . .	<u>\$40,980,160</u>
Funds obtained from:	
Depreciation Allowance . . . . .	\$ 9,248,364
Balance from Operations . . . . .	19,644,613
Contributions and Advances in Aid of Construction . . . . .	1,133,268
Bond Construction Fund . . . . .	10,904,194
Sale of Property . . . . .	<u>49,721</u>
Total . . . . .	<u>\$40,980,160</u>

## SOURCE AND DISTRIBUTION OF THE CPSB UTILITY REVENUE DOLLAR





# MANAGEMENT STAFF:



## A HISTORY OF CPSB

The City of San Antonio acquired the gas and electric utilities in 1942 after the holding company which had owned them was forced to dispose of many of its properties under provisions of the Holding Company Act of 1935.

The purchase price was \$33,950,000 which the City financed through the issuance of revenue bonds. Thus, without any cash outlay and at no cost to the taxpayers, the City acquired the utility properties which were to be an excellent investment.

Under the provisions of the indenture and in accordance with Texas statutes, the governing body of the City of San Antonio appointed a five-member Board of Trustees. One as a member ex-officio must always be the Mayor of the City of San Antonio. Five trustees is the maximum permitted under state law.

The new City Public Service Board, although starting without any funds, met the challenges of rapid growth and shortages of personnel and material all during the World War II period.

In the post-war period, the systems expanded rapidly as the area became one of the fastest growing in the United States. The electric system has expanded at a historic rate of 11 per cent a year

and the gas system has had a steady but lower growth pattern.

Today, the electric system which serves all of Bexar County, and some fringe areas outside the county, has an installed capacity of approximately 1,300,000 kilowatts. It serves 234,565 customers. The gas system consists of 2,422 miles of high pressure steel mains and serves 201,397 customers in the San Antonio urban area.

Both systems have maintained a tradition of excellent service and very low rates for residential, commercial, industrial and government customers.

Ample plans have been made for service to an area with a population of 1,000,000 by 1974 and nearly 2,000,000 by the year 2000. The electric system has cooling lakes installed which will provide for the addition of 4,000,000 kilowatts. At the present rate of growth this capability will all be needed over the next 20 years. The gas system has been expanded and should be able to provide service for the surrounding San Antonio area in the foreseeable future. All components of the systems are properly maintained to provide good service to growing numbers of customers.



## BOARD OF TRUSTEES

\***LEROY G. DENMAN, JR.**, Chairman  
Chairman, S. A. Loan & Trust Co.

\*\***JOHN R. LOCKE**, Chairman Elect  
Partner, Kelso, Locke & King, Attys.

\*\***J. H. MORSE**, Vice Chairman Elect  
Retired Business Executive

**JOHN GATTI**, Trustee  
Vice Pres. & Regional Manager  
Dempsey-Tegeler & Co., Inc.

\*\***ELOY CENTENO**, Trustee-Elect  
Vice Pres. & General Manager  
Centeno Supermarkets

**W. W. McALLISTER**,  
Ex-Officio Trustee  
Mayor, City of San Antonio

\*Retired, Jan. 31, 1970

\*\*Elected Feb. 1, 1970

## FORMER TRUSTEES

ALBERT STEVES III  
2-1-62 to 3-15-69

CHARLES GEORGE  
11-26-62 to 1-25-65

GEN. JOHN M. BENNETT, JR.  
1-6-50 to 1-31-64

MELROSE HOLMGREEN  
2-1-51 to 10-31-62

J. H. CALVERT  
10-10-50 to 1-31-62

W. E. SIMPSON  
11-29-48 to 1-31-60

W. P. NAPIER  
10-24-42 to 2-1-51

J. H. FROST  
8-6-47 to 10-9-50

D. F. YOUNGBLOOD  
10-24-42 to 12-31-49

COL. W. B. TUTTLE  
10-24-42 to 11-29-48

FRANZ C. GROOS  
10-24-42 to 6-4-47



O. W. Sommers, general manager, is shown at left with the City Public Service Board of Trustees. Left to right are John Gatti, Mayor W. W. McAllister, Leroy G. Denman, Jr., John R. Locke, John H. Morse and Eloy Centeno.





## PROGRESS REPORT



O. W. SOMMERS

LEROY G. DENMAN, JR.

The fiscal year ending January 31, 1970 was another one of substantial accomplishment and continued progress in serving the gas and electric utility's growing number of customers in the San Antonio area.

The value of good planning was evidenced during the extremely hot summer and again during the very cold weather in January when the utility was able to meet unprecedented customer demands for electricity and natural gas without difficulty. The record peak demand for electricity of 1,107,000 KW was above expectations. And on January 6, 1970 a new record of 366,786 MCF of gas was delivered.

Throughout the year interruptions in service were the infrequent exception and then only small areas were affected for very short periods. Plans for the future and current progress toward implementation of those plans will enable the Board to continue its excellent record of meeting all customer needs while maintaining a low, stable rate structure.

### Low Rates

Rate studies show that San Antonio residential customers continue to enjoy the lowest gas and electric rates of any of the 25 major cities in the U.S. and any of the large cities of Texas. Rates for commercial, industrial and governmental customers are also very low.

The City, which purchased the utilities for \$33,950,000 in 1942, has found, due to the formula for payments to the City General Fund, an increasing source of benefits. In the past year, benefits in cash and services totaled a record \$11,131,102 and through more than 27 years of operations have amounted to \$104,342,130.

### Construction Expenditures

During the past year, total construction requirements were \$39,878,000, a decrease of \$389,000 from the record requirements of the previous year. Over one-half of the additions were for power plant facilities. This included \$14,534,000 toward construction of 405,000 KW Unit #3 at Braunig Plant, \$2,236,000 for completion of Calaveras Lake and \$2,859,000

for engineering and progress payments for the first unit at the Calaveras Power Plant. Unit 3 at Braunig will go into service in spring of 1970; Units 1 and 2 at Calaveras, both rated at 430,000 KW, will go into service in 1972 and 1974. Engineering has already started on Unit 2 at Calaveras.

Other electric system construction totaled \$12,860,000 and included transmission lines, substations and facilities to serve present and new customers.

Gas system construction during the year was \$3,594,000 of which over two-thirds was spent to serve new customer loads. Construction common to Board-wide operations amounted to \$2,647,000 and covered expenses for development of the Gas and Electric Operations (GEO) system, communications system improvements and automotive and work equipment.

### Financing Construction

During the past fiscal year, \$10,904,000 in bond funds were required above the funds available from revenues to finance the construction program, a ratio of 72% from revenues and 28% from borrowed funds.

For the new fiscal year, a construction budget of \$42,090,000 has been approved. It includes a carry-over of \$2,785,000 in uncompleted construction orders from the past year. Approximately \$18 million will be expended for power plant construction.

It is estimated that revenues from operations will need to be supplemented by approximately \$8.8 million from revenue bonds in fiscal year 1970-71. This additional deduction from the \$21,235,000 in construction funds available on January 31, 1970 and the necessity of maintaining a minimum of \$5,000,000 in the improvements and contingencies funds to meet emergencies indicates that a major bond issue will be required in the near future.

### Triple A Rating

The Board's strong financial position has earned its securities the highest "AAA" rating by both Moody's and Standard and Poor's Investment Services, which in the past has



insured a favorable rate of interest, saving the rate payers millions of dollars in interest charges. The average interest rate of the bonds currently outstanding of 3.89% is very low in comparison with the high interest rates of today.

The Board has benefited from the reinvestment of bond funds until they are needed. Time deposits have yielded up to 6.25% during the past year and will earn up to a maximum of 7.5% in fiscal year 1970-71.

#### Operations

To improve customer service, an automated customer inquiry facility was installed during the year. All customer service business is now centralized and the center is staffed with personnel specially trained to handle all service inquiries. Information pertaining to any customer account is available in random access computer storage and can be made available in a matter of seconds.

Sales of electricity during the year totaled a record 4,258,120,000 kwh, an increase of 15.2% over the previous period. This produced electric revenues of \$61,991,000, higher by \$7,253,000 or 13.3% than the previous year's record.

The use of electricity by residential, commercial, industrial and governmental customers increased. Usage per residential customer for the year was 7,303 kwh, a new record surpassing the 6,237 kwh record of the previous year. It was also materially above the national average of 6,559 kwh. Contrary to the general trend of price increases, the revenue per residential kilowatt hour established a record low of 1.90¢ kwh as compared to 1.96¢ the previous year.

Gas sales of 29,748,578,000 cubic feet represented an increase of 4.4%. Gas revenues of \$14,696,000 were 3.6% above the previous year.

Gross revenues during the past fiscal year were a record \$79,507,875, surpassing last year's \$72,050,096. Operating expenses were \$33,410,020. After deducting \$11,131,102 for benefits to the City of San Antonio, \$6,073,776 for bond requirements and \$9,248,364 for replacement of plant, a balance of \$19,644,613 was available to apply toward the cost of new plant.

#### Progress in Technology

Excellent progress continues to be made in management and utility technology. By the end of the 1970-71 fiscal year, the data base necessary to implement the Management Information System will have been designed and accumulated on the RCA Spectra 70/45 computer. The building of the new Gas and Electric Operations Center is progressing and the necessary hardware and software is being installed and developed to make this system operable late in 1970.

Plans are being made for the addition of 345,000 Extra High Voltage (EHV) transmission lines to increase the capabilities of interchange of power with neighboring utilities and also within the systems. The improvements and additions of all facilities must be made in time to supply the requirements of the customers and long range planning must fill this need.

#### New Trustees

There have been a number of changes on the Board of Trustees. On March 15, 1969, Albert Steves III, vice chairman, suffered a heart attack and died. The Trustees and staff of the utilities note with deep sorrow his passing and the many contributions he had made in insuring the continuing financial soundness of Board operations.

On June 18, 1969, John Gatti, an investment banker and local vice president of a national investment brokerage firm, was selected to fill the vacancy. At the same time, Eloy Centeno, prominent businessman and civic leader, was selected as Trustee-elect to fill the next occurring vacancy on the Board.

At the beginning of the new 1970-71 fiscal year, John R. Locke was elected Chairman, John H. Morse, Vice Chairman and Eloy Centeno a Trustee, to fill the vacancy created by the expiration of the two terms of office of the Chairman. In another change, Claude Dickens Jr., was appointed Secretary-Treasurer and Controller, filling the vacancy created when W. E. Bessellieu, Secretary-Treasurer, retired March 1, 1970 after more than 50 years of service to the Board.

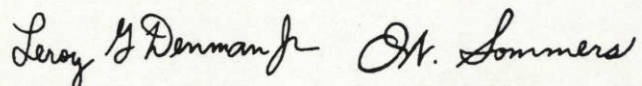
The Board is deeply appreciative of the active participation and support of Mayor Walter W. McAllister, ex-officio Trustee. Through his good offices the objectives of the City of San Antonio and the utilities are co-ordinated to the best interests of the citizens and the rate payers.

With this report, the Chairman will conclude ten years of Trusteeship, six of which were served in his present position. He notes with regret the expiration of his two terms of office and has many memories of pleasant experiences in his service to the citizens of San Antonio on the Board. He is particularly appreciative of the many courtesies extended by his fellow Trustees and the staff and employees during the ten year period.

The Trustees and management staff note with deep appreciation and great admiration the technical skills and dedicated motivation of Board employees, who have been responsible for the wonderful record of service that the utilities have compiled through the years.

With the implementation of the existing plans, and a continuation of a proven planning process, there seems to be every assurance that San Antonio will have all the advantages of a gas and electric system which will provide excellent service at low rates to its customers in the rapidly growing service area.

Very truly yours,



LEROY G. DENMAN, JR.  
Chairman

O. W. SOMMERS  
General Manager



# SERVING OUR CUSTOMERS



The "Instant Information" concept which the Board introduced this past year has proved to be one of the greatest advances in customer service in many years. A product of the Management Information System, this service makes complete information concerning any account available to contact personnel in a matter of seconds. The simple procedure of entering the customer's address or account number on the keyboard of a video data terminal and pressing a key for the proper display activates the computer which produces complete information usually before the customer has finished his request.

The system makes it possible for each clerk to handle twice as many calls and also provides a monitoring device which can be used in training personnel. The VDT's are also utilized for issuing orders to the service centers via computer and teletype terminals, for updating new accounts on the computer, and for handling gas and electric trouble calls during working hours and also in times of emergencies such as those caused by storms.

Twenty-four VDT's are housed in the new and highly functional Customer Service Center which is the focal point of all customer business. Personnel in this center handle cash payments, requests for service made on personal visits, or any other customer matters of a non-technical nature.

As a convenience to its customers, the Board has made it possible to transact nearly all business by telephone or through the mails.

The MIS has also made possible the implementation of one stop service, whereby a new customer can expect one person to handle all contacts necessary to establish gas and electric service. Records on the computer have been established for all new construction sites from plats of subdivisions. Each lot has an account number and address so when a customer starts to build, the Board already has basic information. From this point, one contact representative takes care of all requirements from temporary service for construction right on through to the time when his services have been inspected and his permanent service connected. The computer generates the paper work necessary for installing the service which greatly simplifies and expedites the addition of new customers.

"Instant information" on any account is available in seconds through video data terminals.





As a necessary prelude to these innovations, the Board has established a uniform system of addresses throughout the county, which is the basic service area. This has included the numbering of all apartments and of changing route and box numbers to street and road addresses which are an extension of the numbering system in San Antonio. Other agencies and businesses are expected to benefit greatly from this system which will enable them to provide service more promptly.

In its constant search for means of improving service to its customers, the Board has made many changes. All customer service functions have been centralized and personnel have been extensively cross-trained to improve their capabilities in handling the great variety of requests received. Qualified engineers and technically oriented personnel are available to serve residential, commercial, industrial and public authority customers.

In keeping with its slogan: "Partners with you for better living," the Board practices good citizenship in many ways. Informational advertising is scheduled in the local press which not only extols the advantages of appliances but also gives the customer many practical tips on how to save money on air conditioning and heating by operating these appliances properly. The Board also maintains a telephone information service to handle inquiries on all appliances. In cooperation with other area efforts, an extensive promotion in the national business press is scheduled to attract new business and industry.

The Board's home economists conduct programs on lighting, kitchen planning, and many phases of homemaking including dietetics. Classes are conducted for such diverse groups as "Project Head Start" children, Girl Scouts, groups of disadvantaged youths, homemaking groups, brides-to-be and home economists.

The Board also conducts plant tours for many groups, teaches the principles of safe wiring in schools and has a highly successful "Wiring on the Farm" program. Last year Board-coached Farm Skill teams won two first place awards in state-wide competition.



1 Board instructor is made honorary fire chief after instructing City firemen in wiring safety.

2 New Customer Services Center houses all information pertaining to customers' accounts.

3 Home Service Division offers a wide range of courses and instructions for Board customers.



# PLANNING FOR GROWTH OF THE

Planning is the key to the orderly and economical development of a utility. Electric planning is particularly critical since the use of electricity in San Antonio is increasing at a rate of 11% a year as compared to the industry average of about 8%.

The gas system, which has recently been modernized, should have no difficulty providing for the needs of the customers in the foreseeable future. A major gas supply loop encircles the city. From this, radial mains can be extended to serve every growing area.

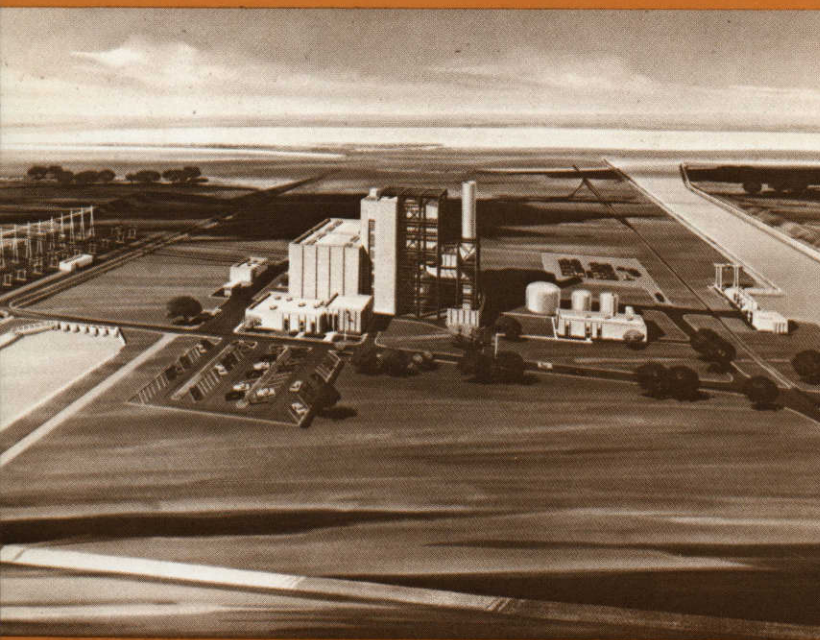
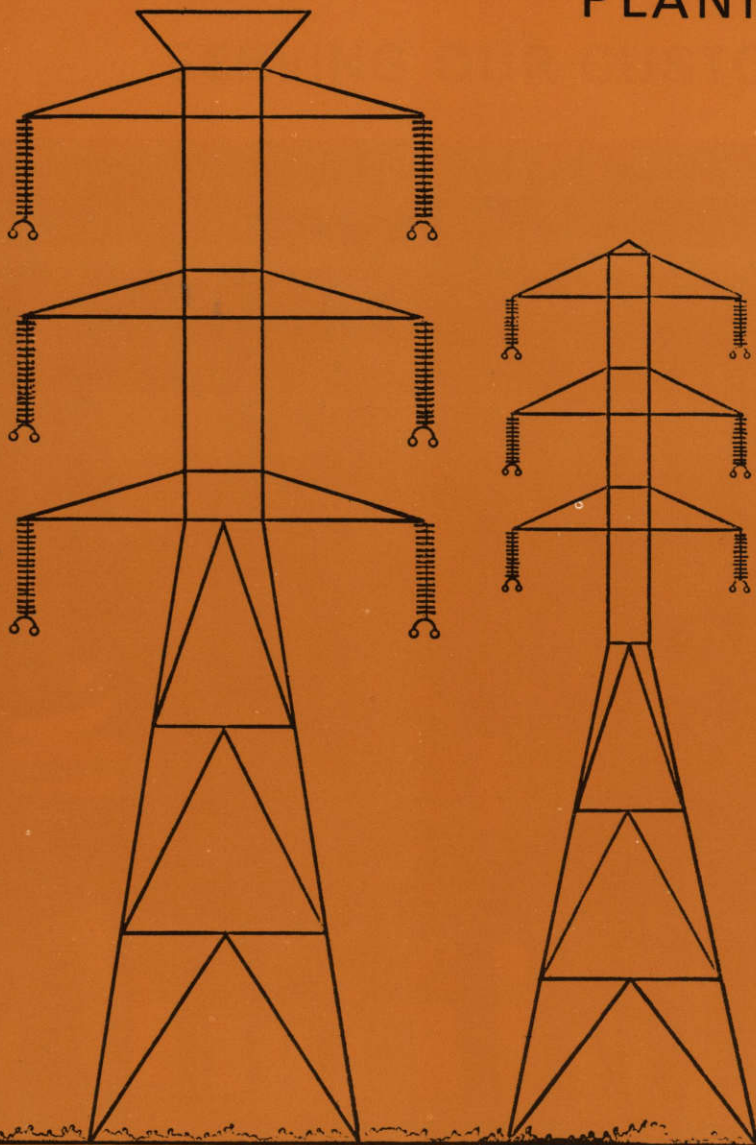
However, the electric system with its very rapid growth rate requires the utilization of every modern forecasting technique. It requires about ten years to plan and build a new power plant. Equipment such as boilers and turbine generators must be ordered five years in advance. There have been abnormally long lead times in the industry on deliveries of many critical items.

In its planning the Board has provided for the installation of 3,500 MW of power at the new Calaveras Lake and 500 MW additional at Braunig power plant during the next two decades. Plans are being made for strengthening interconnects with neighboring utilities during the 1970's. A 345 kv double circuit interconnect with the Lower Colorado River Authority system is being planned. This will tie in with

Upper. Profile shows difference between new 345 KV transmission lines planned and present 138 KV towers.

Lower left. Architects' view of first unit at Calaveras power plant, under construction at year end.

Lower right. New 30,000 KVA mobile transformer provides an extra measure of reliability of service for CPSB customers.





# GAS & ELECTRIC SYSTEMS

a similar line around the perimeter of San Antonio and with other extra high voltage interconnects with Central Power and Light's system to the south by the mid '70's.

Board planners work with the eight other utilities in the Texas Interconnected Systems to insure the highest reliability of service and to effect economies in operations. Through the interchange of electricity during certain operating conditions and in emergency, and through proper planning and scheduling of the installation of generating units within the systems, greater reliability of service can be assured.

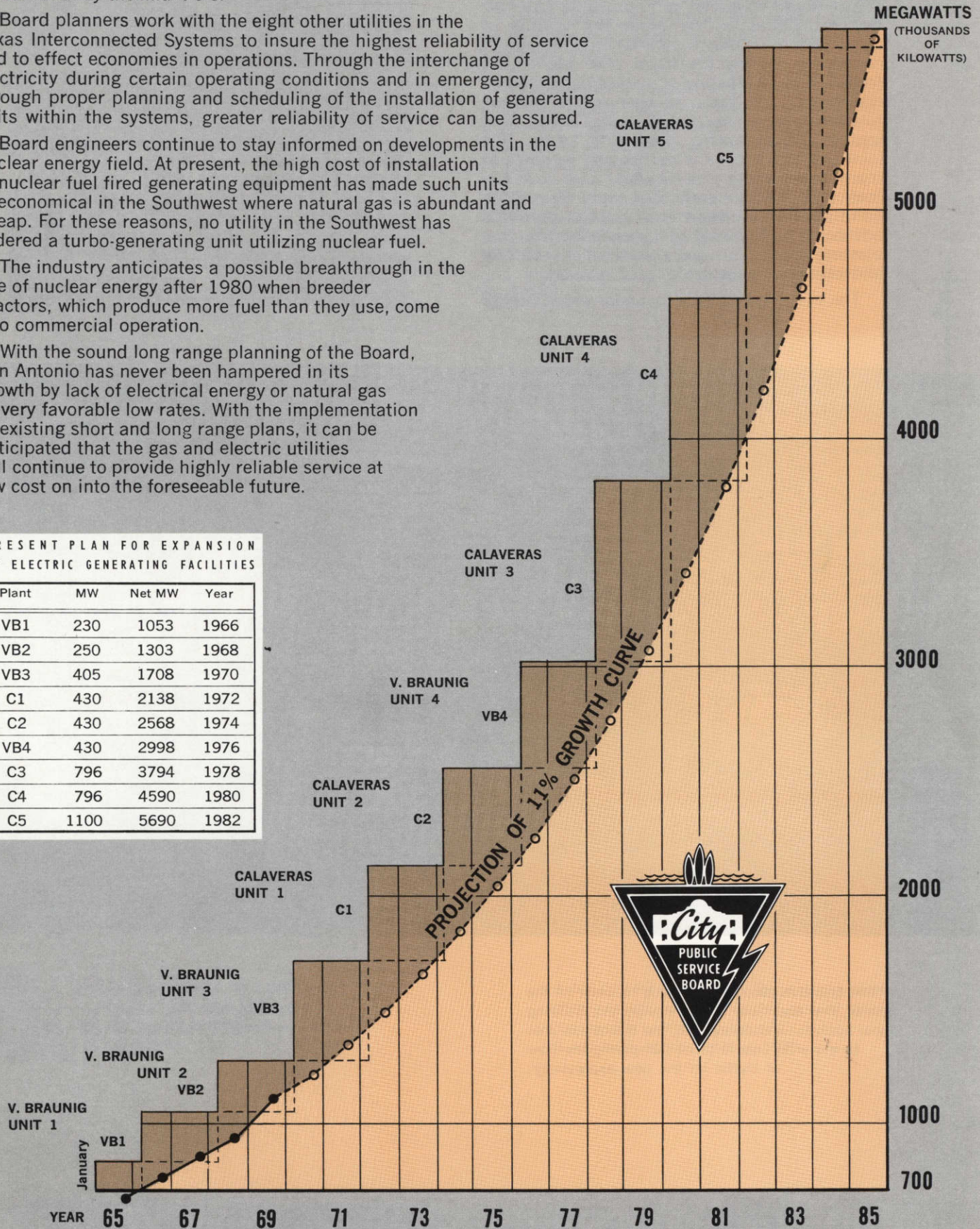
Board engineers continue to stay informed on developments in the nuclear energy field. At present, the high cost of installation of nuclear fuel fired generating equipment has made such units uneconomical in the Southwest where natural gas is abundant and cheap. For these reasons, no utility in the Southwest has ordered a turbo-generating unit utilizing nuclear fuel.

The industry anticipates a possible breakthrough in the use of nuclear energy after 1980 when breeder reactors, which produce more fuel than they use, come into commercial operation.

With the sound long range planning of the Board, San Antonio has never been hampered in its growth by lack of electrical energy or natural gas at very favorable low rates. With the implementation of existing short and long range plans, it can be anticipated that the gas and electric utilities will continue to provide highly reliable service at low cost on into the foreseeable future.

PRESENT PLAN FOR EXPANSION OF ELECTRIC GENERATING FACILITIES

Plant	MW	Net MW	Year
VB1	230	1053	1966
VB2	250	1303	1968
VB3	405	1708	1970
C1	430	2138	1972
C2	430	2568	1974
VB4	430	2998	1976
C3	796	3794	1978
C4	796	4590	1980
C5	1100	5690	1982







## CONSTRUCTION

The Board continues to improve its cost-cutting techniques in the expanding volume of construction it must undertake to serve its customers. During the fiscal year, techniques for the joint installation of underground electric distribution and gas have been further refined to a point where substantial savings will be realized to balance other increasing costs. This joint use of trenches is particularly valuable in many areas where a particularly hard rock formation is encountered. To cope with these conditions, the Board has also purchased advanced equipment and developed its own blasting techniques as a further cost-cutting and efficiency measure.

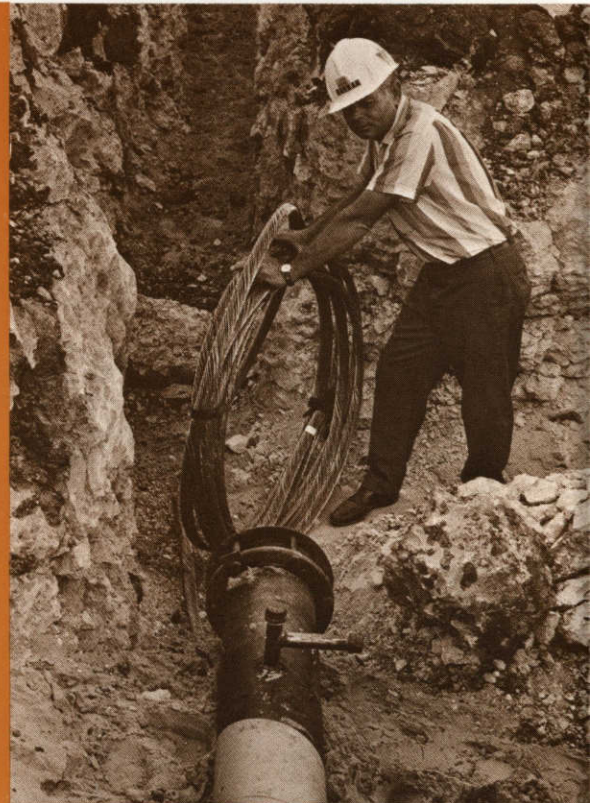
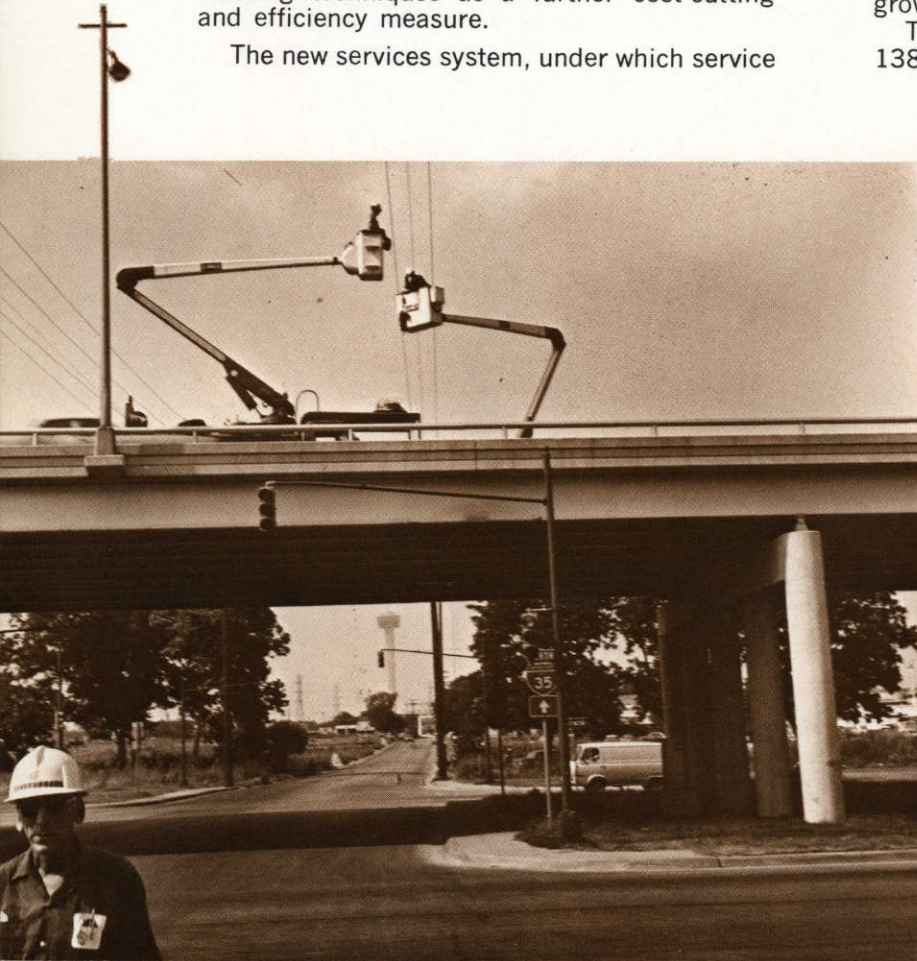
The new services system, under which service

orders are controlled by the computer and can be scheduled well in advance of customer requirements, also has made it possible to utilize installation crews more effectively.

Heavy reliance is made on work and time-saving construction equipment such as aerial buckets, wheel type trenchers, conductor stringing equipment and all the other newly developed equipment used in heavy industry.

During the past year, construction of transmission and substation facilities has been particularly heavy as it becomes necessary to transport increasing amounts of power to rapidly growing new areas in San Antonio.

The double circuit, bundle conductored 138,000 volt transmission line from the Braunig



The Board is placing increasing reliance on the use of time and labor saving equipment. Utilizing aerial buckets as shown above, the Board was able to move its lines without hampering the flow of traffic on the new expressway.

Board-developed techniques for burying underground Residential Distribution electric cable under gas mains are saving thousands of dollars in labor costs.



power plant to the Marbach substation in south-east San Antonio was completed and good progress was being made on a similar transmission line from Braunig power plant around the eastern perimeter of the city to the Skyline substation in the northeast area. Both of these projects are part of the outer transmission loop around the city. A map of the project is shown on page 14.

Over 50% of the construction budget was spent on power plant construction. Over \$14 million was spent on completing the 405,000 KW third generating unit at the Braunig power plant. It will be ready for service in the spring of 1970. Most of the remaining \$6 million in the power plant construction budget was spent

on completion of Calaveras cooling lake and for engineering on 430,000 KW units 1 and 2 which must be ready to serve customers in 1972 and 1974.

A considerable amount of time was spent in installing control equipment at regulator stations in the gas system and transducers in the substations in advance of the computerization of the GEO system.

There is every indication that the high level of Board construction activities will continue as substantial building developments and the addition of large numbers of new customers and increasing load of existing customers is predicted.



Construction was completed on 3,500 acre Calaveras Lake this past year, and it was nearly filled. Its cooling waters will provide for up to 3,500,000 kw.

A 405,000 kw third unit at Braunig lake plant, shown at left, will provide for growing loads during the next two summers. It will be in service in May, 1970.



# THE FUTURE: COMPUTER CONTROLLED GAS

As production and distribution facilities expand in size and complexity to meet the requirement for abundant economical power, system control equipment to allow improved energy management procedures must be updated.

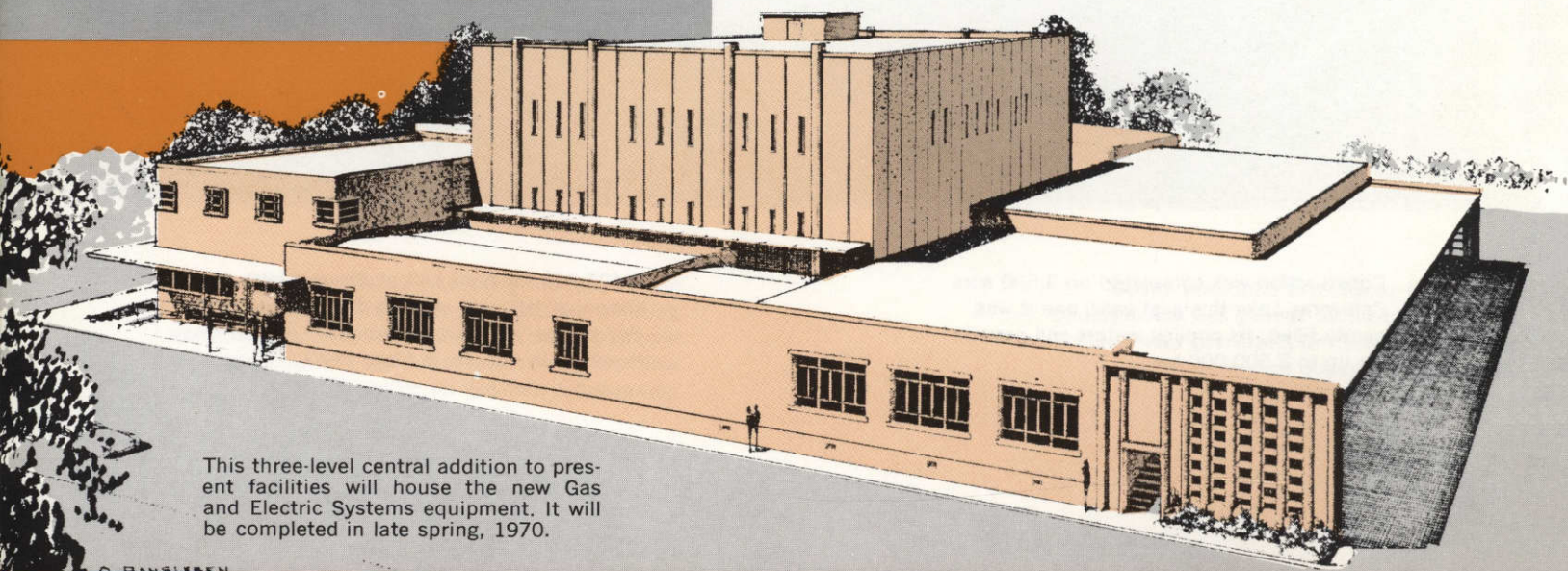
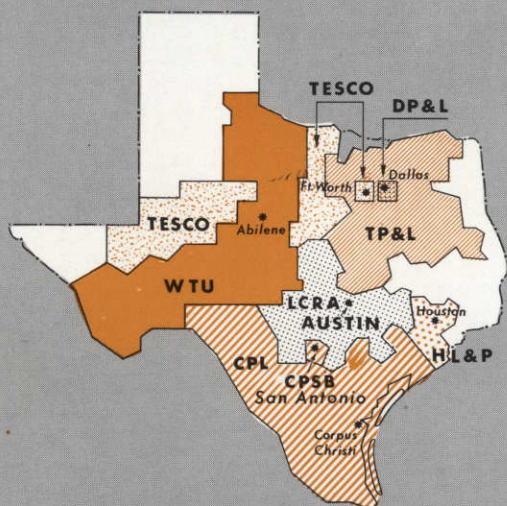
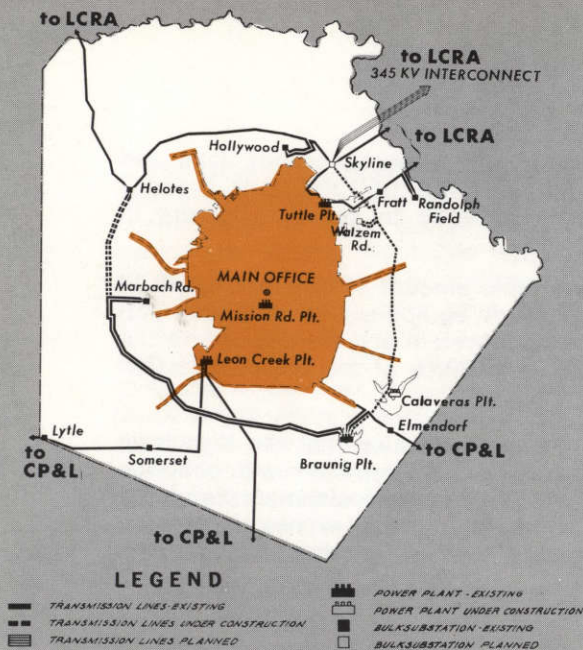
In the past, the Board's electric and gas operating procedures emanated from two separate control centers. The electro-mechanical control equipment utilized was rapidly approaching practical expansion limits and was no longer manufactured except at premium costs. Foreseeing the need for consolidating the electric and gas dispatching functions, the management staff in 1966 assigned a group of engineers to the task of designing and supervising the construction of a new centralized operations center with advanced-style, modern control equipment.

Since then design, equipment acquisition, software development, building construction and testing have proceeded according to plan. Initial live operational trials are expected by late 1970.

The new control system design includes the advanced concepts and equipment essential for efficient energy management. At the heart of the system are two Sigma 5 computers which provide rapid computation enabling improved decision capability by dispatching personnel. With comprehensive data analysis available, complex operating decisions during emergencies will be simplified.

Upper left. Construction phases of 138,000 volt loop around San Antonio. Provisions have been made for building 345,000 volt double circuit line on same right-of-way.

Center left. CPSB electric system with respect to other utilities in the Texas Interconnected Systems.



This three-level central addition to present facilities will house the new Gas and Electric Systems equipment. It will be completed in late spring, 1970.

© HANSLER



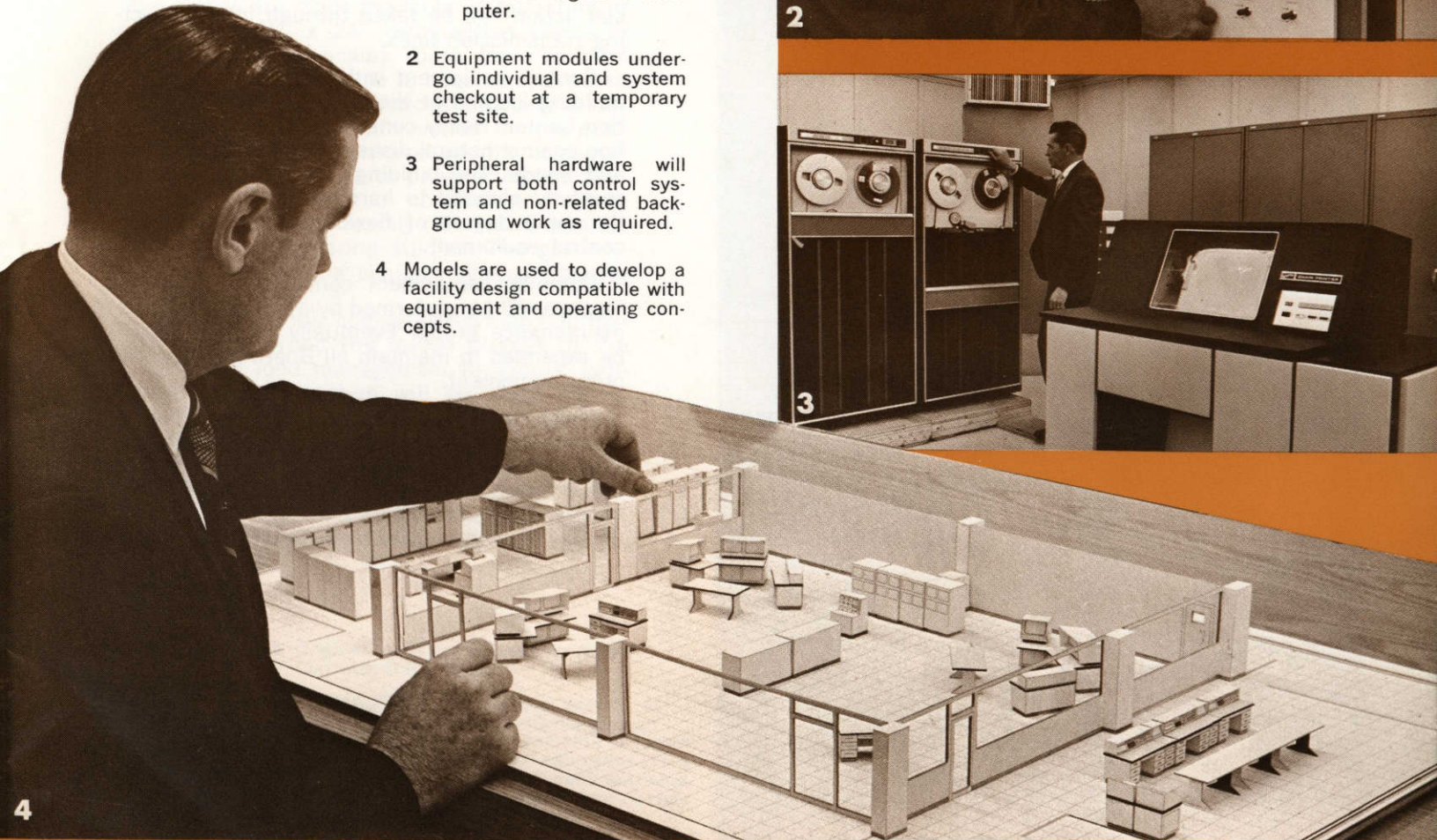
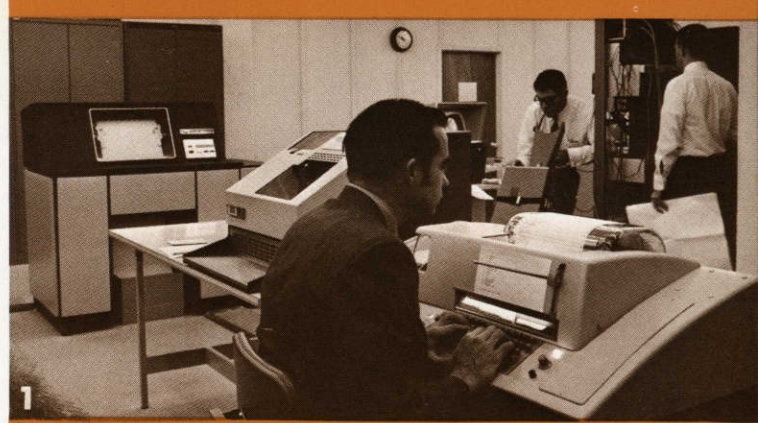
## AND ELECTRIC OPERATIONS

The computer, as the hub, links all operations system information-gathering equipment and will communicate with the central RCA computer of the Management Information System. Thus, system operations data will be available through the RCA central processor to satisfy information and reporting requirements in other areas such as engineering and accounting.

The computer-oriented control system was also chosen because it allows for the flexibility and versatility so necessary in planning during this era of rapidly advancing technology and early obsolescence of old style designs. Computer programs allow alterations to fit unforeseen new system operating concepts which formerly required extensive hardware changes.

Computer and peripheral hardware is arranged in modular form to permit additions or changes in a building block fashion without restriction to a single equipment supplier. Careful configuration planning has produced an integration of hardware from several suppliers with each module selected on the basis of best performance in its area of application.

- 1 Initiating a program on the new Sigma 5 computer.
- 2 Equipment modules undergo individual and system checkout at a temporary test site.
- 3 Peripheral hardware will support both control system and non-related background work as required.
- 4 Models are used to develop a facility design compatible with equipment and operating concepts.







(CONTINUED)

The display and control system, depicted on the front cover, is the most versatile available. It consists of three operator consoles equipped with TV-like screens which present the operator with dynamic pictorial system condition information. Operators may actuate remote field devices by applying a light pen directly to the face of the video tubes which display diagrams and data of remote stations and controllable devices. Results of operator actions are displayed immediately upon execution of operator commands.

Control system reliability is achieved by selection of proven equipment. Stand-by equipment has been provided where a single failure would severely impair system operation capability. All system operations functions have been consolidated at a single location. This is done to decrease the possibility of misinterpretation of operating procedure and to allow use of common equipment and personnel for both Gas and Electric Operations.

Capability of the new equipment will also allow for better assessment of electric system conditions with respect to neighboring utilities. This is in order that the best mutually beneficial action can be taken through interconnecting transmission lines.

Control equipment will be housed in a new building located at the Jones Avenue Distribution Center. Heavy construction affords protection against natural disasters such as tornadoes and floods. The building layout and size were carefully planned to harmonize with and offer the same degree of flexibility included in the control equipment.

Computer equipment control system maintenance will be performed by a specially trained maintenance group. Eventually this group will be expanded to maintain all Board-owned computer equipment.

When completed, the new Gas and Electric Operations (GEO) System will provide the Board with the latest control techniques and equipment combinations available for effective energy management best to insure customers reliability of service under all operating conditions.

Remote stations such as this at every substation will provide for computerized central control of gas and electric operations.



# NEW MAPPING SYSTEM

The project of remapping the Board's 1,556 square mile service area, begun several years ago by Board engineers, has been completed. The grid coordinate unique identification of electric and gas system facilities is also nearing completion and early indications are that the new system will yield rich dividends in improved map utilization as well as in system engineering planning.

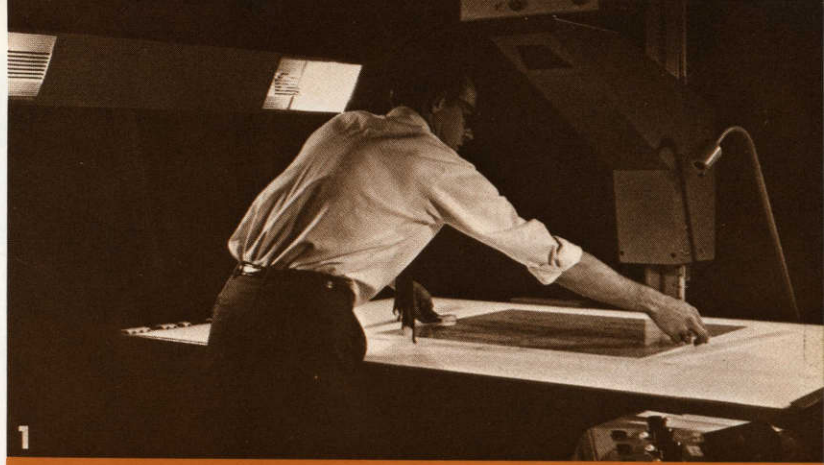
The entire area has been remapped using the latest techniques in photogrammetry. Geographically accurate base maps reproduced on stable plastic sheets are overlaid with either gas or electric facility maps. On these overlays all poles, lines, switches, etc. are precisely located, uniformly coded and digitized (a technique allowing location in computer memory). Field checking of locations and descriptions has been used to insure accuracy. Approximately 300,000 equipment locations have been digitized with X and Y coordinates in accordance with the widely used Texas State Plane Coordinate system.

As new electric and gas facilities are installed or old facilities removed, the centralized map posting group makes necessary changes to the master maps keeping them completely current. Map copies are made available on microfilm or on uniform 18" x 24" xerographed sheets in practical working scales. Desk top microfilm readers make it possible to have compact map records available to the various map user areas.

The digitized map information for the electric system has been entered into the computer engineering master file to provide the basis for the planned automated continuing property records and to keep readily referenced data for distribution engineering studies. The gas system facilities will be similarly digitized during the coming year.

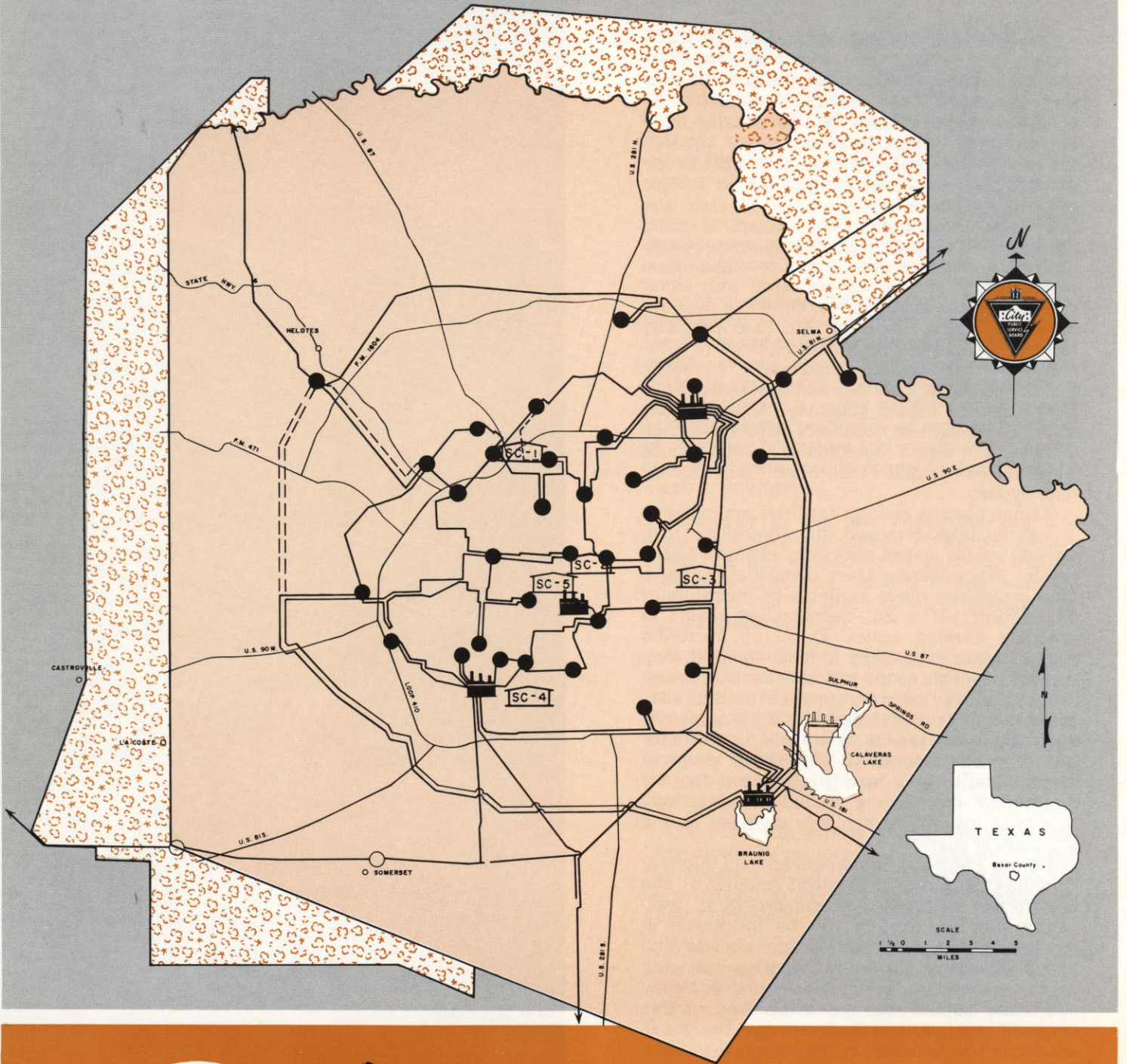
During 1969 this computerized map information has provided the initial phases of the transformer load management programs, indicating that the system will be invaluable in monitoring loads on distribution circuits and transformers and for future planning, providing necessary load growth trends by area. Many additional applications are envisioned in this mapping system which is among the most advanced and efficient in the nation.

- 1 Original maps are reduced to microfilm with this camera.
- 2 Microfilm prints of any section of the map are readily available through xerography.
- 3 Simple, inexpensive microfilm readers such as these make microfilmed maps available wherever needed.





# Electric Distribution System



## LEGEND



POWER PLANTS



CALAVERAS PLANT

— TRANSMISSION SYSTEM, 138,000 OR 69,000 VOLT

- - - UNDER CONSTRUCTION

● SUBSTATIONS UNDER GEO

○ NOT UNDER GEO CONTROL



# Gas Distribution System



## LEGEND

- |  |  |  |                       |
|--|--|--|-----------------------|
|  | SERVICE CENTERS                                  |  | GAS DELIVERY STATIONS |
|  | GAS REGULATING STATIONS<br>ALL UNDER GEO CONTROL |  | GAS SUPPLY LINES      |
|  |  |  | ALAMO GAS SUPPLY      |







# EMPLOYMENT



The new utility technology with its reliance on computers and other highly complex procedures has made it necessary for the Board to place increasing emphasis on educational qualifications in hiring as well as on additional training and advanced education of present employees.

Board recruiters visit colleges and universities in the state on a regular basis. To help ease the critical shortage of engineers, a Work-Study program has been developed under which enrollees work a semester at the CPSB and go to school a semester, until graduation. The new program has created a great deal of interest among engineering students.

Close liaison with local secondary schools is maintained through the "Partnership with the Community" program which provides plant tours, lecturers for career days, instructors on the basics of electricity and other inducements to interest high school students in a career with the utilities.

To its 2,423 employees, the Board offers many opportunities for additional education and training on the job. During the past year, 125 employees participated in the college and technical school Tuition Refund Program.

Over 1,175 took advantage of the wide range of on-the-job training offered including orientation, clerical and secretarial training, telephone techniques, foremanship, customer accounting, computer courses, basic electricity, apprentice underground and linemen courses and others.



1 Supervisors emphasize on-the-job training and take a warm and friendly interest in new employees.

2 The Board participates in many programs aimed at upgrading the training and educational qualifications of minority groups.

3 A group of employees learn of new computerized customer accounting procedures in one of the many on-the-job training sessions.





# AND TRAINING

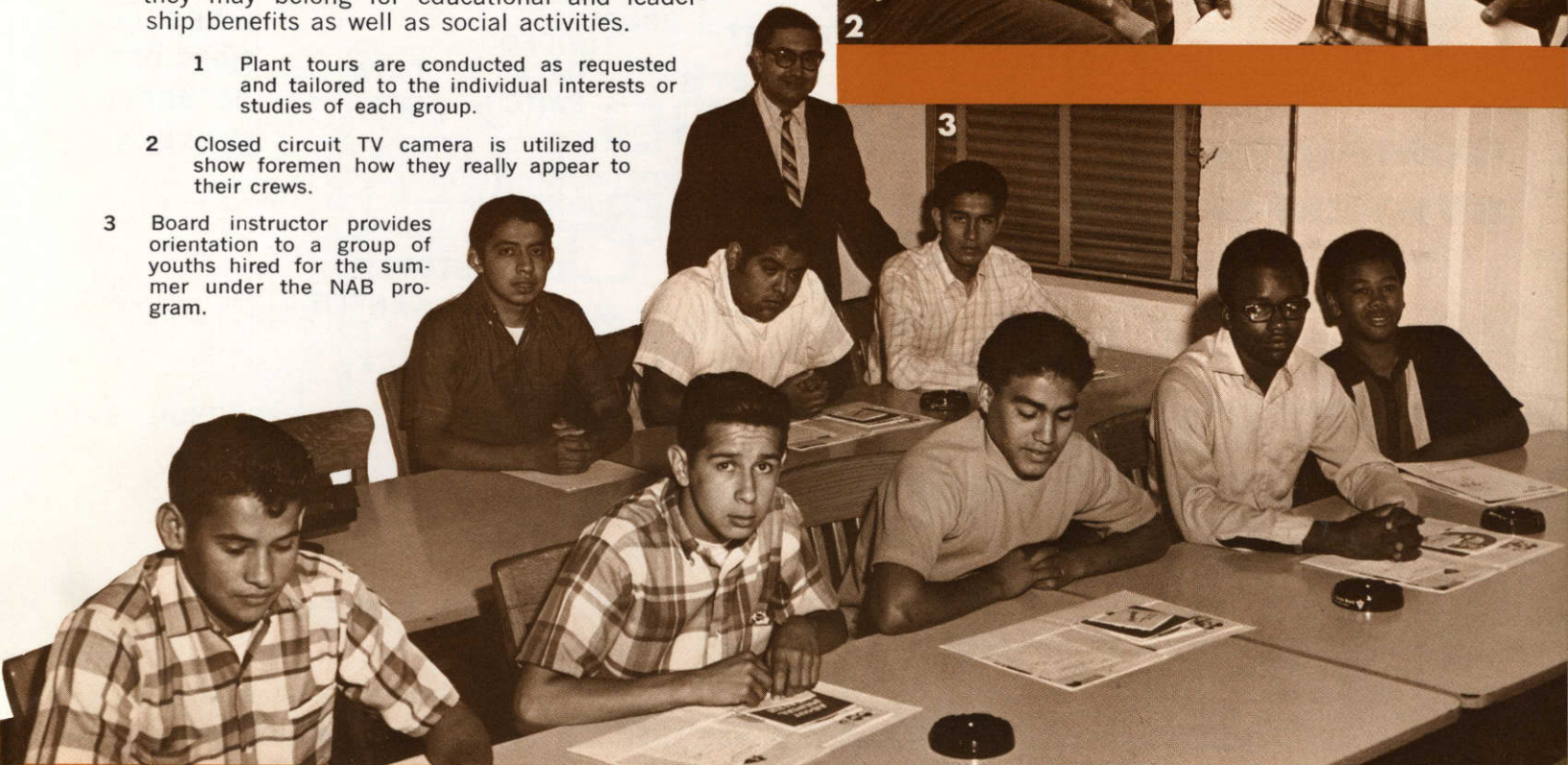
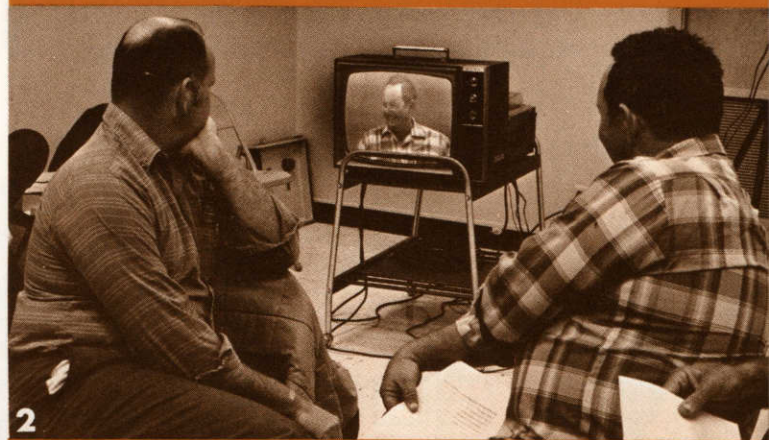
The Board is an Equal Opportunity Employer. It has a longstanding policy of hiring the best qualified persons for the job openings that occur. For employees who do not have a high school education, the Board offers a Basic Adult Education Program leading to completion of the General Education Development high school equivalency. This program utilizes a fully qualified bilingual educator and several part-time assistants. Forty-seven have enrolled and more than half have passed the test to date.

For the past two years, the Board has had a full-time executive on loan to the National Alliance of Businessmen's program aimed at employing the disadvantaged. During the past summer, 44 disadvantaged youths were employed throughout the departments of the Board. In addition, 70 technically oriented college students were employed under the summer recruitment program.

On April 1, 1969 a five per cent wage increase was granted to all employees on a per hour basis and similar increases were granted as merited to those on the monthly payroll.

The Board provides a full range of employee benefits including group hospitalization and life insurance, social security, and an annuity-type pension plan. The Board and its employees contribute jointly to support these benefits. The Board employees have 12 service clubs to which they may belong for educational and leadership benefits as well as social activities.

- 1 Plant tours are conducted as requested and tailored to the individual interests or studies of each group.
- 2 Closed circuit TV camera is utilized to show foremen how they really appear to their crews.
- 3 Board instructor provides orientation to a group of youths hired for the summer under the NAB program.





# ADDED EFFICIENCY AND ECONOMY WITH CPSB's

In August, 1965, the City Public Service Board began implementation of a long range computer oriented Management Information System. The goal of this Management Information System is the development of an integrated data base for better control of all facets of the business and for better planning on both a short and long range basis. This plan was developed by a special study group consisting of a consultant and key employees from each area of the Board's operation. The plan approved by the Board of Trustees also recommended installation of a solid-state, third-generation computer system.

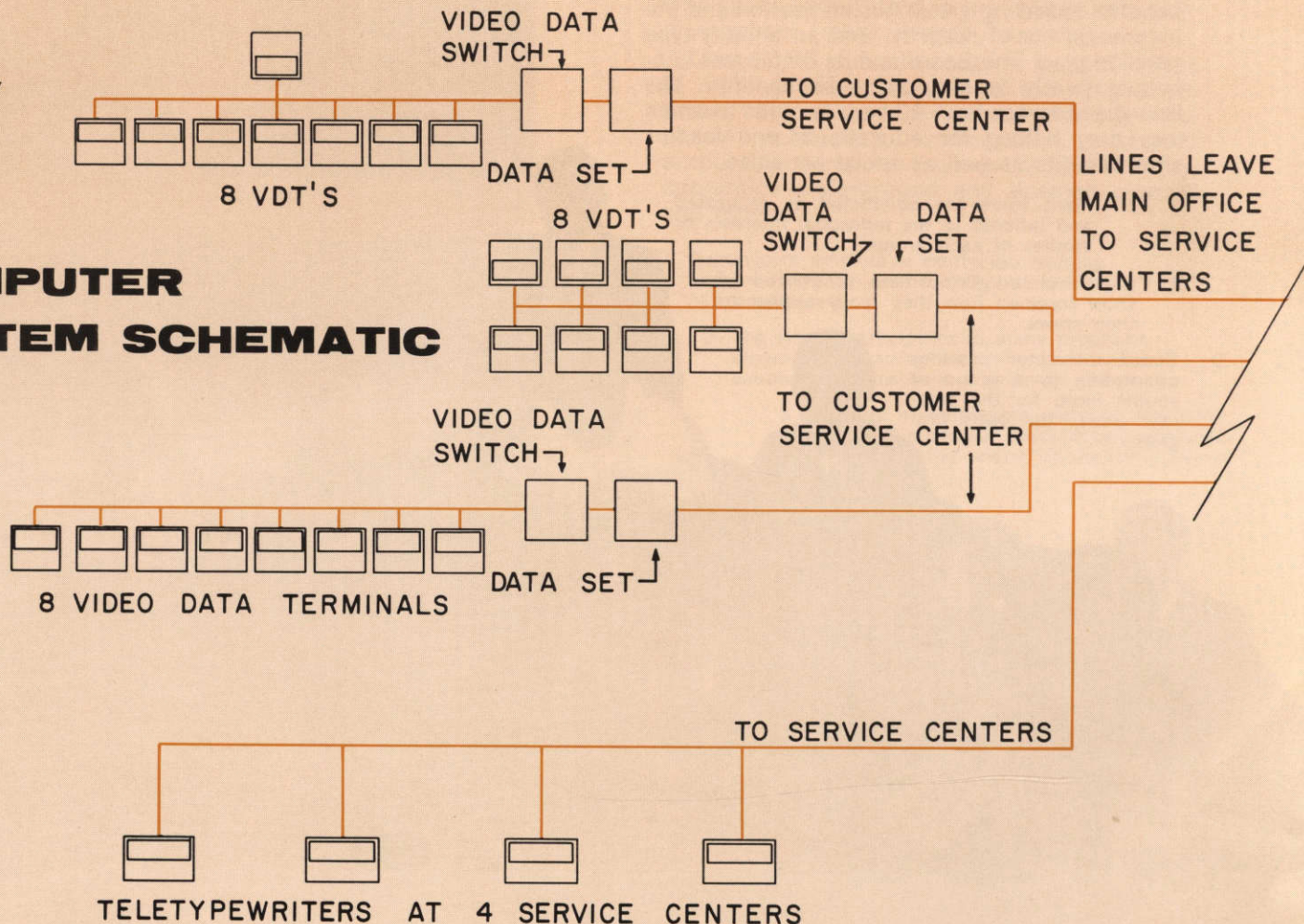
The basic computer system was installed in the fall of 1966. This RCA Spectra 70/45 computer system was tape oriented and had 65,000 characters of storage. During the intervening three years, additional storage allowing up to 550 million characters of information to be immediately available to the system has been

installed. The basic memory size has been doubled and during this last year communications equipment has also been added. During coming years, more storage and communications equipment is being planned. This computer system will enable the City Public Service Board to complete implementation of the approved Management Information System and handle the more advanced applications presently in the initial planning stages.

The installation of the Management Information System was scheduled to take place in two phases. The initial phase which is now completed has emphasized improvement in the customer billing operation. Major changes and improvements in this area were started early in 1967. Since that time, the Customer Service application has entered the second phase and has resulted in an up-to-the-minute Customer Service system featuring immediate display of



## COMPUTER SYSTEM SCHEMATIC





# MANAGEMENT INFORMATION SYSTEM

information, as outlined on page 8. This, for the present, completes the major effort in the Customer Service area.

Efforts are currently in progress to implement the second phase development in all areas of Board activities other than the Customer Service area. This effort is presently in the final planning stages and has been subdivided into four divisions of basic business information which are titled Construction Assembly Processing, Time in Productivity Management, Inventory Management and Planning and Control. Data from these four basic areas as well as from the Customer Service area will then be coordinated and combined with other general information to form an advanced data base which provides the foundation for the integrated Management Information System.

The Construction Assembly Processing project enables the engineers to efficiently design

new facilities which will provide gas and electric service for our customers by utilizing a type of shorthand. In this way, uniform planning, construction, and ultimately accounting information is developed and mechanically maintained.

The Time in Productivity Management project integrates all manpower and equipment information so as to enable effective manpower and project scheduling and performance management reporting. The goal here is to provide each level of management with needed information relative to manpower abilities, manpower and equipment accomplishments, and projected manpower and equipment requirements.

The Inventory Management area will focus attention on all aspects of the Board's six million dollar investment in supplies and materials. It will control the ordering, receipt, warehouse-

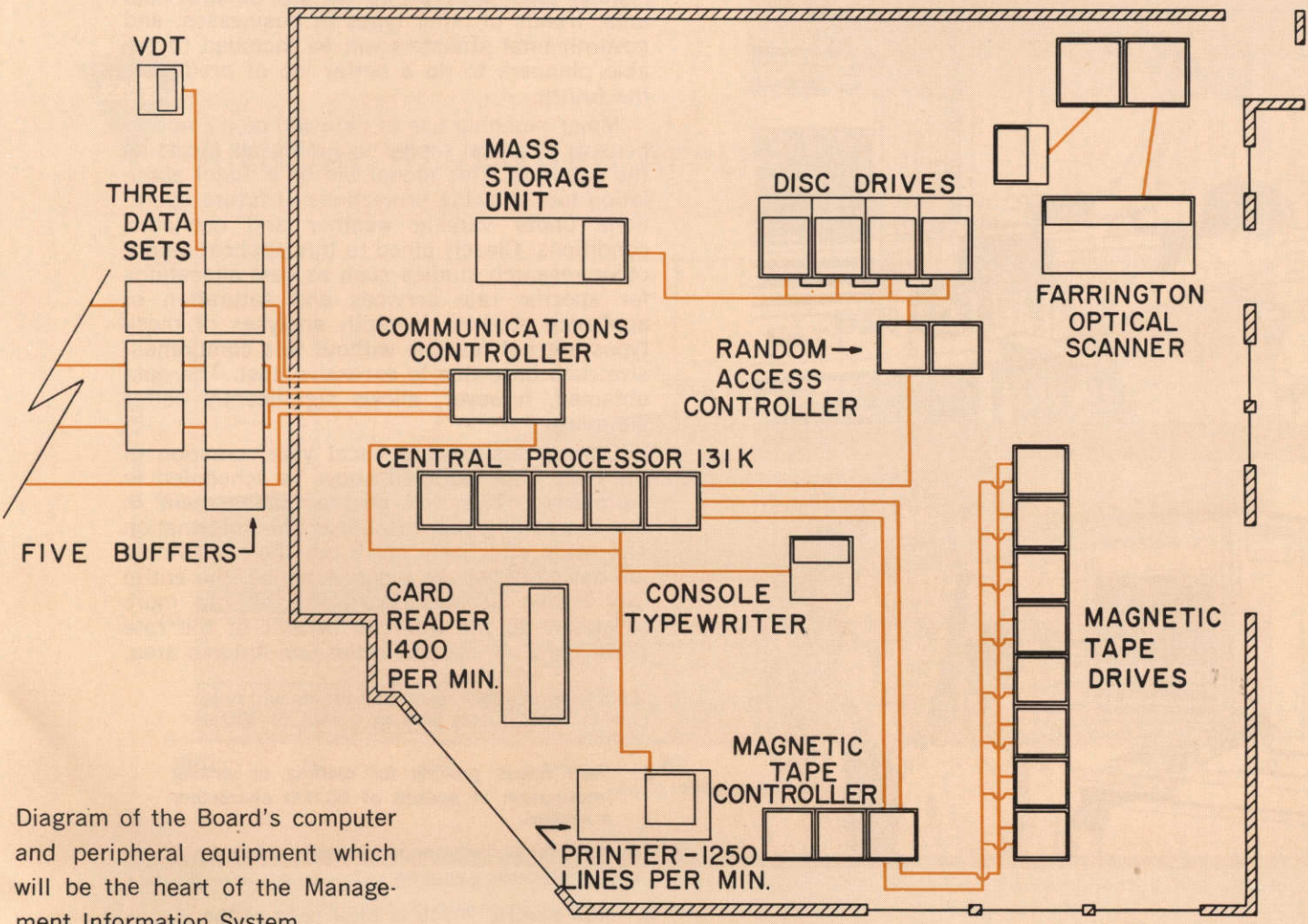
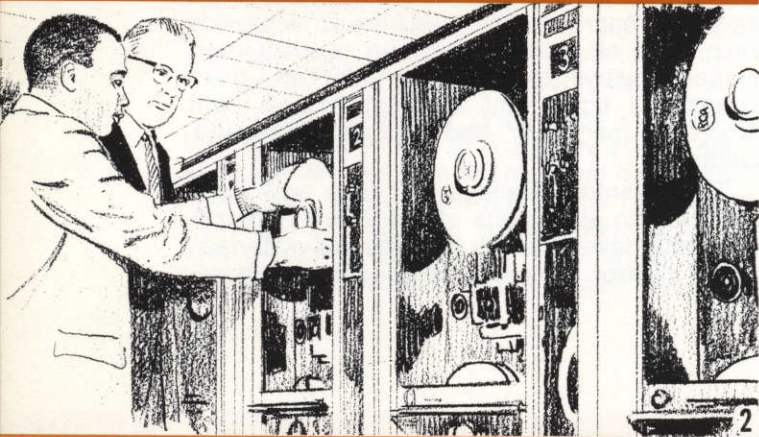
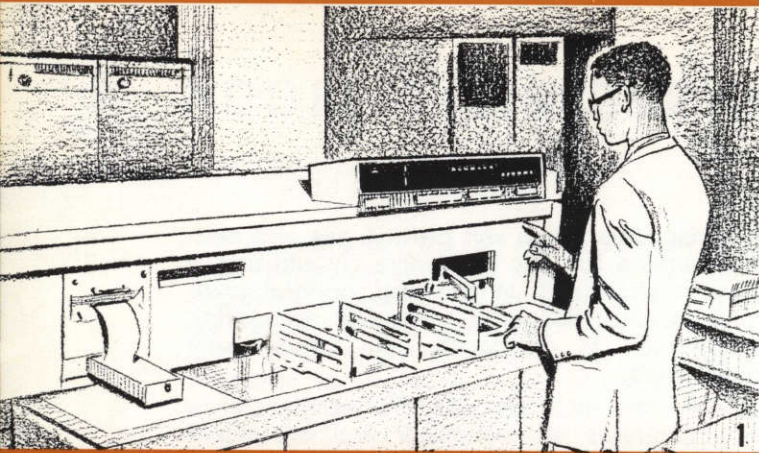


Diagram of the Board's computer and peripheral equipment which will be the heart of the Management Information System.





(CONTINUED)

ing, disbursement, and reordering of all these items. It will provide information to minimize the Board's inventory investment consistent with sound business planning.

Summary information from each of these areas as well as more general information relative to such areas as cash receipts, disbursements, bond indebtedness, and other miscellaneous type information will be combined with summary Customer Service information into a central information bank which is being called a Planning and Control file. A consolidation and reconstituting of all this information will provide the necessary information for improved financial planning, facilities planning, and general management control.

Hand-in-hand with the development of this business oriented system, technical projects have also been completed or are in the development stage. Areas in development include analyses of gas flow, studies of transformer loads, most efficient power generator studies, and various scientific and mathematical routines. Information developed in these studies will be included in the information base outlined above. Information relative to the operation of the gas and electric systems generated by the GEO System (described on pages 14-16) is also being made a part of this total record. Any environmental data such as economics of the local area, trends of other types of businesses, and governmental statistics will be included to enable planners to do a better job of predicting the future.

Major planning use of data will be a comprehensive financial model including all facets of the business. This model will be a major simulation tool allowing projections of future operations under varying weather and economic conditions. Closely allied to this application are other research studies such as cost allocations for specific rate services and saturation of appliance studies. In-depth analyses of these types are not feasible without this comprehensive data base due to excessive cost. The data obtained, however, allows significantly better planning.

During this coming fiscal year, creation of the data base outlined above is scheduled to be started. This will enable management in the succeeding years to utilize this information and more effectively carry out their individual job assignments. As a consequence, the entire City Public Service Board will be run more efficiently to the ultimate benefit of the rate payers and all citizens in the San Antonio area.

- 1 Farrington scanner reads documents and puts the information on tape at a rate of 300 a minute.
- 2 Tape drives provide for reading or writing information at speeds of 60,000 characters a second.
- 3 Card reader in background is capable of reading 1,400 cards a minute.
- 4 RCA Spectra 70/45 is focal point of the Board's Management Information System.



# FINANCIAL REVIEW

The sound financial position of the Board is reflected in the audited financial statement contained in this report. This position is also affirmed by the triple-A rating, the highest given, accorded the Board's revenue bonds by both Moody's and Standard and Poor's Investment Services.

Large plant expenditures during the last several years to provide the facilities to meet customers' energy requirements have made it necessary to use bond funds in a higher proportion to finance the Board's construction program. The Board, however, is still lightly indebted, with long term debt representing only 19.3% of capitalization. By present day standards, the average interest rate of 3.89% on outstanding bonds is very low.

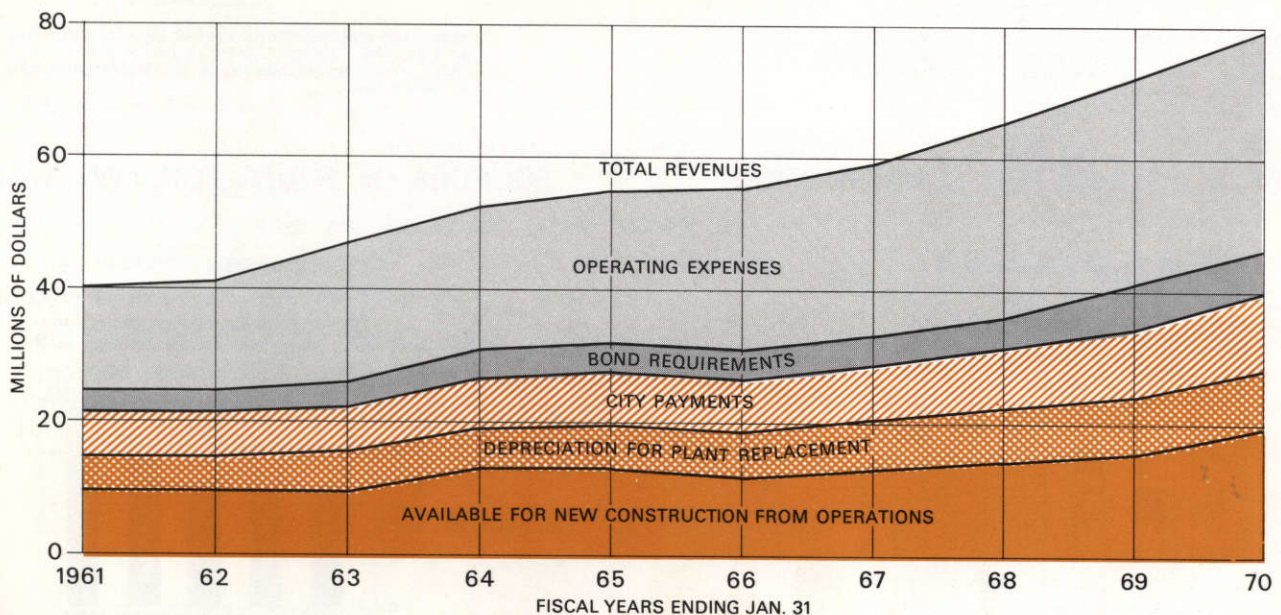
As provided by the bond indentures governing the operations of the Board, all revenues are deposited in the general fund and applied as specified. First priority is the payment of current expenses of operating, maintaining and repairing the systems. Following in sequence are the payment of bond interest and principal; payments in lieu of taxes; 12.5% of gross revenues into the Improvements and Contingencies Fund; and reimbursement for services, additions to the street and traffic lighting system and an additional payment to the City of San Antonio to bring total benefits and services



Street light installations included 173 expressway, 715 arterial and 456 residential lights, making San Antonio with a total of 28,935 installed, one of America's best lighted cities.



## ANNUAL REVENUES APPLIED



The forces of inflation on materials, salaries, bond requirements and other expenses have caused them to increase at a steady rate. The amount of funds available for construction has not increased at the same ratio, making it necessary for the utility to rely more heavily on revenue bond financing for the necessary additions.



(CONTINUED)

to 14% of gross revenues. All funds remaining are deposited in the Improvements and Contingencies Fund.

In accordance with the third supplemental indenture effective February 1, 1960, total payments and services to the City of San Antonio are 14% of gross revenues.

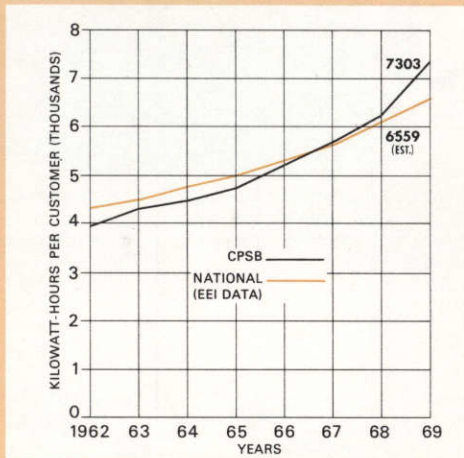
Benefits to the City this fiscal year were:	
Payments in Lieu of Taxes	\$ 3,114,946
Refund, Gas and Electricity	2,195,973
Street Lighting Construction	433,058
Additional Cash Payments	5,387,125
<b>Total</b>	<b>\$11,131,102</b>

Total benefits to the City of San Antonio from October 24, 1942 through January 31, 1970 have amounted to \$104,342,130. These payments and services, of course, have aided the City in keeping tax rates low.

In addition, the Board during the last fiscal year made payments totaling \$112,107 in street rental franchises to 19 other incorporated cities within the service area. San Antonio's many expressway, street widening, storm and sanitary sewer and urban renewal projects also necessitated an expenditure of \$178,812 during the year to rearrange gas pipe lines and electric facilities ahead of construction.

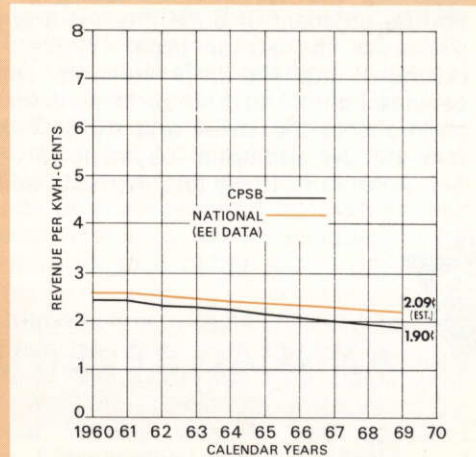
The Board follows the accounting procedures of the Uniform System of Accounts prescribed by the National Association of Railroad and Utilities Commissioners. Among other advantages, this makes possible the direct comparison of various unit costs with other utilities. Such studies show that Board operating expenses are usually below those of other utilities with comparable conditions.

### RESIDENTIAL ELECTRIC



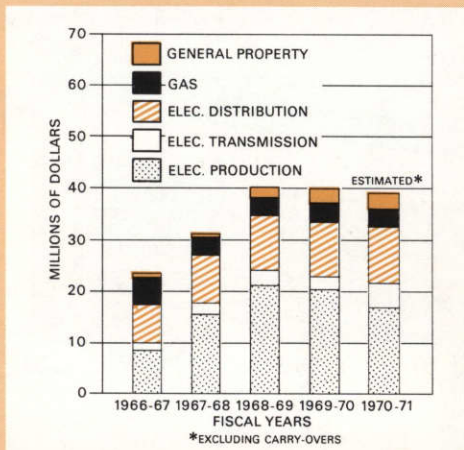
Annual kilowatt hour sales per residential customer, which once lagged behind the national average, have been increased materially in the past five years.

### RESIDENTIAL ELECTRIC



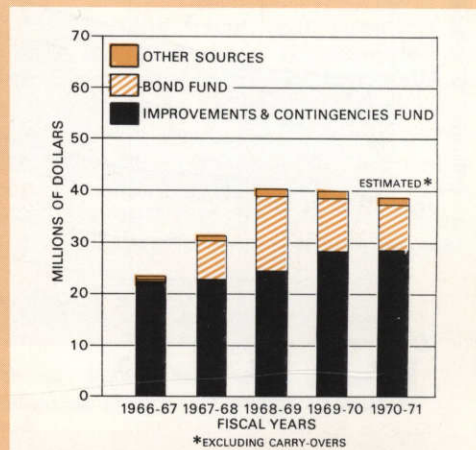
While the cost of nearly everything else continues to rise, the average price per residential kilowatt hour of electricity continues to decline, reaching a record low.

### USES OF ALL FUNDS FOR CONSTRUCTION



Approximately half of all construction funds have been spent on power plant expansion as numbers of customers and usage per customer continues to increase.

### SOURCES OF FUNDS FOR CONSTRUCTION



Heavy construction requirements have made it necessary for the Board to rely more heavily on revenue bond financing than it has in past years.





# CITY PUBLIC SERVICE BOARD

## Statement of Revenue and Application of Revenue

Years ended January 31, 1970 and January 31, 1969

	1970	1969
THE REVENUE FROM OPERATIONS WAS		
Electric sales . . . . .	\$ 61,990,536	\$ 54,737,072
Gas sales . . . . .	14,696,361	14,190,549
Interest and other . . . . .	2,820,978	3,122,475
TOTAL REVENUE	<u>\$ 79,507,875</u>	<u>\$ 72,050,096</u>
THE REVENUE WAS APPLIED AS FOLLOWS		
For operating and maintaining the system — Note:		
Gas and electricity purchased . . . . .	\$ 17,875,557	\$ 15,975,174
Other operating and general expenses . . . . .	11,636,858	10,953,657
Maintenance . . . . .	3,897,605	4,010,109
TOTAL FOR OPERATING AND MAINTAINING THE SYSTEM	<u>\$ 33,410,020</u>	<u>\$ 30,938,940</u>
For City of San Antonio:		
In lieu of taxes . . . . .	\$ 3,114,946	\$ 2,931,525
Refund for gas and electric services . . . . .	2,195,973	2,052,473
Construction of street lighting facilities . . . . .	433,058	475,934
Additional payment to equal 14% of gross revenue . . . . .	5,387,125	4,627,081
TOTAL FOR CITY OF SAN ANTONIO	<u>\$ 11,131,102</u>	<u>\$ 10,087,013</u>
For debt requirements:		
Interest and debt expense . . . . .	\$ 2,701,074	\$ 2,738,681
Retirement of bonds . . . . .	3,045,000	2,960,000
Addition to bond reserve fund . . . . .	327,702	1,030,103
TOTAL FOR DEBT REQUIREMENTS	<u>\$ 6,073,776</u>	<u>\$ 6,728,784</u>
For additions to utility plant (exclusive of street lighting facilities for City of San Antonio):		
Total expenditures . . . . .	\$ 39,445,159	\$ 39,790,660
Additions to Improvements and Contingencies fund . . . . .	1,535,001	-0-
Less funds provided from sources other than revenue:		
Bond construction fund . . . . .	\$ 40,980,160	\$ 39,790,660
Bond construction fund . . . . .	\$ 10,904,194	\$ 14,155,849
Sale of property . . . . .	49,721	144,609
Customers' advances and contributions for construction . . . . .	1,133,268	1,194,843
	<u>\$ 12,087,183</u>	<u>\$ 15,495,301</u>
TOTAL FOR ADDITIONS TO UTILITY PLANT	<u>\$ 28,892,977</u>	<u>\$ 24,295,359</u>
TOTAL REVENUE APPLIED	<u>\$ 79,507,875</u>	<u>\$ 72,050,096</u>

NOTE: The Board provides for depreciation at amounts calculated to amortize the cost of the assets over their estimated useful lives using straight-line rates. The provision for depreciation amounted to \$9,248,364 in 1970, and \$8,476,414 in 1969. At the time of retirement of property, the allowance for depreciation has been charged with original cost of the property and the cost of removal, and has been credited with the salvage value and any other amounts recovered. Expenditures for maintenance and repairs were charged to expenses; and renewals and betterments were capitalized.





# CITY PUBLIC SERVICE BOARD

## Balance Sheet

JANUARY 31, 1970 WITH COMPARATIVE FIGURES FOR 1969

ASSETS	JANUARY 31	JANUARY 31
	1970	1969
UTILITY PLANT — on the basis of cost		
Electric . . . . .	\$274,007,610	\$262,553,115
Gas . . . . .	77,112,229	73,693,555
General . . . . .	7,039,856	6,607,463
Construction work in progress . . . . .	62,321,036	40,462,073
	<u>\$420,480,731</u>	<u>\$383,316,206</u>
Less allowances for depreciation . . . . .	85,354,841	77,354,905
	<u>\$335,125,890</u>	<u>\$305,961,301</u>
RESTRICTED CASH AND SECURITIES		
Deposited with trustee under terms of trust indenture:		
U. S. Government securities at cost and accrued interest (quoted market prices: \$5,967,236 in 1970; \$5,698,287 in 1969) . . . . .	\$ 6,160,631	\$ 5,832,929
Cash, including time deposits — improvements and contingencies fund . . . . .	6,535,162	5,000,161
Cash, including time deposits — bond construction fund . . . . .	14,700,629	25,509,490
	<u>\$ 27,396,422</u>	<u>\$ 36,342,580</u>
CURRENT ASSETS		
Cash, including time deposits — operating funds . . . . .	\$ 9,158,715	\$ 9,257,016
Accounts receivable . . . . .	5,041,037	4,986,058
Material and supplies — at average cost . . . . .	6,835,979	6,056,160
Prepayments and other . . . . .	1,275,860	775,158
	<u>\$ 22,311,591</u>	<u>\$ 21,074,392</u>
UNAMORTIZED DEBT EXPENSE . . . . .	60,601	67,063
	<u>\$384,894,504</u>	<u>\$363,445,336</u>



## LIABILITIES and EQUITY

	JANUARY 31 1970	JANUARY 31 1969
<b>LONG-TERM DEBT — less current maturities</b>		
Revenue refunding bonds, 1951 series, 2%, due in 1972 . . . . .	\$ 1,520,000	\$ 3,005,000
Revenue improvement bonds, 1953 series, 2.9% due serially to 1976 . . . . .	6,600,000	6,800,000
Revenue improvement bonds, 1957 series, 3.25% — 3.5%, due serially to 1980 . . . . .	14,235,000	14,745,000
Revenue improvement bonds, 1962 series, 2.75% — 3.25%, due serially to 1984 . . . . .	17,045,000	17,460,000
Revenue improvement bonds, 1968 series, 4.3% — 5%, due serially to 1989 . . . . .	28,510,000	29,030,000
	<u>\$ 67,910,000</u>	<u>\$ 71,040,000</u>
<b>EQUITY</b>		
Appropriated retained earnings:		
Bond reserve fund . . . . .	\$ 6,160,631	\$ 5,832,929
Improvements and contingencies fund . . . . .	6,535,162	5,000,161
	<u>\$ 12,695,793</u>	<u>\$ 10,833,090</u>
Earnings reinvested in plant . . . . .	283,636,259	262,083,828
	<u>\$296,332,052</u>	<u>\$272,916,918</u>
<b>CURRENT LIABILITIES</b>		
Current maturities of long-term debt . . . . .	\$ 3,130,000	\$ 3,045,000
Accounts payable . . . . .	5,675,474	5,415,999
Customers' service deposits . . . . .	1,860,169	1,865,323
	<u>\$ 10,665,643</u>	<u>\$ 10,326,322</u>
<b>DEFERRED CREDITS AND RESERVES</b>		
Customers' advances for construction . . . . .	\$ 791,836	\$ 880,790
Reserve for injuries and damages . . . . .	189,612	199,846
Other deferred credits . . . . .	66,118	122,462
	<u>\$ 1,047,566</u>	<u>\$ 1,203,098</u>
CONTRIBUTIONS IN AID OF CONSTRUCTION . . . . .	8,939,243	7,958,998
PURCHASE AND CONSTRUCTION COMMITMENTS — \$57,179,000 in 1970, \$40,134,000 in 1969	<u>\$384,894,504</u>	<u>\$363,445,336</u>



# Independent Auditor's Report

ERNST & ERNST  
2100 TOWER LIFE BUILDING  
SAN ANTONIO, TEXAS 78205

Board of Trustees  
City Public Service Board of San Antonio  
San Antonio, Texas

We have examined the balance sheet of the City Public Service Board of San Antonio as of January 31, 1970, and the related statement of revenue and application of revenue for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances. We previously made a similar examination of the financial statements for the preceding year.

In our opinion, the accompanying balance sheet presents fairly the financial position of the City Public Service Board of San Antonio at January 31, 1970, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year. Further, in our opinion the accompanying statement of revenue and application of revenue presents fairly the information set forth therein.

*Ernst & Ernst*

San Antonio, Texas  
February 27, 1970





# Long-Term Debt Requirements

... ALL ISSUES

January 31,  
1970

Year Ending January 31,	Principal	Interest	Total Requirements
1971	3,130,000	2,601,200	5,731,200
1972	3,220,000	2,514,150	5,734,150
1973	3,305,000	2,420,575	5,725,575
1974	3,405,000	2,311,713	5,716,713
<hr/>			
1975	3,515,000	2,199,290	5,714,290
1976	3,620,000	2,082,005	5,702,005
1977	3,740,000	1,958,125	5,698,125
1978	3,860,000	1,825,185	5,685,185
1979	4,000,000	1,688,175	5,688,175
<hr/>			
1980	4,135,000	1,546,280	5,681,280
1981	4,270,000	1,399,595	5,669,595
1982	4,415,000	1,257,005	5,672,005
1983	4,565,000	1,104,142	5,669,142
1984	3,300,000	947,695	4,247,695
<hr/>			
1985	3,430,000	816,640	4,246,640
1986	3,560,000	665,720	4,225,720
1987	3,710,000	509,080	4,219,080
1988	3,850,000	345,840	4,195,840
1989	4,010,000	176,440	4,186,440
Less:	<u>\$71,040,000</u>	<u>\$28,368,855</u>	<u>\$99,408,855</u>
Current maturities (maturing within one year)	3,130,000	2,601,200	5,731,200
	<u>\$67,910,000</u>	<u>\$25,767,655</u>	<u>\$93,677,655</u>





# CITY PUBLIC SERVICE BOARD

## 10 Year Financial Review

### FACTS AT A GLANCE

Years ending January 31

	1970	1969	1968	1967
<b>REVENUE AND APPLICATION: (000 Omitted)</b>				
<b>Revenues:</b>				
Electric sales . . . . .	\$ 61,991	\$ 54,737	\$ 49,723	\$ 44,781
Gas sales . . . . .	14,696	14,191	12,634	12,546
Other income . . . . .	2,821	3,122	1,912	1,656
<b>Total Revenues . . . . .</b>	<b>\$ 79,508</b>	<b>\$ 72,050</b>	<b>\$ 64,269</b>	<b>\$ 58,983</b>
<b>Revenues applied:</b>				
<b>Cost of operating systems:</b>				
Gas and electricity purchased . . . . .	\$ 17,875	\$ 15,975	\$ 14,428	\$ 12,906
Other operating expenses . . . . .	11,637	10,954	10,280	9,335
Maintenance . . . . .	3,898	4,010	3,860	3,600
<b>Total . . . . .</b>	<b>\$ 33,410</b>	<b>\$ 30,939</b>	<b>\$ 28,568</b>	<b>\$ 25,841</b>
<b>Payment and services to City:</b>				
Payment in lieu of taxes . . . . .	\$ 3,115	\$ 2,932	\$ 2,887	\$ 2,736
Refunds for services . . . . .	2,196	2,052	1,744	1,678
Construction of street lighting . . . . .	433	476	373	491
Additional payment . . . . .	5,387	4,627	3,993	3,352
<b>Total . . . . .</b>	<b>\$ 11,131</b>	<b>\$ 10,087</b>	<b>\$ 8,997</b>	<b>\$ 8,257</b>
<b>Debt retirement:</b>				
Interest and debt expense . . . . .	\$ 2,701	\$ 2,739	\$ 1,493	\$ 1,558
Bond retirement and reserve . . . . .	3,373	3,990	2,718	2,573
<b>Total . . . . .</b>	<b>\$ 6,074</b>	<b>\$ 6,729</b>	<b>\$ 4,211</b>	<b>\$ 4,131</b>
<b>Additions to plant:</b>				
Total expenditures for year . . . . .	\$ 39,445	\$ 39,791	\$ 30,793	\$ 22,834
Addition to improvement and contingencies fund . . . . .	1,535	-0-	-0-	-0-
<b>Total . . . . .</b>	<b>\$ 40,980</b>	<b>\$ 39,791</b>	<b>\$ 30,793</b>	<b>\$ 22,834</b>
<b>Less provided from other sources:</b>				
Bond construction fund . . . . .	\$ 10,904	\$ 14,156	\$ 7,407	\$ 36
Sale of property . . . . .	50	145	56	60
Improvements and contingencies fund . . . . .	-0-	-0-	-0-	1,413
Customers' advances and contributions . . . . .	1,133	1,195	837	571
<b>Total . . . . .</b>	<b>\$ 12,087</b>	<b>\$ 15,496</b>	<b>\$ 8,300</b>	<b>\$ 2,080</b>
<b>Total Revenues Applied . . . . .</b>	<b>\$ 28,893</b>	<b>\$ 24,295</b>	<b>\$ 22,493</b>	<b>\$ 20,754</b>
<b>Total Revenues Applied . . . . .</b>	<b>\$ 79,508</b>	<b>\$ 72,050</b>	<b>\$ 64,269</b>	<b>\$ 58,983</b>
<b>BALANCE SHEET DATA: (000 Omitted)</b>				
Utility Plant at Cost . . . . .	\$ 420,481	\$ 383,316	\$ 345,915	\$ 317,618
Annual Construction Additions . . . . .	39,878	40,267	31,167	23,325
Depreciation Reserve . . . . .	85,355	77,355	70,440	63,980
Annual Depreciation Allowance . . . . .	9,248	8,476	8,126	7,570

\*Includes \$1,000 increase in Operating Fund



1966	1965	1964	1963	1962	1961
\$ 41,990	\$ 41,626	\$ 40,012	\$ 35,963	\$ 30,734	\$ 29,743
11,800	11,236	11,251	10,143	9,350	9,676
1,540	1,423	1,214	620	729	811
<u>\$ 55,330</u>	<u>\$ 54,285</u>	<u>\$ 52,477</u>	<u>\$ 46,726</u>	<u>\$ 40,813</u>	<u>\$ 40,230</u>
\$ 12,464	\$ 11,552	\$ 11,173	\$ 10,325	\$ 6,903	\$ 7,129
8,864	8,207	7,531	8,004*	6,910	6,379
3,160	3,015	2,675	2,645	2,693	2,357
<u>\$ 24,488</u>	<u>\$ 22,774</u>	<u>\$ 21,379</u>	<u>\$ 20,974</u>	<u>\$ 16,506</u>	<u>\$ 15,865</u>
\$ 2,703	\$ 2,669	\$ 2,648	\$ 2,396	\$ 2,232	\$ 2,039
1,598	1,611	1,539	1,356	1,226	1,130
384	503	458	544	379	546
3,061	2,817	2,702	2,212	2,671	2,793
<u>\$ 7,746</u>	<u>\$ 7,600</u>	<u>\$ 7,347</u>	<u>\$ 6,508</u>	<u>\$ 6,508</u>	<u>\$ 6,508</u>
\$ 1,622	\$ 1,685	\$ 1,746	\$ 1,351	\$ 1,158	\$ 1,200
2,471	2,435	2,623	2,222	1,936	1,883
<u>\$ 4,093</u>	<u>\$ 4,120</u>	<u>\$ 4,369</u>	<u>\$ 3,573</u>	<u>\$ 3,094</u>	<u>\$ 3,083</u>
\$ 20,867	\$ 22,763	\$ 13,806	\$ 23,585	\$ 21,295	\$ 18,883
172	-0-	6,130	-0-	-0-	-0-
<u>\$ 21,039</u>	<u>\$ 22,763</u>	<u>\$ 19,936</u>	<u>\$ 23,585</u>	<u>\$ 21,295</u>	<u>\$ 18,883</u>
\$ 1,534	\$ -0-	\$ -0-	\$ 4,162	\$ 4,626	\$ -0-
-0-	133	80	-0-	92	2
-0-	2,343	-0-	3,222	1,438	3,826
502	496	474	530	434	281
<u>\$ 2,036</u>	<u>\$ 2,972</u>	<u>\$ 554</u>	<u>\$ 7,914</u>	<u>\$ 6,590</u>	<u>\$ 4,109</u>
<u>\$ 19,003</u>	<u>\$ 19,791</u>	<u>\$ 19,382</u>	<u>\$ 15,671</u>	<u>\$ 14,705</u>	<u>\$ 14,774</u>
<u>\$ 55,330</u>	<u>\$ 54,285</u>	<u>\$ 52,477</u>	<u>\$ 45,726</u>	<u>\$ 40,813</u>	<u>\$ 40,230</u>
\$ 297,777	\$ 279,054	\$ 258,980	\$ 246,568	\$ 224,349	\$ 204,704
21,252	23,266	14,264	24,129	21,675	19,430
59,170	52,259	45,779	40,852	35,838	31,627
7,039	6,714	6,226	5,737	5,304	4,901





# CITY PUBLIC SERVICE BOARD

## 10 Year Operating Review

### FACTS AT A GLANCE

Years ending January 31

#### OPERATING REVENUES. (000 Omitted)

	1970	1969	1968	1967
<b>Electric:</b>				
Residential . . . . .	\$ 28,424	\$ 24,391	\$ 22,331	\$ 19,987
Commercial & Industrial . . . . .	23,438	21,092	18,975	17,331
Street Lighting . . . . .	1,416	1,388	1,254	1,146
Public Authorities . . . . .	7,176	6,478	5,728	5,092
Other Utilities . . . . .	906	785	810	711
Miscellaneous . . . . .	631	603	625	514
<b>Total Electric . . . . .</b>	<b>\$ 61,991</b>	<b>\$ 54,737</b>	<b>\$ 49,723</b>	<b>\$ 44,781</b>
<b>Gas:</b>				
Residential . . . . .	\$ 9,243	\$ 9,033	\$ 8,073	\$ 8,149
Commercial & Industrial . . . . .	4,545	4,266	3,710	3,622
Public Authorities . . . . .	755	729	660	642
Miscellaneous . . . . .	153	163	191	133
<b>Total Gas . . . . .</b>	<b>\$ 14,696</b>	<b>\$ 14,191</b>	<b>\$ 12,634</b>	<b>\$ 12,546</b>
<b>SALES: (000 Omitted)</b>				
<b>Electric — KWH:</b>				
Residential . . . . .	1,496,079	1,243,099	1,120,918	979,053
Commercial & Industrial . . . . .	1,785,483	1,583,731	1,404,947	1,250,953
Street Lighting . . . . .	53,818	48,866	42,114	39,175
Public Authorities . . . . .	841,450	763,805	688,254	594,741
Other Utilities . . . . .	81,290	58,186	69,538	49,896
<b>Total . . . . .</b>	<b>4,258,120</b>	<b>3,697,687</b>	<b>3,325,771</b>	<b>2,913,818</b>
<b>Gas — MCF:</b>				
Residential . . . . .	13,307	12,978	11,578	11,912
Commercial & Industrial . . . . .	14,146	13,278	11,502	11,666
Public Authorities . . . . .	2,296	2,230	2,000	2,005
<b>Total . . . . .</b>	<b>29,749</b>	<b>28,486</b>	<b>25,080</b>	<b>25,583</b>
<b>PURCHASE FOR RESALE:</b>				
Electric (1000) KWH . . . . .	4,639	6,278	5,521	4,093
Gas (1000) MCF . . . . .	31,203	29,271	26,209	25,651
<b>ELECTRIC GENERATION (1000) KWH . . . . .</b>	<b>4,524,422</b>	<b>3,930,183</b>	<b>3,512,454</b>	<b>3,107,040</b>
<b>ELECTRIC GENERATION CAPACITY — KW . . . . .</b>	<b>1,303,000</b>	<b>1,303,000</b>	<b>1,053,000</b>	<b>1,053,000</b>
<b>ELECTRIC PEAK DEMAND — KW . . . . .</b>	<b>1,107,000</b>	<b>941,000</b>	<b>840,000</b>	<b>759,000</b>
<b>NUMBER OF CUSTOMERS:</b>				
Electric . . . . .	234,565	228,564	220,145	211,785
Gas . . . . .	201,397	196,566	190,045	183,248
<b>RESIDENTIAL AVERAGES:</b>				
<b>Electric:</b>				
Revenue per customer . . . . .	\$ 138.75	\$ 122.37	\$ 115.79	\$ 106.52
KWH per customer . . . . .	7,303	6,237	5,813	5,218
Revenue per KWH . . . . .	1.90¢	1.96¢	1.99¢	2.04¢
<b>Gas:</b>				
Revenue per customer . . . . .	\$ 50.70	\$ 50.91	\$ 47.03	\$ 48.87
MCF per customer . . . . .	73	73	67	71
Revenue per MCF . . . . .	69¢	70¢	70¢	68¢



1966	1965	1964	1963	1962	1961
\$ 18,242	\$ 17,821	\$ 17,010	\$ 15,567	\$ 13,222	\$ 12,779
16,458	16,447	15,469	13,962	12,069	11,487
1,063	1,005	936	840	789	717
5,042	5,184	5,173	4,496	3,581	3,407
714	698	953	670	682	1,010
471	471	471	428	391	343
<u>\$ 41,990</u>	<u>\$ 41,626</u>	<u>\$ 40,012</u>	<u>\$ 35,963</u>	<u>\$ 30,734</u>	<u>\$ 29,743</u>
\$ 7,604	\$ 7,222	\$ 7,258	\$ 6,245	\$ 5,931	\$ 6,046
3,444	3,261	3,199	2,759	2,410	2,620
615	609	654	1,031	911	918
137	144	140	108	98	92
<u>\$ 11,800</u>	<u>\$ 11,236</u>	<u>\$ 11,251</u>	<u>\$ 10,143</u>	<u>\$ 9,350</u>	<u>\$ 9,676</u>
867,452	798,677	756,620	678,897	551,881	532,249
1,141,255	1,062,151	977,353	906,785	814,522	773,746
36,312	33,998	32,320	28,772	27,152	24,560
561,455	515,083	507,066	466,559	406,226	379,554
54,497	53,611	127,504	65,138	60,015	208,442
<u>2,660,971</u>	<u>2,463,520</u>	<u>2,400,863</u>	<u>2,146,151</u>	<u>1,859,796</u>	<u>1,918,551</u>
11,010	10,425	10,625	9,664	10,075	10,366
11,063	10,443	10,303	9,900	10,126	11,052
1,910	1,816	1,940	3,991	4,132	4,208
<u>23,983</u>	<u>22,684</u>	<u>22,868</u>	<u>23,555</u>	<u>24,333</u>	<u>25,626</u>
24,009	-0-	261	36	7,425	731
25,625	23,823	23,115	24,533	25,331	26,507
2,811,698	2,636,078	2,567,733	2,306,681	1,990,183	2,060,064
823,000	823,000	823,000	656,000	656,000	551,000
664,000	625,000	571,000	548,000	440,700	438,000
207,120	203,431	199,769	196,310	192,155	187,249
178,888	175,784	173,079	170,009	166,101	161,011
\$ 99.73	\$ 99.33	\$ 97.17	\$ 90.18	\$ 78.69	\$ 78.04
4,742	4,452	4,301	3,933	3,285	3,251
2.10¢	2.23¢	2.25¢	2.29¢	2.40¢	2.40¢
\$ 47.09	\$ 45.39	\$ 46.58	\$ 40.84	\$ 39.97	\$ 42.00
68	66	68	63	68	72
69¢	69¢	68¢	65¢	59¢	58¢



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City Public Service Board  
Post Office Box 1771  
San Antonio, Texas 78206



**San Antonio—America's 13th Largest City—Home County Population 831,000**

**CITY PUBLIC SERVICE BOARD ANNUAL REPORT  
FISCAL YEAR FEB. 1, 1969 / JAN. 31, 1970**

TXPUB\_00163