SMUD

SACRAMENTO MUNICIPAL UTILITY DISTRICT

# RANCHO SECO NUCLEAR GENERATING STATION
# UNIT NO. 1



## LICENSE APPLICATION



NOVEMBER 1967

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BEFORE THE
UNITED STATES ATOMIC ENERGY COMMISSION

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| Station, Sacramento County, California | ) |

DAVID S. KAPLAN

Attorney for
Sacramento Municipal Utility District
6201 "S" Street
Post Office Box 15830
Sacramento, California 95813

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BEFORE THE UNITED STATES ATOMIC ENERGY COMMISSION

| | | |
|---|---|---|
| Application of SACRAMENTO MUNICIPAL UTILITY DISTRICT for a Construction Permit and a Class 104 (b) License to Acquire, Possess and Use a Utilization Facility at its RANCHO SECO NUCLEAR GENERATING STATION, Sacramento County, California | ) ) ) ) ) ) ) | Docket No. 50-312 |

In accordance with the Atomic Energy Act of 1954, as amended, and the rules and regulations issued thereunder, SACRAMENTO MUNICIPAL UTILITY DISTRICT (hereinafter referred to variously as SMUD or the District) herein seeks from the UNITED STATES ATOMIC ENERGY COMMISSION (hereinafter called the Commission) (i) a 40-year Class 104 b, license to construct and operate a nuclear power plant at its Rancho Seco site in the southeast portion of Sacramento County, California, with a core power level of 2772 Mwt (hereinafter called the Plant), and (ii) appropriate source, by-product and special nuclear material licenses for the Plant. In support of this application the District alleges as follows: | 5

1. The name of the District is the SACRAMENTO MUNICIPAL UTILITY DISTRICT.

2. SMUD's address is 6201 S Street, Post Office Box 15830, Sacramento, California 95813.

3. The District is the sole supplier of electricity to the individuals, corporations, public agencies, and other power users within its boundaries, which include most of the County of Sacramento and a small portion of the County of Placer in the State of California.

It generates electricity at hydroelectric plants in the County of El Dorado, California, and purchases additional electricity from the United States Bureau of Reclamation. SMUD also has a contract with the Pacific Gas and Electric Company providing for both the sale and purchase of bulk electricity.

4. The District is a municipal utility district formed in California in 1923 under the Municipal Utility District Act, Chapter 218 of the California Statutes of 1921. The Act was subsequently amended and codified as Division 6 of the Public Utilities Code of the State of California by Chapter 764 of the California Statutes of 1951 and was thereafter further amended. The location of the District's principal executive offices is at the address given in Paragraph 2.

5. All of SMUD's directors and principal officers are citizens of the United States.

The names and addresses of directors are as follows:

| Name | Address |
|---|---|
| Theodore J. Labhard | 11th & L Building, #618<br>Sacramento, California 95814 |
| Reginald A. Sweet | 279 Arden Way<br>Sacramento, California 95815 |
| Frederick E. Anderson, Jr. | P.O. Box 9117<br>Sacramento, California 95816 |
| William O. Baird | 781 Morris Way<br>Sacramento, California 95825 |
| Donald C. McClain | P.O. Box 223<br>Courtland, California 95615 |

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The names and titles of the District's principal officers are as follows:

| Name | | |
|---|---|---|
| Theodore J. Labhard | President | 28 |
| Reginald A. Sweet | Vice President | |
| E. Kendell Davis | General Manager | 15 |
| John J. Mattimoe | Assistant General Manager and Chief Engineer | |
| David S. Kaplan | General Counsel and Secretary | |
| William C. Walbridge | Assistant General Manager and Treasurer | |
| Duane C. Browning | Assistant General Manager, Operations | |
| Willian S. Bossenmaier | Assistant General Manager and Controlier | |

All of the foregoing officers maintain offices at 6201 "S" Street, Sacramento, California 95813, except President Theodore J. Labhard and Vice President Reginald A. Sweet whose addresses are shown in the table listing the District's directors. 28

6. SMUD is not owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government.

7. SMUD is not acting as agent or representative of another person in filing this application.

8. As stated previously, the District seeks from the Commission (i) a 40-year Class 104 b. license to construct and operate a nuclear power plant at its Rancho Seco site in the southeast portion of Sacramento County, California, with a core power level of 2772 Mwt and (ii) appropriate source, by product and special nuclear material licenses for the Plant. 5

9. The use to which the Plant will be put is the generation of electric power to meet the needs of the District's service area.

10. The financial qualifications of the District to carry out the activities for which the licenses are sought are shown in the material attached hereto as Exhibit A and hereby made a part hereof.

11. SMUD's organization and training program is described in Section 12 of the document entitled

RANCHO SECO NUCLEAR GENERATING STATION

FINAL SAFETY ANALYSIS REPORT

SACRAMENTO MUNICIPAL UTILITY DISTRICT

VOLUMES I, II, III, IV, V, and VI

forwarded herewith and hereby made a part hereof.

SMUD has retained Bechtel Corporation to act as its architect engineer and to supervis construction of the Plant. The technical qualifications of Bechtel Corporation are shown in the material attached hereto as Exhibit B and hereby made a part hereof.

The nuclear steam supply system for the Plant is being furnished by the Babcock & Wilcox Company. The technical qualifications of the Babcock & Wilcox Company are shown in the material attached hereto as Exhibit C and hereby made a part hereof.

12. The earliest and latest dates for completion of construction of the Plant are December 1972 and December 1973.

13. A portion of the technical information required by Section 50.34 of 10 CFR 50 is set forth in the document described in Paragraph 11 herein above and forwarded herewith.

14. The District will provide and maintain financial protection for public liability and will sign an indemnity agreement with the Commission covering excess liability, all as provided in 10 CFR 140.

15. SMUD will not permit any individual to have access to Restricted Data until the Civil Service Commission shall have made an investigation and report to the Commission on the character, associations, and loyalty of such individual, and the Commission shall have determined that permitting such person to have access to Restricted Data will not endanger the common defense and security.

16. It is requested that all orders, notices, papers or other communications issued by the Commission in connection with this application be mailed or delivered to:

D. S. Kaplan
General Counsel
Sacramento Municipal Utility District
6201 "S" Street
Post Office Box 15830
Sacramento, California 95813

15

WHEREFORE, the District prays that the Commission issue (i) a 40-year Class 104 b. license authorizing the District to construct and operate the proposed nuclear plant at its Rancho Seco site and (ii) such by-product, source, and special nuclear material licenses as may be appropriate for the Plant.

Subscribed in Sacramento, California, this 1st day of November, 1967.

Respectfully submitted,

SACRAMENTO MUNICIPAL UTILITY DISTRICT

By _____
Paul E. Shaad
General Manager and Chief Engineer

E. K. DAVIS
DAVID S. KAPLAN
Attorneys for Sacramento
Municipal Utility District

By _____
David S. Kaplan

VERIFICATION

STATE OF CALIFORNIA

County of Sacramento

PAUL E. SHAAD, being first duly sworn, deposes and says: That he is General Manager and Chief Engineer of SACRAMENTO MUNICIPAL UTILITY DISTRICT, the applicant herein; that he has read the foregoing Application and knows the contents thereof; that the same is true of his own knowledge, except as to the matters which are therein stated on information or belief, and as to those matters he believes it to be true.

DATED: November 1, 1967

Paul E. Shaad

Subscribed and sworn to before me this

1st day of November, 1967.

Betty Mattier, Notary Public in and for
the County of Sacramento, State of California.

My Commission Expires January 12, 1968.

VERIFICATION

STATE OF CALIFORNIA

County of Sacramento

E. K. Davis, being first duly sworn, deposes and says: That he is General Manager of SACRAMENTO MUNICIPAL UTILITY DISTRICT, the applicant herein; that he has read the foregoing Application and knows the contents thereof; that the same is true of his own knowledge, except as to the matters which are therein stated on information or belief, and as to those matters he believes it to be true.

DATED: September 11, 1972

E. K. Davis

Subscribed and sworn to before me th
11th day of September, 1972

Betty Mattier, Notary Public in and for
the County of Sacramento, State of
California

My Commission Expires January 12, 1976


BEFORE THE UNITED STATES ATOMIC ENERGY COMMISSION

| | |
|---|---|
| In the Matter of | |
| SACRAMENTO MUNICIPAL UTILITY DISTRICT (Rancho Seco) | Docket No. 50-312 |
| | Amendment No. 1 |

Regulatory Suppl File Cy.

Now comes SACRAMENTO MUNICIPAL UTILITY DISTRICT (SMUD) and amends its above-numbered application by submitting herewith Amendment No. 1. This amendment updates the SMUD Preliminary Safety Analysis Report (PSAR) to conform with the contents of Metropolitan Edison Company's PSAR (Docket #50-289) and its Amendments 1, 2, 3, and 4.

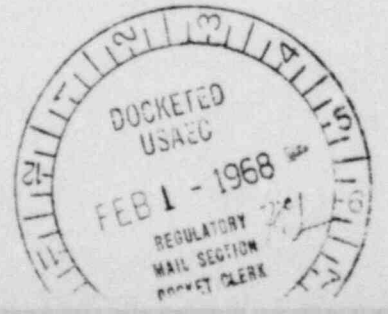
This amendment consists of:

(1) revised pages for Sections 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12, and 14 and new appendices 1A, 3A, 4A, 5J, 6A, 7A, 9A, 11A, 12A, and 14A, which contain the SMUD responses to questions asked of Metropolitan Edison Company by the Commission;

(2) Appendix 1B, titled "Quality Assurance Operations";

(3) a supplement to Appendix 2D, titled "Report on Seismic Hazard at the Sierran Sites Area", by Perry Byerley;

(4) Appendix 2F, titled "Meteorological Station"; and



(5) Appendix 2G, titled "Storage Reservoir Criteria", and a supplement thereto.

An instruction letter and a table of cents are included as a part of this amendment.

Subscribed in Sacramento, California, this 26th day of January, 1968.

Respectfully submitted,

SACRAMENTO MUNICIPAL UTILITY DISTRICT

By _____
Paul E. Shaad
General Manager and Chief Engineer

E. K. DAVIS
DAVID S. KAPLAN
Attorneys for Sacramento
Municipal Utility District

By _____
David S. Kaplan

BETTY MATTIER, NOTARY PUBLIC
SACRAMENTO CO., CALIF.
MY COMMISSION EXPIRES JAN. 12, 1972

Subscribed and sworn to before me
this 26th day of January, 1968

_____
Betty Mattier, Notary Public in
and for the County of Sacramento,
State of California.

My Commission expires January 12, 1972.

BEFORE THE UNITED STATES ATOMIC ENERGY COMMISSION

| | | |
|---|---|---|
| In the Matter of | ) | |
| | ) | Docket No. 50-312 |
| SACRAMENTO MUNICIPAL UTILITY DISTRICT (Rancho Seco) | ) | Amendment No. 2 |

Now comes SACRAMENTO MUNICIPAL UTILITY DISTRICT (SMUD) and amends its above-numbered application by submitting herewith Amendment No. 2. This amendment updates the SMUD Preliminary Safety Analysis Report (PSAR) to respond to letters from Peter A. Morris, Director, Division of Reactor Licensing to E. K. Davis, General Counsel, Sacramento Municipal Utility District, dated February 19, 1968 and March 21, 1968.

Following the procedure adopted with Amendment No. 1, the questions in the above letters are listed and answered in appendices bearing the same numbers as the sections of the PSAR to which the questions relate; i.e., questions relating to Section 1 are listed and answered in Appendix 1A, a subdivision of Appendix 1, questions relating to Section 2 are listed and answered in Appendix 2H, a subdivision of Appendix 2, and so on. It will be noted that the letter designation indicating the subdivision of the appendix in which DRL questions are answered is not the same in all instances. Reference to the Table of Contents will show which subdivision of each appendix consists

of answers to DRL questions on the section of the PSAR to which that appendix pertains.

Accordingly, this amendment consists of:

(1) New pages for Appendices 1A, 2H, 3A, 4A, 5J, 6A, 7A, 8A, 9A, 10A, 11A, 12A, 13A, 14A, and 15A, all of which are subdivisions of appendices in which DRL questions are listed and answered.

The response to the foregoing questions has required changes in other portions of the SMUD Preliminary Safety Analysis Report (PSAR). Accordingly this amendment also contains:

(2) New appendices 2A, 2C, 2D, and 2E which have been reprinted on both sides to provide more space in Volume IV of the PSAR. There have been no changes to the text;

(3) Revised pages for Sections 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 and Appendices 1B, 2A, 5A, 6A, 9A, 11A, and 14A;

(4) New Appendix 1C, titled "Rancho Seco Project Engineering Staff";

(5) A supplement to Appendix 2A, titled "Meteorological Investigation", by Meteorology Research, Inc.

An instruction letter and a table of contents are

included as a part of this amendment.

Subscribed in Sacramento, California, this 12th day of April, 1968.

Respectfully submitted,

SACRAMENTO MUNICIPAL UTILITY DISTRICT

By _____
Paul E. Shaad
General Manager and Chief Engineer

E. K. DAVIS
DAVID S. KAPLAN
Attorneys for Sacramento
Municipal Utility District

By _____
David S. Kaplan

BETTY MATTIER, NOTARY PUBLIC
SACRAMENTO CO., CALIF.
MY COMMISSION EXPIRES JAN. 12, 1972

Subscribed and sworn to before me
this 12th day of April, 1968.

_____
Betty Mattier, Notary Public in
and for the County of Sacramento,
State of California.

My Commission expires January 12, 1972.

BEFORE THE UNITED STATES ATOMIC ENERGY COMMISSION

| | | |
|---|---|---|
| In the Matter of | ) | |
| | ) | Docket No. 50-312 |
| SACRAMENTO MUNICIPAL UTILITY DISTRICT | ) | |
| (Rancho Seco) | ) | Amendment No. 3 |

Now comes SACRAMENTO MUNICIPAL UTILITY DISTRICT (SMUD) and amends its above-numbered application by submitting herewith Amendment No. 3. This amendment updates the SMUD Preliminary Safety Analysis Report (PSAR) to respond to the letter from Peter A. Morris, Director, Division of Reactor Licensing to E. K. Davis, General Counsel, Sacramento Municipal Utility District, dated April 10, 1968, and also updates Amendment No. 2 in other respects. This amendment also amends Exhibit A of the license application (Financial Qualifications of the District) by including District's 1967 Annual Report and April, 1968, balance sheet data.

Following the procedure adopted with Amendment No. 1, the questions in the above letter are listed and answered in appendices bearing the same numbers as the sections of the PSAR to which the questions relate; i.e., questions relating to Section 1 are listed and answered in Appendix 1A, a subdivision of Appendix 1, questions relating to Section 2 are listed and answered in Appendix 2H, a subdivision of Appendix 2, and so on. It will be noted that the letter designation indicating the subdivision of the appendix in which DRL questions are answered is

not the same in all instances. Reference to the Table of Contents will show which subdivision of each appendix consists of answers to DRL questions on the section of the PSAR to which that appendix pertains.

Accordingly, this amendment consists of:

(1) New pages for Appendices 2H and 5J which are subdivisions of appendices in which DRL questions are listed and answered.

(2) Revised pages for Sections 1, 3, 4, 5, 6, 7, 8, 9, 11, and 14 and Appendices 1A, 2H, 3A, 4A, 5A, 6A, 7A, 9A, 11A, 12A, 13A, and 14A.

An instruction letter and a table of contents are included as a part of this amendment.

Subscribed in Sacramento, California, this 22nd day of May, 1968.

Respectfully submitted,

SACRAMENTO MUNICIPAL UTILITY DISTRICT

By _____
Paul E. Shaad
General Manager and Chief Engineer

E. K. DAVIS
DAVID S. KAPLAN
Attorneys for Sacramento Municipal Utility District

By _____
David S. Kaplan

Subscribed and sworn to before me this 22nd day of May, 1968.

_____
Betty Mattier, Notary Public in and for the County of Sacramento, State of California.

My Commission expires January 12, 1972.

BETTY MATTIER, NOTARY PUBLIC
SACRAMENTO CO., CALIF.
MY COMMISSION EXPIRES JAN. 12, 1972

Regulatory File Cy.

SMUD

SACRAMENTO MUNICIPAL UTILITY DISTRICT ☐ 6201 S Street, Box 15830, Sacramento, California 95813; (916) 452-3211

April 14, 1971

Dr. Peter A. Morris, Director
Division of Reactor Licensing
U. S. Atomic Energy Commission
Washington D. C. 20545



Dear Dr. Morris:

Rancho Seco Nuclear Generating Station, Unit No. 1
AEC Docket No. 50-312, Amendment 5

Sacramento Municipal Utility District hereby amends its application for a construction permit and operating license for the Rancho Seco Nuclear Generating Station, Unit No. 1, by submitting eighty (80) copies of the Final Safety Analysis Report and eighty (80) copies of revised pages in the License Application. The Final Safety Analysis Report replaces the Preliminary Safety Analysis Report as previously supplemented and amended with the exception of Attachments A and B submitted January 28, 1970. The revised pages of the License Application provide for an increased power rating for the unit and update the financial status of the District.

We expect that Rancho Seco Unit No. 1 described in the License Application as supplemented and amended will be ready for initial loading of nuclear fuel December 1, 1972. Accordingly, we request that the Commission initiate a further review of the License Application as promptly as possible.

As required by the Commission's Rules of Practice, a copy of this Amendment No. 5 is being served on the Chairman of the County Board of Supervisors, Sacramento County, California, the county in which the facility is located.

Respectfully submitted

SACRAMENTO MUNICIPAL UTILITY DISTRICT

E. K. DAVIS
DAVID S. KAPLAN
Attorneys for Sacramento
Municipal Utility District

By_____
Paul E. Shaad
General Manager and Chief Engineer

By_____
E. K. Davis



Subscribed and sworn to before me this 14th day of April, 1971



Betty Mattier

Betty Mattier, Notary Public in and for the County of Sacramento, State of California.

My Commission expires January 12, 1972.

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EXHIBITS

CONTENTS — EXHIBITS



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EXHIBIT A

EXHIBIT A

FINANCIAL QUALIFICATIONS OF THE DISTRICT

I. Estimated Cost of Project

The total cost to the District for the design, equipment, construction, interest during construction, overhead, licensing and pre-operational testing of Rancho Seco Unit No. 1, including transmission and substation facilities, is estimated to be $281,000,000 based on 1972 price levels escalated to 1973. Table 1 provides the detailed tabulation of this cost estimate. The nuclear steam supply system will be supplied by the Babcock & Wilcox Company for a contracted price of $38,234,000 (including estimated escalation). The Westinghouse Electric Corporation is supplying the turbine-generator for $24,560,000. 15

The District expects to expend an additional sum of $1,500,000 for personnel training.

II. Initial Fuel Inventory

The cost of the initial fuel inventory is estimated to be $29,000,000 including carrying charges during construction and escalation to 1973. 5

TABLE 1
SACRAMENTO MUNICIPAL UTILITY DISTRICT
ESTIMATED COST OF RANCHO SECO
NUCLEAR GENERATING STATION

| FPC Account No. | Item | Estimated Cost | |
|---|---|---|---|
| | NUCLEAR PRODUCTION | | |
| 320 | Land and Land Rights | $ 901,000 | |
| 321 | Structure and Improvements | 38,321,000 | |
| 322 | Reactor Plant Equipment | 81,897,000 | |
| 323 | Turbo-Generator Equipment | 53,420,000 | |
| 324 | Accessory Electric Equipment | 14,957,000 | |
| 325 | Miscellaneous Power Plant Equipment | 3,130,000 | 15 |
| | Engineering, Superintendence and Accounting | 40,118,000 | |
| | Overhead Construction Cost | 41,366,000 | |
| | Total Production | $274,110,000 | |
| | SWITCHYARD | | |
| 352 | Structures and Improvements | 570,000 | |
| 353 | Station Equipment & Transformers | 3,150,000 | |
| | Engineering, Superintendence and Accounting | 140,000 | 15 |
| | Overhead Construction Cost | 320,000 | |
| | Total Switchyard | $ 4,180,000 | |
| | TRANSMISSION | | |
| 350 | Land and Land Rights | 330,000 | |
| 354 | Towers and Fixtures | 770,000 | |
| 356 | Conductors and Insulators | 1,130,000 | |
| | Engineering, Superintendence and Accounting | 160,000 | 15 |
| | Overhead Construction Costs | 320,000 | |
| | Total Transmission | $ 2,710,000 | |
| | TOTAL PROJECT | $281,000,000 | |

The schedule of contained uranium, its enrichment and cost based upon the current AEC schedule of charges is:

| Batch No. | Weight Kg of U | Enrichment % U-235 (Average) | Cost of Enriched $UF_6$ |
|---|---|---|---|
| 1 | 25,964 | 2.01 | $ 3,925,224 |
| 2 | 28,281 | 2.67 | 6,357,075 |
| 3 | 27,817 | 3.00 | 7,300,865 |
| Total | 82,062 | | $17,583,164 |

5

Under the terms of the District's contract with the Babcock & Wilcox Company, B&W will design, fabricate and warrant the workmanship and performance of the initial fuel loading and the first three reload batches. The prices for these services, subject to escalation, are:

| | |
|---|---|
| Core 1 | $6,672,900 |
| Batch 4 | $2,036,000 |
| Batch 5 | $2,220,500 |
| Batch 6 | $2,186,400 |

The District has purchased uranium concentrates for Core 1 and Batch Nos. 4, 5, and 6 from Utah Construction Mining Company of San Francisco, California. The District also has contracted with Allied Chemical Corporation for conversion of $U_3O_8$ to $UF_6$ and with the AEC for enrichment of $UF_6$ to the necessary percent of U-235.

5

III. Financing of Construction Program

Financial forecast for the years 1972 through 1981 shows that the District will finance expenditures for plant additions and betterments to its electric system, including the remaining cost of Rancho Seco No. 1 by providing about 47% from internally generated funds and 53% by the sale of revenue bonds. Revenue bonds, approximately $305,000,000 sold or proposed to be issued during 1972-1981 inclusive, will hold parity status with outstanding revenue bonds of the District as respects the payment of interest and principal after operation and maintenance expenses have been provided from operating revenue. According to law, the District may issue revenue bonds having a maturity up to 40 years.

Table 2, Business Forecast 1972-1981 - Total Net Revenue and Debt Service Coverage shows that the District will continue to maintain a strong financial position during the aforementioned decade after providing for all operation and maintenance expenses and debt service on all presently outstanding revenue bonds and additional parity status revenue bonds proposed to be issued. In fact, the debt service ratio on all revenue bonds during this forecast period is not less than 1.49 times.

The effect of this proposed method of financing on the District's capital structure is shown in Table 3, Projected Capitalization. The customers' equity segment of the District's capitalization was 36% at the end of 1971. During periods of heavy debt financing for nuclear generation plant, it is lowered to 33% in 1972, but increases it to 40% by 1977.

SACRAMENTO MUNICIPAL UTILITY DISTRICT

TABLE 2

# BUSINESS FORECAST 1971-1981
# TOTAL NET REVENUES AND DEBT SERVICE COVERAGE

*(thousands of dollars)*

| | 1971 (Actual) | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Operating Revenue from Sales: | | | | | | | | | | | |
| Sales to Ultimate Customers(A) | $47,675 | 53,957 | 59,818 | 63,649 | 67,654 | 71,979 | 76,605 | 81,702 | 85,691 | 91,680 | 97,407 |
| Sales to PG&E | — | — | 2,548 | 22,522 | 20,349 | 19,302 | 16,738 | 13,555 | 10,690 | 12,374 | 27,264 |
| Total | $47,675 | 53,957 | 62,366 | 86,171 | 88,003 | 91,281 | 93,343 | 95,257 | 96,381 | 104,054 | 124,671 |
| 2. Operating Expenses: | | | | | | | | | | | |
| Purchased Power | $ 8,661 | 9,559 | 9,847 | 7,770 | 7,772 | 7,775 | 7,773 | 7,774 | 7,775 | 7,775 | 7,775 |
| Operation and Maintenance: | | | | | | | | | | | |
| Hydro Generation | 1,008 | 1,401 | 1,264 | 1,329 | 1,399 | 1,472 | 1,550 | 1,632 | 1,720 | 1,813 | 1,911 |
| Nuclear Generation | — | — | 4,386 | 12,884 | 13,057 | 13,411 | 13,804 | 13,665 | 13,750 | 15,917 | 23,704 |
| Other | 10,212 | 11,923 | 12,578 | 14,400 | 15,372 | 16,426 | 17,565 | 18,801 | 20,143 | 21,691 | 23,546 |
| Taxes | 215 | 214 | 225 | 242 | 254 | 267 | 280 | 294 | 309 | 324 | 340 |
| Total | $20,096 | 23,097 | 28,300 | 36,625 | 37,854 | 39,351 | 40,972 | 42,166 | 43,697 | 47,520 | 57,276 |
| 3. Net Operating Revenue | $27,579 | 30,860 | 34,066 | 49,546 | 50,149 | 51,930 | 52,371 | 53,091 | 52,684 | 56,534 | 67,395 |
| 4. Other Income (principally interest) | 3,980 | 2,815 | 2,553 | 3,108 | 3,249 | 3,471 | 3,244 | 4,024 | 5,463 | 3,720 | 4,477 |
| 5. Unused Balance of White Rock Project Revenue Bond Construction Fund(B) | — | 3,938 | — | — | — | — | — | — | — | — | — |
| 6. Total Net Revenue | $31,559 | 37,613 | 36,619 | 52,654 | 53,398 | 55,401 | 55,615 | 57,115 | 58,147 | 60,254 | 71,872 |
| 7. Debt Service on Revenue Bonds: | | | | | | | | | | | |
| Electric System Revenue Bonds | $ 1,550 | 1,524 | 1,492 | 1,461 | 1,429 | 1,396 | 1,363 | 1,329 | 1,294 | 1,260 | 1,225 |
| UARP Refunding Revenue Bonds | 5,079 | 5,059 | 5,046 | 5,048 | 5,060 | 4,970 | 5,077 | 5,080 | 5,078 | 5,071 | 5,059 |
| White Rock Project Revenue Bonds | 6,045 | 6,210 | 6,172 | 6,129 | 6,287 | 6,342 | 6,298 | 6,254 | 6,204 | 6,352 | 6,293 |
| Electric Revenue Bonds—Series A, B, and C | 2,657 | 7,923 | 7,923 | 8,216 | 8,195 | 8,175 | 8,544 | 8,788 | 9,014 | 9,217 | 9,304 |
| Electric Revenue Bonds—Future(C) | — | — | 3,900 | 4,800 | 4,997 | 5,735 | 7,223 | 8,158 | 14,233 | 16,598 | 18,994 |
| Total | $15,331 | 20,716 | 24,533 | 25,654 | 25,968 | 26,618 | 28,505 | 29,609 | 35,823 | 38,498 | 40,875 |
| 8. Revenue After Revenue Bond Debt Service | $16,228 | 16,897 | 12,086 | 27,000 | 27,430 | 28,783 | 27,110 | 27,506 | 22,324 | 21,756 | 30,997 |
| 9. G.O. Debt Service(D) | $ 2,048 | 2,549 | 3,048 | 7,281 | 13,653 | 13,786 | 13,791 | 6,265 | 6,961 | 14,000 | 16,955 |
| 10. Ratio—Total Net Revenue to: | | | | | | | | | | | |
| Debt Service—All Revenue Bonds | 2.06 | 1.82 | 1.49 | 2.05 | 2.06 | 2.08 | 1.95 | 1.93 | 1.62 | 1.57 | 1.76 |
| Maximum Debt Service on Outstanding Revenue Bonds for Ensuing Three Years(E) | 1.51 | 1.56 | 1.41 | 2.01 | 2.01 | 1.96 | 1.83 | 1.65 | 1.49 | 1.49 | 1.71 |
| Total Interest on All Revenue Bonds | 2.89 | 2.36 | 1.86 | 2.59 | 2.65 | 2.67 | 2.53 | 2.54 | 2.06 | 2.01 | 2.28 |

(A) Tabulation includes 9.7% rate increase beginning June 29, 1972.

(B) The overage between $100,000,000 of bond proceeds and the project costs which, according to the Resolution of Issuance, becomes Revenues when project is completed and all bills are paid.

(C) $50,000,000 in 1972; $30,000,000 in 1973; $25,000,000 in 1976; $25,000,000 in 1977; $65,000,000 in 1978; $70,000,000 in 1979; $25,000,000 in 1980; $15,000,000 in 1981 (6% net annual interest assumed).

(D) Includes debt service on Notes, Series A and future issues of nuclear fuel notes in the amount of $15,000,000 in 1974; $46,000,000 in 1975, $15,000,000 in 1980 (4½% net annual interest assumed). G.O. debt service has been paid from revenues since the commencement of operations on December 31, 1946.

(E) Ratio of Total Net Revenue to debt service for maximum of three ensuing years. (Debt Service Ratio per terms of Electric System, White Rock, UARP Refunding and Electric Revenue Bond Resolutions.)

TABLE 3

SACRAMENTO MUNICIPAL UTILITY DISTRICT

PROJECTED CAPITALIZATION
($1,000's)

| | 1971 (Actual) | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 |
|---|---|---|---|---|---|---|---|
| Customer's equity | $188,738 | $206,485 | $226,149 | $238,289 | $251,456 | $268,006 | $285,512 |
| Long-term debt | 340,565 | 411,996 | 431,002 | 431,042 | 412,706 | 418,188 | 431,489 |
| Total Capitalization | $529,303 | $618,481 | $657,151 | $669,331 | $664,162 | $686,194 | $717,001 |
| Percentage of customer's equity | 36% | 33% | 34% | 36% | 38% | 39% | 40% |

The District may levy and collect, or cause to be collected, taxes for any lawful purpose as authorized in Sections 12891 and 12892 of the California Municipal Utility District Act.

IV. Bond Credit Rating, Issues Outstanding and Interest Cost

The District since 1959 has issued $474,500,000 of revenue bonds. These issues, with the ratings accorded each are shown in Table 4.

Additionally, the District has issued $69,589,000 of general obligation bonds and notes. These were issued in the period between 1938-1958 and in March 1972. These general obligation bonds and notes enjoy an Aa and AA rating by both rating services. As of June 30, 1972, $46,029,000 of general obligations were outstanding.

Average net annual interest rate on all bonds outstanding as of June 30, 1972 was 4.724%.

V. Nuclear Insurance

Upon arrival of nuclear fuel at the Rancho Seco site, the District will have acquired from Nuclear Energy Liability Insurance Association (NELIA) a policy of third-party liability insurance with limits of at least $1,000,000. Upon issuance by the AEC of an operating license for the project, the District will acquire the maximum of nuclear public liability insurance for third-party personal injury and property damage available from NELIA and from Mutual Atomic Energy Liabili y Underwriters (MAELU).

Additionally, the District will have acquired coverage to the extent available from the aforementioned pools for any third-party liability for bodily injury or personal injury or property damage from nuclear perils for

Amendment 15

TABLE 4
REVENUE BOND ISSUES

| Issue | Date of Issue | Amount of Issue | Average Annual Interest Cost % | Ratings | | Amount Outstanding as of February 29, 1972 |
|---|---|---|---|---|---|---|
| | | | | Moodys | Standard & Poor | |
| Upper American River Project Revenue Bonds | | | | | | |
| Series A | 1959 | $25,000,000 | 3.58 | Aa | AA | $ --- |
| Series B | 1960 | 30,000,000 | 3.94 | Aa | AA | --- |
| Series C | 1961 | 30,000,000 | 3.77 | Aa | AA | --- |
| Upper American River[1] Project Refunding Revenue Bonds | 1965 | 79,500,000 | 3.27 | Aa | AA | 74,400,000 |
| White Rock Project Revenue Bonds | | | | | | |
| Series A | 1964 | 12,000,000 | 3.46 | Aa | AA | 11,670,000 |
| Series B | 1965 | 30,000,000 | 3.46 | Aa | AA | 29,000,000 |
| Series C | 1970 | 29,000,000 | 6.95 | Aa | AA | 29,000,000 |
| Series D | 1970 | 29,000,000 | 6.81 | Aa | AA | 29,000,000 |
| Electric System Revenue Bonds | | | | | | |
| Series A | 1962 | 10,000,000 | 2.96 | Aa | AA | 6,490,000 |
| Series B | 1963 | 10,000,000 | 2.98 | Aa | AA | 6,670,000 |
| Electric Revenue Bonds | | | | | | |
| Series A | 1971 | 50,000,000 | 5.59 | A | AA | 50,000,000 |
| Series B | 1971 | 40,000,000 | 6.11 | Aa | AA | 40,000,000 |
| Series C | 1971 | 50,000,000 | 5.13 | Aa | AA | 50,000,000 |
| Series D | 1972 | 50,000,000 | 5.42 | Aa | AA | 50,000,000 |
| | | | | Total Outstanding Revenue Bonds | | $326,230,000 |

[1] In 1965 the District sold $79,500,000 Upper American River Project Refunding Revenue Bonds to redeem, on February 15, 1969, the balance of Upper American River Project Revenue Bonds then outstanding



15

which it may have responsibility during processing or transport of atomic products.

In regard to the project during the course of construction, the District provides builder's risk coverage for its contractors and their subcontractors of any tier.

Upon acceptance of the plant from the contractors, the District proposes to acquire "all risk" property damage insurance, including nuclear perils, to the limits of coverage available from Nuclear Energy Property Insurance Association (NEPIA) and Mutual Atomic Energy Reinsurance Pool (MAERP). 5

In regard to nuclear energy liability insurance, the District has authorized Marsh & McLennan, Inc. and CNA Casualty of California Company to act in its behalf in submitting an application for such insurance. Marsh & McLennan, Inc. has been appointed the broker of record for the placement of nuclear plant property damage insurance. 15 5

VI. Estimated Operating Expense

Table 5 presents the estimated operating costs for Rancho Seco Unit No. 1 for the years 1973 through 1977.

VII. Decommissioning Cost 15

Funds required to permanently shut down the plant will be acquired in the same manner as funds used for construction and will be from internally generated funds and from the sale of revenue bonds. The cost of permanently shutting down the facility is estimated to be $21,000,000 based on 1972 dollars.

The annual cost to maintain the plant in the safe shut down condition is estimated at $70,000. This cost includes manpower, maintenance, surveys, groundskeeping, and overhead.

The cost estimate for permanently shutting down the unit was based on the following:

- All fuel is removed from site.
- Chemical decontamination of primary and auxiliary systems.
- Solidification and disposal of resin and contaminated liquid by an AEC licensed disposal contractor.
- Contaminated equipment above grade in the auxiliary building is dismantled and moved into the containment building. 15
- Contaminated equipment below grade in the auxiliary building is disconnected and capped or sealed in such a manner as to provide a barrier for the system.
- Portions of the containment building and auxiliary building are filled with concrete.
- Concrete slabs are used to seal the auxiliary building below grade.
- All radwaste tanks are sealed in place with concrete.
- The spent fuel storage pool is filled and sealed with concrete.

TABLE 5
SACRAMENTO MUNICIPAL UTILITY DISTRICT
ESTIMATED OPERATING EXPENSES
RANCHO SECO UNIT NO. 1
($1,000's)

| Item | 1973 | 1974 | 1975 | 1976 | 1977 |
|---|---|---|---|---|---|
| Fuel Cost | $ 3,154 | $ 9,868 | $ 9,921 | $10,140 | $10,359 |
| Insurance | 269 | 1,073 | 1,073 | 1,073 | 1,073 |
| Operation & Maintenance | 1,232 | 3,016 | 3,136 | 3,271 | 3,445 |
| Depreciation[1] | 1,978 | 7,912 | 7,912 | 7,912 | 7,912 |
| TOTAL | $ 6,633 | $21,869 | $22,042 | $22,396 | $22,789 |

[1]Based on the straight-line method, 30 year life.

SACRAMENTO MUNICIPAL UTILITY DISTRICT
BALANCE SHEETS
JUNE 30, 1972 AND 1971

TABLE 6

## ASSETS

| | June 30 1972 | June 30 1971 |
|---|---|---|
| ELECTRIC UTILITY PLANT, at original cost: | | |
| Plant in service | $344 548 701 | $291 443 880 |
| Less - Reserve for depreciation | 53 990 062 | 49 181 783 |
| | $290 558 639 | $242 262 097 |
| Construction work in progress - | | |
| Nuclear | 192 824 795 | 88 105 298 |
| Hydroelectric | 3 232 751 | 40 216 435 |
| Other | 11 917 660 | 10 980 980 |
| Nuclear fuel | 24 594 421 | 3 529 917 |
| | $523 128 266 | $385 094 727 |
| SEGREGATED FUNDS: | | |
| Consisting of cash and securities, at cost - | | |
| System construction fund | $ 22 609 752 | $ 71 774 249 |
| From W.R.P. Revenue Bonds | - | 5 256 238 |
| From Electric Revenue Bonds | - | 944 517 |
| For nuclear fuel | 3 941 380 | - |
| In reserve funds for revenue bonds - | | |
| For Electric System Bonds | 1 011 702 | 1 010 900 |
| For Electric Revenue Bonds | 8 070 926 | 2 656 370 |
| For all Parity Bonds | 7 738 403 | 7 353 684 |
| For White Rock Project Bonds | 472 967 | - |
| | $ 43 845 130 | $ 88 995 958 |
| CURRENT ASSETS: | | |
| Cash | $ 253 691 | $ 206 396 |
| Cash and securities for payment of debt service | 7 544 964 | 7 399 982 |
| Accounts receivable, less reserves of $88,602 and $76,578, respectively | 3 316 473 | 3 022 688 |
| Estimated receivable under business interruption insurance | - | 488 731 |
| Interest receivable | 842 566 | 1 003 012 |
| Materials and supplies, at average cost | 3 027 589 | 1 769 484 |
| Prepayments and special deposits | 1 086 083 | 1 152 767 |
| | $ 16 071 366 | $ 15 003 060 |
| DEFERRED CHARGES: | | |
| Unamortized bond redemption premium, debt discount, and expense | $ 3 568 469 | $ 3 694 490 |
| Other | 558 533 | 300 494 |
| | $ 4 127 002 | $ 3 994 984 |
| | $587 171 764 | $493 088 729 |

## LIABILITIES

| | June 30 1972 | June 30 1971 |
|---|---|---|
| CAPITALIZATION: | | |
| Customers' equity employed in the business - | | |
| Balance beginning of year | $188 737 554 | $170 648 308 |
| Net revenue for the year | 6 504 553 | 8 185 808 |
| Total customers' equity | $195 242 107 | $178 834 116 |
| Long-term debt (Note 1) | 364 225 447 | 292 672 844 |
| | $559 467 554 | $471 506 960 |
| CURRENT LIABILITIES: | | |
| Accounts payable | $ 11 271 135 | $ 6 286 494 |
| Accrued salaries and wages | 269 167 | 638 720 |
| Accrued vacation | 1 322 046 | 1 146 805 |
| Long-term debt due within one year | 6 347 000 | 6 213 000 |
| Accrued interest on long-term debt | 4 576 341 | 4 223 841 |
| Customers' deposits | 1 207 609 | 1 080 780 |
| Other | 412 902 | 429 432 |
| | $ 25 406 200 | $ 20 019 072 |
| PROPERTY INSURANCE RESERVE | $ 95 833 | $ - |
| CONTRIBUTIONS IN AID OF CONSTRUCTION | $ 2 202 177 | $ 1 562 697 |
| | $587 171 764 | $493 088 729 |

Amendment 15

A-13

POOR ORIGINAL

SACRAMENTO MUNICIPAL UTILITY DISTRICT
STATEMENT OF NET REVENUE
JUNE 1972

TABLE 7

| | Current Month | | Six Months to Date | | Twelve Months to Date | |
|---|---|---|---|---|---|---|
| | Amount | Over (Under) Prior Year | Amount | Over (Under) Prior Year | Amount | Over (Under) Prior Year |
| OPERATING REVENUES: | | | | | | |
| Sales of electric energy - | | | | | | |
| Residential | $1 968 900 | $ 253 522 | $11 793 345 | $1 221 962 | $24 523 591 | $3 476 753 |
| Commercial and industrial | 2 328 677 | 272 866 | 12 221 633 | 1 407 990 | 25 222 972 | 3 296 464 |
| Street lighting | 39 800 | (77) | 248 713 | 21 673 | 488 300 | 67 138 |
| Sales for resale | 2 123 | 24 | 12 548 | 851 | 26 349 | 3 437 |
| Total sales of electric energy | $4 339 500 | $ 526 335 | $24 276 239 | $2 652 476 | $50 261 212 | $6 843 792 |
| Other electric revenue | 1 535 | 445 | 65 278 | 8 384 | 74 776 | 8 949 |
| Total operating revenues | $4 341 035 | $ 526 780 | $24 341 517 | $2 660 860 | $50 335 988 | $6 852 741 |
| OPERATING EXPENSES: | | | | | | |
| Operation - | | | | | | |
| Purchased power | $ 930 174 | $ 518 000 | $ 5 145 095 | $1 336 218 | $ 9 996 893 | $1 011 574 |
| Production | 61 754 | 18 981 | 391 559 | 110 187 | 687 213 | 142 628 |
| Transmission and distribution | 250 690 | 83 747 | 1 267 799 | 239 265 | 2 392 203 | 378 134 |
| Customer accounts | 165 748 | 10 556 | 956 599 | 97 080 | 1 853 316 | 168 007 |
| Sales | 61 299 | (31 412) | 355 143 | (107 872) | 862 036 | (207 988) |
| Administrative and general | 264 971 | 40 085 | 1 398 642 | 188 359 | 2 747 417 | 363 186 |
| Total operation | $1 734 636 | $ 639 957 | $ 9 554 837 | $1 863 237 | $18 539 078 | $1 855 541 |
| Maintenance | 308 003 | 77 782 | 1 798 465 | 351 945 | 3 556 759 | 280 786 |
| Provision for depreciation | 606 489 | 86 441 | 3 660 415 | 572 340 | 7 055 264 | 923 405 |
| Taxes | 55 414 | 32 110 | 210 791 | 31 406 | 246 741 | 30 061 |
| Total operating expenses | $2 704 542 | $ 836 290 | $15 224 508 | $2 818 928 | $29 397 842 | $3 089 793 |
| Net operating revenue | $1 636 493 | $(309 510) | $ 9 117 009 | $ (158 068) | $20 938 146 | $3 762 948 |
| OTHER INCOME: | | | | | | |
| Allowance for funds used during construction | 792 808 | 272 999 | 4 367 814 | 1 467 012 | 7 585 371 | 2 717 311 |
| Interest income and other | 213 921 | (194 002) | 1 548 244 | (218 463) | 3 761 566 | (131 666) |
| Gross income | $2 643 222 | $(230 513) | $15 033 067 | $1 090 481 | $32 285 083 | $6 348 593 |
| INCOME DEDUCTIONS: | | | | | | |
| Interest on long-term debt | $1 434 957 | $ 290 446 | $ 8 463 330 | $2 765 486 | $15 748 827 | $5 519 162 |
| Amortization of bond premium, bond redemption premium, discount and expense, net | 11 042 | 1 333 | 65 184 | 6 248 | 128 265 | (10 529) |
| Total income deductions | $1 445 999 | $ 291 779 | $ 8 528 514 | $2 771 734 | $15 877 092 | $5 508 633 |
| Net revenue | $1 197 223 | $(522 292) | $ 6 504 553 | $(1 681 253) | $16 407 991 | $ 839 960 |

SACRAMENTO MUNICIPAL UTILITY DISTRICT
NOTES TO FINANCIAL STATEMENTS
JUNE 30, 1972

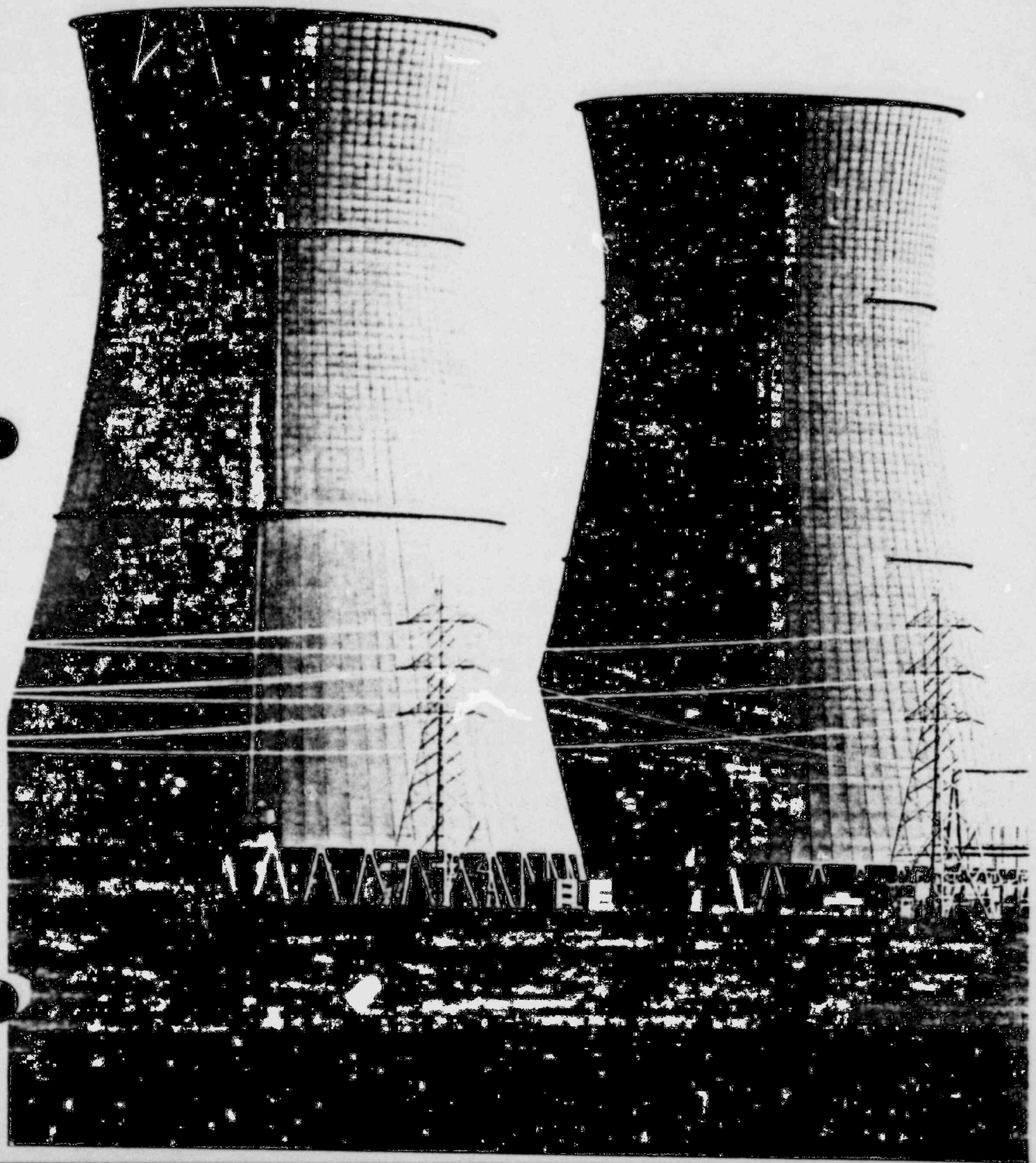
TABLE 8

(1) Long-term debt outstanding at June 30, 1972 and 1971, was as follows:

| | June 30 1972 | June 30 1971 |
|---|---|---|
| General Obligation Bonds and Notes - | | |
| Power Bonds of 1938 - | | |
| Series A, 3%, 1972 to 1974 | $ 45 000 | $ 60 000 |
| Series D, 5%, 1972 to 1979 | 4 390 000 | 4 843 000 |
| Electric Bonds, 2%, 1972 to 1990 | 11 524 000 | 12 244 000 |
| Buildings Bonds of 1958 - | | |
| 2-1/2% - 2-3/4%, 1973 to 1978 | 2 070 000 | 2 380 000 |
| Notes - | | |
| Series A, 3-1/2% - 4-2/5%, 1974 to 1977 | 28 000 000 | - |
| Revenue Bonds - | | |
| Upper American River Project Refunding Bonds, 3% - 3-4/5%, 1973 to 1991 | 71 700 000 | 74 400 000 |
| White Rock Project Bonds - | | |
| Series A, 3-1/4% - 5%, 1972 to 2004 | 11 670 000 | 11 840 000 |
| Series B, 3% - 5%, 1972 to 2004 | 29 000 000 | 29 500 000 |
| Series C, 6-3/4% - 7%, 1973 to 2010 | 28 900 000 | 29 000 000 |
| Series D, 6-9/10% - 7%, 1973 to 2010 | 28 900 000 | 29 000 000 |
| Electric System Bonds - | | |
| Series A, 2-3/4% - 3-1/10%, 1973 to 1982 | 5 900 000 | 6 490 000 |
| Series B, 2-3/4% - 3-3/20%, 1972 to 1983 | 6 670 000 | 7 225 000 |
| Electric Revenue Bonds - | | |
| Series A, 4-4/5% - 6-4/5%, 1974 to 2011 | 50 000 000 | 50 000 000 |
| Series B, 5-1/4% - 7%, 1974 to 2011 | 40 000 000 | 40 000 000 |
| Series C, 4-3/4% - 6-3/4%, 1974 to 201[illegible] | 50 000 000 | - |
| Total bonds and notes | $368 769 000 | $296 982 000 |
| Less - Amount due within one year | 6 347 000 | 6 213 000 |
| | $362 422 000 | $290 769 000 |
| Premium on Power Bonds of 1938, Series D | 378 458 | 478 855 |
| | $362 800 458 | $291 247 855 |
| Purchase Agreement with Georgetown Divide Public Utility District, 3-3/4%, 1972 to 2000 | 1 424 989 | 1 424 989 |
| | $364 225 447 | $292 672 844 |

1971

POOR ORIGINAL



WACHHORST

ANDERSON

SWEET

BAIRD

LABHARD

## Directors

DONALD E. WACHHORST, *President*
THEODORE J. LABHARD, *Vice President*
FREDERICK E. ANDERSON, JR.
WILLIAM O. BAIRD
REGINALD A. SWEET


The Sacramento Municipal Utility District service area comprises 656 square miles of Central California including the state capital.

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*Front and back cover pictures show the first large nuclear generating plant in the country under construction on a dry site. The most prominent features of the District's Rancho Seco plant are two giant hyperbolic cooling towers which will cool and recycle condenser cooling water.*

THE SACRAMENTO BEE

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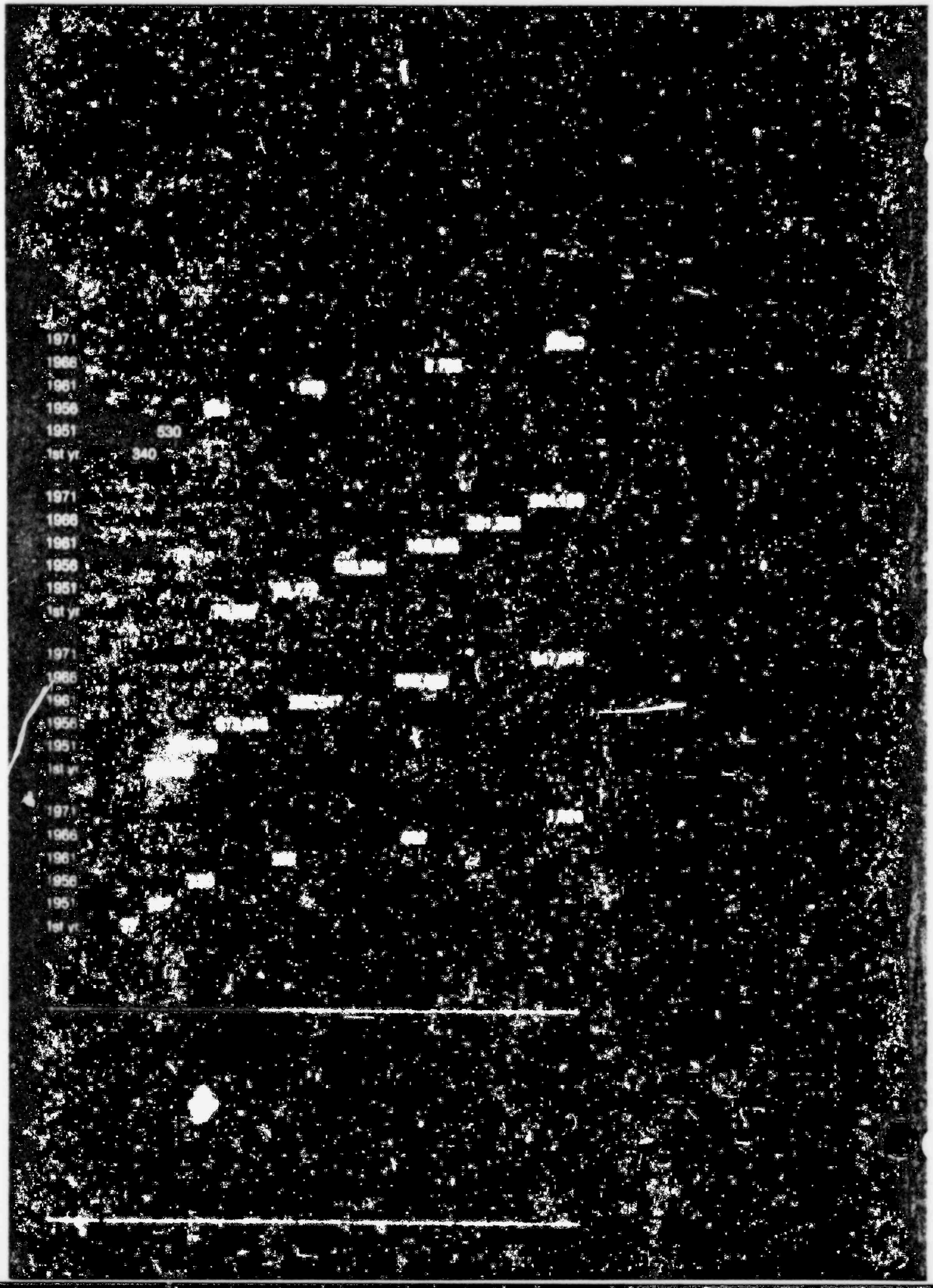
The Sacramento Union

SMUD Will Start Operation Today

Holiday Will Be Chilly

Sacramento Gl Ready
For Tule Lake Farm


1971
1966
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1971
1966
1961
1956
1951
1st yr

# Operational Review

E. Kendell Davis,
*General Manager*

The year 1971 was significant to the District because it was the quarter-century operational year and because of other important events.

Major changes occurred on the District's governing Board of Directors. Donald E. Wachhorst assumed the presidency in April upon the retirement of Royal Miller, who had been president since 1933. William O. Baird was appointed to fill the Board vacancy caused by Miller's retirement. Frederick E. Anderson, Jr., was appointed to the Board in October to fill the vacancy created by the death of Gerald C. Johnson.

In May, Paul E. Shaad retired following a 26-year career with the District. Since 1959 he had been General Manager and Chief Engineer. The Board appointed E. Kendell Davis, a long-time District employee, to the position of General Manager.

The Upper American River Project, a $210,000,000 hydroelectric development in the Sierra Nevada, 60 miles east of the District's service area, was completed in November when the sixth powerhouse became operational.

Construction of the nuclear generation plant and other facilities required the sale of $140,000,000 of revenue bonds during the year—the largest amount for any one year.

A general rate increase of 10% became effective in March. This was the first rate increase since 1962.

A more detailed chronicle of SMUD's 25th operational year appears on the succeeding pages.

## SALES

Energy sales in 1971 totaled 3.7 billion kilowatt-hours—a 7.6% increase for the year.

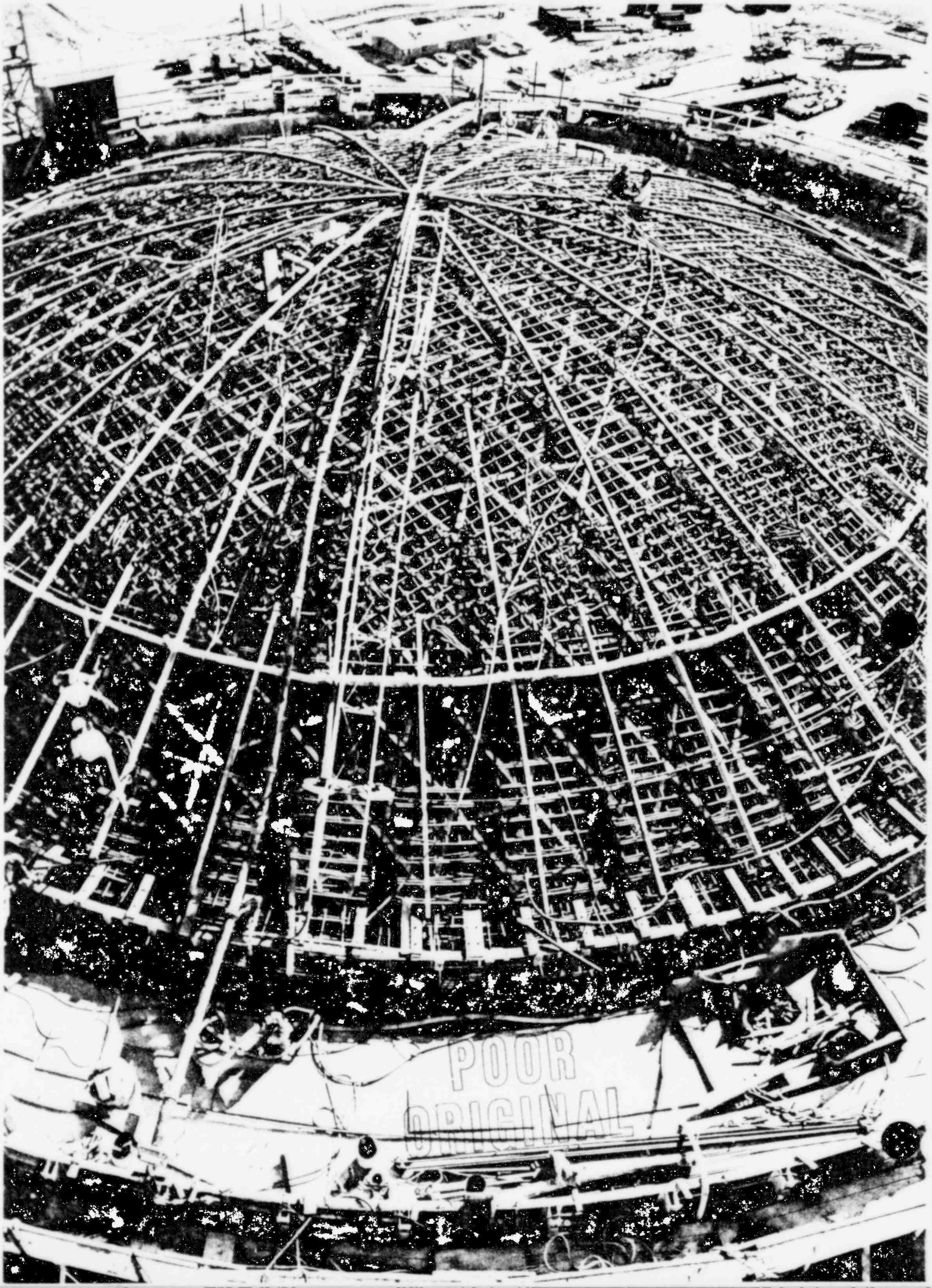
Residential customers, who account for 44% of total electric sales, consumed more power individually than in 1970, with the average customer using 7,928 kwh, a 7.6% increase for the year. This is substantially above the national average.

Power sales reached their peak during the air-conditioning season with the maximum demand reaching 1,020,389 kw, an increase of 112,001 kw over the peak demand of 1970.

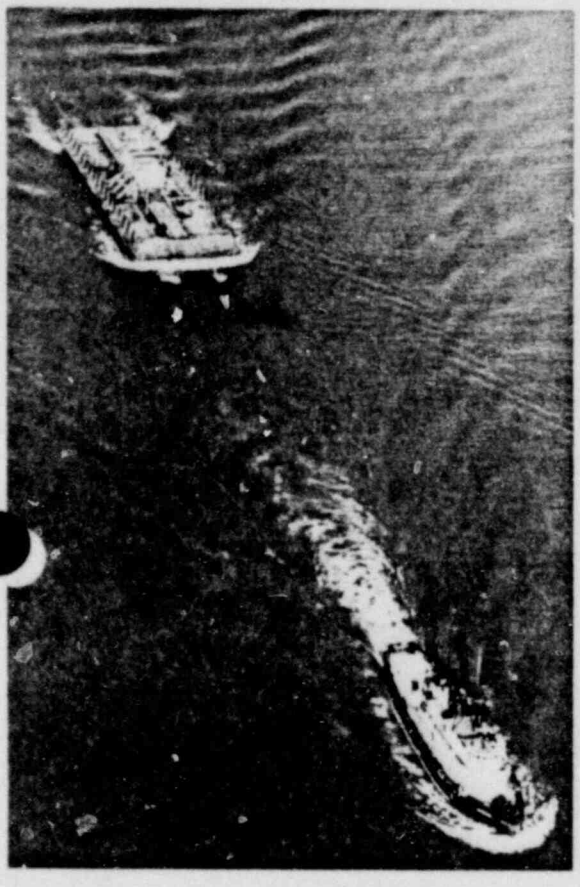
## REVENUES AND OTHER INCOME

Revenues from the sale of electric energy, enhanced by a 10% rate increase commencing in March 1971, totaled $47,609,000. This rate adjustment, forced by high interest costs and inflation, accounted for $3,700,000 of the $6,391,000 increase in electric revenue for the year.

Other income in 1971 amounted to $10,098,000, composed of $6,118,000 allowance for funds used during construction, $3,980,000 of interest earned on invested funds and minor miscellaneous income.



# Operational Review



*Construction of the District's Rancho Seco nuclear-powered generating plant continued on schedule during 1971. The post-tension reactor building (left) was topped out at year-end. Nuclear steam supply system vessels were on site ready for installation during February 1972. The 342-ton reactor vessel was barged (upper) from Ohio to within a few miles of the plant site.*

## EXPENSES

Purchased power, operations, maintenance, taxes and depreciation totaled $26,579,000, an increase of $1,579,000 over 1970. This increase results from a high volume of business and inflationary factors.

During 1971 the District purchased 2.2 billion kwh and, as a result of a relatively good water year, District hydroelectric plants generated 1.7 billion kwh.

Power generation was interrupted by an electrical explosion in March at the District's 220,000-kw White Rock plant. One generator was off line for three months and the second generator for ten months. Losses, excepting minimum deductibles, are covered by insurance.

Net purchased power costs were $8,661,000, an increase over the previous year of $265,000.

Operation and maintenance expenses totaled $11,220,000, an increase for the year of $783,000.

Depreciation is computed on historical cost of electric plant on a straight-line basis at rates established by engineering studies, and amounted to $6,483,000 during 1971. This was an increase of $483,000 for the year.

Taxes which are charged as such to operations amounted to $215,000. These taxes included the major portion of social security contributions and ad valorem taxes paid to El Dorado County on certain lands and water rights of the Upper American River Project. Sales/use taxes and gasoline taxes, which are not charged directly as such, are included in the cost of materials and supplies. Taxes are also paid to Sacramento County on the Rancho Seco nuclear site because it is located outside the District's service area.

## NET REVENUE

Net revenue in 1971, after operating expenses and other deductions (primarily debt service), was $18,089,000, an increase of $2,852,000 over 1970. The positive effect of the 10% rate increase made in March was partially offset by higher interest costs and inflation.

## CONSTRUCTION

Construction expenditures during 1971 were $125,377,000, the largest amount expended by the District in one year. Construction expenditures were made for the following purposes:

| | |
|---|---|
| Nuclear project | $89,844,000 |
| Nuclear fuel | 14,979,000 |
| Hydroelectric project | 5,620,000 |
| Service area additions and improvements | 14,934,000 |

The Rancho Seco nuclear-powered generation project was 60%

completed at year-end. A distinguishing feature of the plant, twin hyperbolic cooling towers (see cover picture), and a standby cooling water reservoir, which will be used for recreation, were finished during the year. Turbine-generator components and the nuclear steam supply vessels were on site as well as other major equipment purchases.

Installation of equipment is progressing on schedule and plant operation is planned for 1973.

Construction of the District's 628,000-kw hydroelectric development in the Sierra Nevada, 60 miles east of the service area, was completed in the fall when underground Loon Lake power plant, the sixth of a series, went on line. The $210,000,000 project was started in 1958, power was first generated in May 1961 and final payments will be made in early 1972.

Service area construction included additions and improvements to the distribution system, completion at Orangevale of the District's fourth major bulk power substation and the continuation of a reconstruction and streamlining project of the operations yard.

*"We are here to help you get the most out of your electricity" is the theme of the District Marketing Department, which during 1971 switched emphasis to wiser use of power. Electrical advisory services to homemakers, builders and commercial enterprises are offered by District specialists.*

## UTILITY PLANT

Utility plant stated at original cost less depreciation amounted to $466,091,000 at year-end. This was $117,936,000 greater than 1970. A large portion, $176,550,000, represents work in progress, with $150,210,000 being the nuclear plant, and $14,979,000, nuclear fuel.

## FINANCING

To finance the large 1971 construction program and to replace general funds previously expended on construction, the District sold three issues of revenue bonds in the principal amount of $140,000,000. These were the first three issues of a new series entitled "Electric Revenue Bonds." These bonds, which are on a parity with other outstanding revenue bonds of the District, were issued as follows:

| Series | Principal Amount | Date Sold | Net Annual Interest Cost |
|---|---|---|---|
| A | $50,000,000 | January 20 | 5.5891% |
| B | 40,000,000 | May 5 | 6.1113 |
| C | 50,000,000 | October 27 | 5.1329 |

Additional issues of Electric Revenue Bonds are planned for the 1970s. The proceeds of these issues plus internally generated funds will be used to finance additions and improvements to the District's plant including a second large generating plant planned for the 1980s.

Legislation in 1971 enables the District to finance nuclear fuel with short-term general obligations. The District plans to issue $28,000,000 in general obligations under this authority in early 1972.


POOR
ORIGINAL
The
American
Family
COOK
BOOK


POOR
ORIGINAL

# Operational Review

*Commercial operation of 1,200-foot underground ...n Lake powerhouse (left) in the fall of 1971 ...ked the completion of a 14-year $210,000,000 ...droelectric development. The project has ...ix powerhouses with 628,000 kw total capacity. Eleven dams create lakes for a mile-high Sierra Nevada recreation area.*

## POWER SUPPLIES

The District's upper American River hydroelectric project had an installed capacity of 628,000 kw at year-end. During 1971 this project generated 1.7 billion kwh, or 42.6% of the District's requirements.

The remaining requirements were met by purchases under contracts the District has with the U. S. Bureau of Reclamation, the Pacific Gas and Electric Company and utilities in the Pacific Northwest.

The Rancho Seco nuclear generating plant, now under construction, will have a capacity of 900,000 kw when operational in 1973. The plant site has sufficient land and water for an ultimate development of 3,000,000 kw.

The District has a long-term contract with the Pacific Gas and Electric Company which will provide for the integrated operation of the generation and transmission of the two systems when the District's nuclear generating plant comes on line in 1973. This contract provides for the sharing of area generating reserves. This will assure a continuing power supply for customers should the District's generation be out of service for either a scheduled or forced outage. The contract also has a power sale provision which will enable the District to operate its facilities in an optimum manner.

## CUSTOMERS

Residential construction, particularly of apartments and town house developments, has increased customer growth. At year-end, District customers amounted to 234,128, an addition of 9,449 for the year. This is the largest number of additional customers in the past decade.

## CUSTOMER SERVICES

The District's marketing efforts were reduced significantly and were redirected in 1971. Greater emphasis is being placed on advisory services to enable the customer to more effectively utilize electrical equipment. Major marketing effort continues on the promotion of electric space heating to provide a winter balance for the high summer air-conditioning load.

## ACCOUNTING SYSTEM

The District's books and accounts are kept in accordance with the Uniform System of Accounts for Public Utilities and Licensees prescribed by the Federal Power Commission, the same system privately owned utilities are legally required to follow.

Donald E. Wachhorst
*President of the Board*

E. Kendall Dunn
*General Manager*

## Balance Sheets December 31, 1971 and 1970

| ASSETS | | 1971 | 1970 |
|---|---|---|---|
| ELECTRIC UTILITY PLANT, at original cost: | Plant in service | $340,740,327 | $286,396,94 |
| | Less – Reserve for depreciation | 51,199,525 | 46,215,91 |
| | | $289,540,802 | $240,181,03 |
| | Construction work in progress – | | |
| | Nuclear | 150,209,875 | 60,366,07 |
| | Hydroelectric | 2,387,690 | 37,273,64 |
| | Other | 8,973,342 | 10,334,04 |
| | Nuclear fuel | 14,979,091 | – |
| | | $466,090,800 | $348,1 |
| SEGREGATED FUNDS, consisting of cash and securities, at cost: | For construction purposes (Note 4) | $ 64,015,982 | $ 30,037,37 |
| | In reserve funds for Revenue Bonds (Note 2) | 12,546,197 | 5,804,5 |
| | | $ 76,562,179 | $ 35,841,8 |
| CURRENT ASSETS: | Cash | $ 171,556 | $ 219,9 |
| | Segregated cash and securities for payment of debt service | 8,658,235 | 7,338,2 |
| | Accrued interest receivable | 934,783 | 1,324,2 |
| | Accounts receivable, less reserves of $87,372 and $77,854, respectively | 3,574,686 | 2,937,3 |
| | Materials and supplies, at average cost | 2,451,660 | 2,103,9 |
| | Prepayments and special deposits | 1,625,580 | 953,64 |
| | | $ 17,416,500 | $ 14,877,3 |
| DEFERRED CHARGES | | $ 4,093,255 | $ 3, |
| | | $564,162,734 | $402,700,1 |

The accompanying notes are an integral part of these balance shee

| LIABILITIES | | 1971 | 1970 |
|---|---|---|---|
| CAPITALIZATION: | Customers' equity employed in the business — | | |
| | Balance beginning of year | $170,648,308 | $155,411,331 |
| | Net revenue for the year | 18,089,246 | 15,236,977 |
| | Total customers' equity | $188,737,554 | $170,648,308 |
| | Long-term debt (Note 1) | 340,565,218 | 206,907,751 |
| | | $529,302,772 | $377,556,059 |
| CURRENT LIABILITIES: | Accounts payable | $ 19,454,688 | $ 11,753,509 |
| | Accrued salaries, wages and vacation pay | 1,164,767 | 1,449,212 |
| | Long-term debt due within one year | 6,237,000 | 5,898,000 |
| | Accrued interest on long-term debt | 4,397,097 | 2,921,370 |
| | Customers' deposits | 1,148,144 | 1,036,134 |
| | Other | 426,391 | 606,462 |
| | | $ 32,828,087 | $ 23,664,687 |
| CONTRIBUTIONS IN AID OF CONSTRUCTION | | $ 2,031,875 | $ 1,479,368 |
| | | $564,162,734 | $402,700,114 |

| | | 1971 | 1970 |
|---|---|---|---|
| OPERATING REVENUES: | Residential | $23,301,630 | $19,710,7 |
| | Commercial and industrial | 23,814,982 | 21,103,0 |
| | Other | 558,515 | 463,6 |
| | Total operating revenues | $47,675,127 | $41,277,4 |
| OPERATING EXPENSES: | Operation — | | |
| | Purchased power | $ 8,660,675 | $ 8,396,0 |
| | Other | 8,015,167 | 7,2 |
| | Maintenance | 3,204,815 | 3,184,8 |
| | Provision for depreciation (Note 3) | 6,482,924 | 5,999,8 |
| | Taxes | 215,335 | 166,4 |
| | Total operating expenses | $26,578,916 | $24,999,7 |
| | Net operating revenue | $21,096,211 | $16,277,7 |
| OTHER INCOME: | Allowance for funds used during construction | 6,118,360 | 3,346,8 |
| | Interest income | 3,980,031 | 3,700,7 |
| | Gross income | $31,194,602 | $23,325,3 |
| INCOME DEDUCTIONS: | Interest on long-term debt | $12,983,340 | $ 7,985,1 |
| | Amortization of bond premium, bond redemption premium, discount and expense, net | 122,016 | 103,1 |
| | Total income deductions | $13,105,356 | $ 8,0 |
| | Net revenue for the year | $18,089,246 | $15,236,9 |



The accompanying notes are an integral part of these statemer

# Statements of Changes in Financial Position

Years ended December 31, 1971 and 1970



| | | 1971 | 1970 |
|---|---|---|---|
| FUNDS PROVIDED FROM: | Operations — | | |
| | Gross income | $ 31,194,602 | $23,325,300 |
| | Items not affecting funds — | | |
| | Add — Depreciation | 6,482,924 | 5,999,846 |
| | Deduct — Allowance for funds used during construction | 6,118,360 | 3,346,839 |
| | Total available for debt service | $ 31,559,166 | $25,978,307 |
| | Sale of Revenue Bonds — | | |
| | Electric Revenue Bonds | 140,000,000 | — |
| | White Rock Project Bonds | — | 56,260,005 |
| | Reduction in working capital | 6,624,292 | 7,602,305 |
| | Other | (6,130,114) | (857,705) |
| | Total funds provided | $172,053,344 | $88,982,912 |
| FUNDS USED FOR: | Debt service — | | |
| | Revenue bonds | $ 16,781,828 | $11,628,102 |
| | General obligation bonds | 2,034,759 | 2,050,160 |
| | Total debt service | $ 18,816,587 | $13,678,262 |
| | Increase in segregated construction funds | 33,978,611 | 20,510,954 |
| | Additions to plant (exclusive of allowance for funds used during construction) | 119,258,146 | 54,793,696 |
| | Total funds used | $172,053,344 | $88,982,912 |
| NUMBER OF TIMES DEBT SERVICE IS COVERED BY FUNDS AVAILABLE: | Revenue bonds | 1.68 | 2.23 |
| | Total debt | 1.68 | 1.90 |

The accompanying notes are an integral part of these statements.

## 1. LONG-TERM DEBT

Long-term debt outstanding at December 31, 1971 and 1970, was as follows:

| | 1971 | 1970 |
|---|---|---|
| General Obligation Bonds — | | |
| Power Bonds of 1938 including premium, 3% - 5%, 1972 to 1979 | $ 4,863,229 | $ 5,436,762 |
| Electric Bonds, 2%, 1972 to 1990 | 11,904,000 | 12,624,000 |
| Building Bonds of 1958 — 2½% - 2¾%, 1972 to 1978 | 2,380,000 | 2,680,000 |
| Revenue Bonds — | | |
| Upper American River Project Refunding Bonds, 3% - 4½%, 1972 to 1991 | 74,400,000 | 77,000,000 |
| White Rock Project Bonds — | | |
| Series A, 3¼% - 5%, 1972 to 2004 | 11,670,000 | 11,840,000 |
| Series B, 3% - 5%, 1972 to 2004 | 29,000,000 | 29,500,000 |
| Series C, 6¼% - 7%, 1972 to 2010 | 29,000,000 | 29,000,000 |
| Series D, 6-8/10% - 7%, 1972 to 2010 | 29,000,000 | 29,000,000 |
| Electric System Bonds — 2¾% - 3-3/20%, 1972 to 1983 | 13,160,000 | 14,300,000 |
| Electric Revenue Bonds — | | |
| Series A, 4-4/5% - 6-4/5%, 1974 to 2011 | 50,000,000 | — |
| Series B, 5¼% - 7%, 1974 to 2011 | 40,000,000 | — |
| Series C, 4¾% - 6¾%, 1974 to 2011 | 50,000,000 | — |
| Total bonds | $345,377,229 | $211,380,762 |
| Less — Amount due within one year | 6,237,000 | 5,898,000 |
| | $339,140,229 | $205,482,762 |
| Purchase Agreement, 3¾%, 1972 to 2000 | 1,424,989 | 1,424,989 |
| | $340,565,218 | $206,907,751 |

## 2. RESERVE FUNDS FOR REVENUE BONDS

Reserve funds for revenue bonds at December 31, 1971 and 1970, were as follows:

| | 1971 | 1970 |
|---|---|---|
| Electric System Bonds | $ 1,037,537 | $ 529,620 |
| Electric Revenue Bonds | 3,961,270 | — |
| All Parity Bonds | 7,547,390 | 5,274,899 |
| | $ 12,546,197 | $ 5,804,519 |

### 3. PROVISION FOR DEPRECIATION

The District provides for depreciation on the historical cost of electric properties on a straight-line basis at rates determined by engineering studies.

### 4. CONSTRUCTION PROGRAM AND FINANCING

Estimated construction expenditures in 1972 are $106,719,000, including $85,086,000 for the Rancho Seco nuclear generation project. The District estimates total financing requirements for the nuclear generation project over the next two years to be about $96,000,000, most of which will be raised through the sale of additional revenue bonds.

### 5. RETIREMENT PENSION PLAN

The District's employees are covered by a contributory retirement plan administered by the State of California. Contributions by the District for 1971 and 1970 amounted to $935,000 and $761,000, respectively.

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ARTHUR ANDERSEN & CO.

To the Board of Directors of
Sacramento Municipal Utility District:

650 California Street
San Francisco 94108

We have examined the balance sheets of Sacramento Municipal Utility District as of December 31, 1971 and 1970, and the related statements of net revenue and changes in financial position for each of the years 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.

In our opinion, the accompanying balance sheets and statements of net revenue and changes in financial position present fairly the financial position of Sacramento Municipal Utility District as of December 31, 1971 and 1970, the results of its operations and the changes in financial position for each of the years then ended, in conformity with generally accepted accounting principles applied on a consistent basis during the periods.

January 28, 1972

Arthur Andersen & Co.

# Ten-Year Summary and Twenty-Five Year Comparison

| OPERATING STATISTICS | 1971 | 1970 | 1969 | 1968 | 1967 | 1966 |
|---|---|---|---|---|---|---|
| Customers at Year End | 234,128 | 224,679 | 216,408 | 210,976 | 205,615 | 201,3 |
| KWH Sales (in thousands): | | | | | | |
| Residential | 1,611,792 | 1,437,918 | 1,354,488 | 1,202,511 | 1,171,195 | 1,021,2 |
| Commercial, Industrial, and Other | 2,038,245 | 1,953,273 | 1,952,288 | 1,903,108 | 1,728,155 | 1,684,9 |
| Total | 3,650,037 | 3,391,191 | 3,306,776 | 3,105,619 | 2,899,350 | 2,706,1 |
| Revenue (in thousands): | | | | | | |
| Residential | $ 23,302 | $ 19,711 | $ 18,692 | $ 17,178 | $ 16,859 | $ 15,3 |
| Commercial, Industrial, and Other | 24,373 | 21,566 | 21,133 | 20,421 | 19,007 | 18,2 |
| Total | $ 47,675 | $ 41,277 | $ 39,825 | $ 37,599 | $ 35,866 | $ 33,5 |
| Average KWH Sales per Residential Customer | 7,928 | 7,365 | 7,179 | 6,534 | 6,508 | 5,8 |
| Average Revenue per Residential KWH Sold | 1.45¢ | 1.37¢ | 1.38¢ | 1.43¢ | 1.44¢ | 1,5 |
| Power Supply (KWH in thousands): | | | | | | |
| Hydroelectric Generation | 1,664,529 | 1,893,027 | 2,546,344 | 1,121,252 | 1,331,779 | ,4 |
| Purchases | 2,240,277 | 1,737,889 | 981,575 | 2,204,9 4 | 1,786,336 | 2,135, |
| System Peak Demand-KW | 1,020,389 | 908,388 | 855,589 | 793,118 | 740,388 | 682,3 |
| Number of Employees at Year End | 1,166 | 1,036 | 963 | 881 | 838 | 8 |
| **FINANCIAL STATISTICS** (thousands of dollars) | | | | | | |
| TOTAL OPERATING REVENUES | $ 47,675 | $ 41,277 | $ 39,825 | $ 37,599 | $ 35,866 | $ 33,5 |
| OPERATING EXPENSES | | | | | | |
| Purchased power | $ 8,661 | $ 8,396 | $ 6,158 | $ 9,530 | $ 6,894 | $ 9,1 |
| Operation, maintenance, and taxes | 11,435 | 10,604 | 9,078 | 7,856 | 7,442 | 6,6 |
| Depreciation | 6,483 | 6,000 | 5,749 | 5,421 | 4,558 | 4,4 |
| Amortization of intangible plant costs | — | — | — | — | — | - |
| Total operating expenses | $ 26,579 | $ 25,000 | $ 20,985 | $ 22,807 | $ 18,894 | 20,1 |
| Net operating revenue | $ 21,096 | $ 16,277 | $ 18,840 | $ 14,792 | $ 16,972 | $ 13,4 |
| OTHER INCOME | 10,098 | 7,048 | 3,550 | 3,089 | 3,460 | 4,0 |
| Gross income | $ 31,194 | $ 23,325 | $ 22,390 | $ 17,881 | $ 20,432 | $ 17,4 |
| INTEREST AND OTHER INCOME DEDUCTIONS | 13,105 | 8,088 | 5,299 | 5,244 | 5,397 | 5,5 |
| Net revenue for the year | $ 18,089 | $ 15,237 | $ 17,091 | $ 12,637 | $ 15,035 | $ 11,9 |
| Times Bond Service Earned | 1.7 | 1.9 | 2.7 | 2.0 | 2.1 | |
| Bonds Repaid | $ 5,898 | $ 5,759 | $ 81,876 | $ 4,549 | $ 4,377 | $ 4,2 |
| Electric Utility Plant | $ 466,091 | $ 348,155 | $ 296,190 | $ 259,323 | $ 245,915 | $ |
| Capitalization: | | | | | | |
| Long-term Debt | $ 340,565 | $ 206,908 | $ 154,921 | $ 160,805 | $ 165,616 | $ 170,3 |
| Customers' Equity | $ 188,738 | $ 170,648 | $ 155,411 | $ 138,321 | $ 125,684 | $ 110,6 |

| 1965 | 1964 | 1963 | 1962 | 1957 | 1952 | 1947 |
|---|---|---|---|---|---|---|
| 196,112 | 190,507 | 183,596 | 176,170 | 135,601 | 104,356 | 70,952 |
| 922,256 | 863,183 | 785,005 | 714,074 | 381,537 | 200,328 | 100,228 |
| 1,493,768 | 1,322,020 | 1,125,516 | 1,033,446 | 637,952 | 398,604 | 239,873 |
| 2,416,024 | 2,185,203 | 1,910,521 | 1,747,520 | 1,019,489 | 598,932 | 340,101 |
| $ 14,225 | $ 14,006 | $ 12,989 | $ 12,035 | $ 6,613 | $ 4,211 | $ 2,545 |
| 17,496 | 16,879 | 14,948 | 13,924 | 8,347 | 5,676 | 3,920 |
| $ 31,721 | $ 30,885 | $ 27,937 | $ 25,959 | $ 14,960 | $ 9,887 | $ 6,465 |
| 5,417 | 5,232 | 4,959 | 4,711 | 3,338 | 2,351 | 1,817 |
| 1.54¢ | 1.62¢ | 1.65¢ | 1.69¢ | 1.73¢ | 2.10¢ | 2.54¢ |
| 483,597 | 788,121 | 543,995 | 227,789 | — | — | — |
| 124,540 | 1,577,951 | 1,547,587 | 1,669,892 | 1,126,179 | 664,963 | 386,862 |
| 576,590 | 545,590 | 465,792 | 416,994 | 228,784 | 140,036 | 76,857 |
| 811 | 780 | 763 | 769 | 701 | 561 | 490 |
| $ 31,721 | $ 30,885 | $ 27,937 | $ 25,959 | $ 14,964 | $ 9,891 | $ 6,466 |
| $ 6,013 | $ 6,879 | $ 6,946 | $ 7,692 | $ 4,591 | $ 3,729 | $ 2,214 |
| 6,437 | 6,087 | 5,465 | 5,176 | 3,315 | 2,309 | 1,593 |
| 4,496 | 4,343 | 3,657 | 3,084 | 1,507 | 702 | 392 |
| — | — | — | — | — | 415 | 420 |
| $ 16,948 | $ 17,309 | $ 16,068 | $ 15,952 | $ 9,413 | $ 7,155 | $ 4,619 |
| $ 14,773 | $ 13,576 | $ 11,869 | $ 10,007 | $ 5,551 | $ 2,736 | $ 1,847 |
| 2,770 | 1,649 | 2,157 | 2,802 | 428 | 86 | 10 |
| $ 17,543 | $ 15,225 | $ 14,026 | $ 12,809 | $ 5,979 | $ 2,822 | $ 1,857 |
| 5,193 | 4,777 | 4,502 | 4,249 | 566 | 382 | 588 |
| $ 12,350 | $ 10,448 | $ 9,524 | $ 8,560 | $ 5,413 | $ 2,440 | $ 1,269 |
| 2.7 | 3.2 | 2.9 | 2.6 | 4.7 | 4.2 | 4.2 |
| $ 1,295 | $ 1,256 | $ 1,236 | $ 1,323 | $ 832 | $ 336 | $ 25 |
| 217,291 | $ 198,767 | $ 184,422 | $ 166,792 | $ 44,763 | $ 23,727 | $ 15,725 |
| $ 174,835 | $ 146,944 | $ 136,403 | $ 127,830 | $ 27,428 | $ 19,979 | $ 16,213 |
| $ 98,726 | $ 86,376 | $ 75,928 | $ 66,404 | $ 31,702 | $ 12,137 | $ 1,268 |

*The District has always been aware of environmental impact of its facilities and continually seeks ways to improve appearances. This three-in-one pole is a District development and has eliminated clutter at a number of intersections.*

# The Years Ahead

Accurate forecasting is essential to reliable and economical service. Accordingly, the District maintains a continuing study of its rate of growth and its future requirements of power, plant additions and funds.

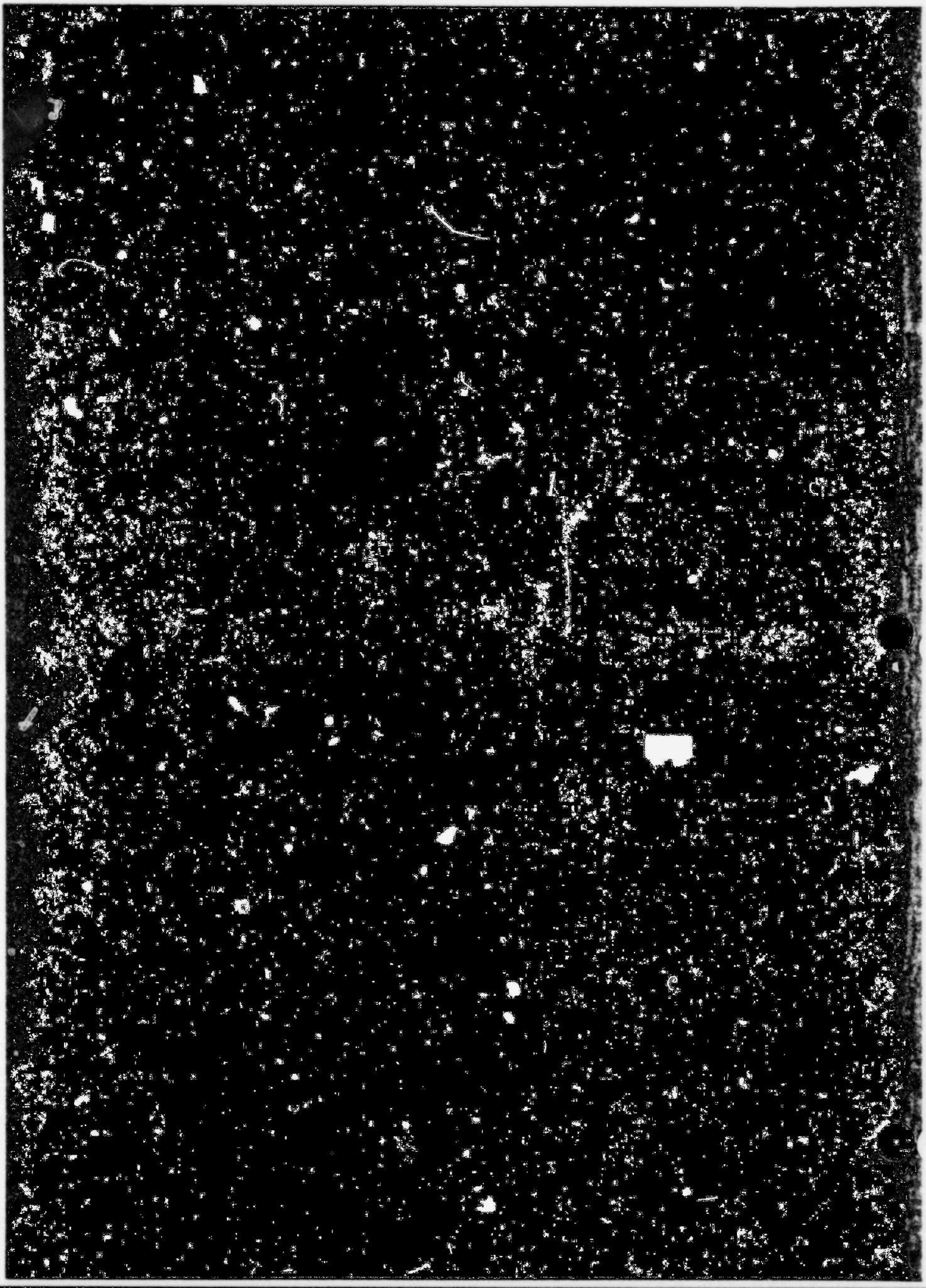
During this decade, the District expects customers to increase 34%; demand to grow 135%; energy sales to rise 115%; and operating revenues (including sales to other utilities) to be 162% higher. (See graphs opposite.)

To meet this growth, the District is now planning for additional generation for operation not later than 1980.

Also greater use of computers is planned so as to render faster and better service.

In addition, the results of years of work to improve the appearance of District facilities will be increasingly evident by the next decade.

296,400
279,400
240,000
224,679
$108,416



## OFFICERS

E. KENDELL DAVIS
*General Manager*

WM. J. NOLAN
*Asst. General Manager and Treasurer*

JOHN J. MATTIMOE
*Asst. General Manager and Chief Engineer*

DAVID S. KAPLAN
*General Counsel and Secretary*

WM. C. WALBRIDGE
*Executive Assistant*

W. S. BOSSENMAIER
*Accountant*

## DEPARTMENT MANAGERS

W. S. BOSSENMAIER
*Accounting and Data Processing*

DUANE C. BROWNING
*Operating*

ROBERT N. CONNELLY
*Engineering*

MARLEN N. DAVIS
*Marketing*

WILLIAM J. HAMMOND
*Personnel*

LEROY J. LOUCHART
*Customer Services*

JOHN PAYNE
*General Services*

JOHN L. RAVERA
*Purchases and Stores*

EARL C. ROSSI
*Land*

E. A. COMBATALADE
*Director of Public Relations*

*he dispatcher's office, from which the entire ·'em is run, will be updated with a computer in . The new computer–controlled supervisory up will continually monitor remote substations nd mountain hydroelectric plants, giving the ispatcher instantaneous information co necessary r more reliable service.*

## PAYING AGENTS

BANK OF AMERICA
National Trust and Savings Association
*San Francisco*

FIRST NATIONAL CITY BANK
*New York*

HARRIS TRUST AND SAVINGS BANK
*Chicago*

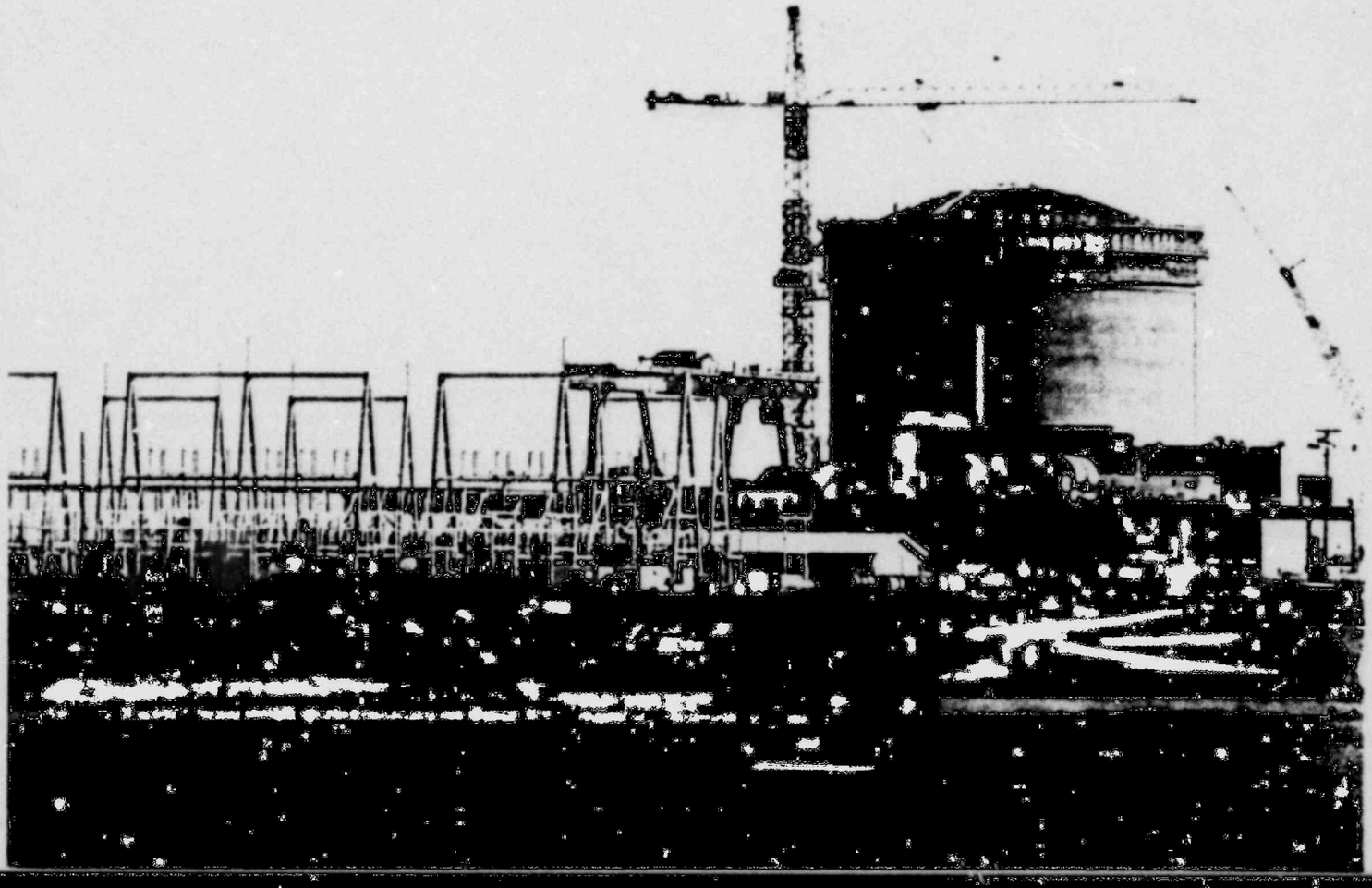
## AUDITORS

ARTHUR ANDERSEN & CO.
*San Francisco*

SACRAMENTO MUNICIPAL UTILITY DISTRICT
*6201 S Street, Box 15830*
*Sacramento, California 95813, (916) 452-3211*

SMUD





# OFFICIAL STATEMENT

RELATING TO

$50,000,000

# Sacramento Municipal Utility District

## Electric Revenue Bonds, Series D

The date of this Official Statement is June 1, 1972

SMUD

SACRAMENTO MUNICIPAL UTILITY DISTRICT

# SACRAMENTO MUNICIPAL UTILITY DISTRICT

SACRAMENTO, CALIFORNIA

**BOARD OF DIRECTORS**

DONALD E. WACHHORST, *President*

THEODORE J. LABHARD, *Vice President*

FREDERICK E. ANDERSON, JR.

WILLIAM O. BAIRD

REGINALD A. SWEET

**OFFICERS AND EXECUTIVES**

E. KENDELL DAVIS, *General Manager*

WM. C. WALBRIDGE
*Assistant General Manager and Treasurer*

JOHN J. MATTIMOE
*Assistant General Manager and Chief Engineer*

DAVID S. KAPLAN
*Attorney and Secretary*

WM. S. BOSSENMAIER
*Accountant*

**SPECIAL SERVICES**

ORRICK, HERRINGTON, ROWLEY & SUTCLIFFE, *San Francisco*
*Bond Counsel*

BANK OF AMERICA NATIONAL TRUST AND SAVINGS ASSOCIATION, *San Francisco*
*Trustee*

FIRST NATIONAL CITY BANK, *New York*
HARRIS TRUST AND SAVINGS BANK, *Chicago*
*Paying Agents*

BECHTEL CORPORATION, *San Francisco*
*Engineers*

ARTHUR ANDERSEN & CO., *San Francisco*
*Auditors*

KUHN, LOEB & CO., *New York*
*Financing Consultants*

Main Offices of the District: 6201 S Street, Sacramento, California 95813

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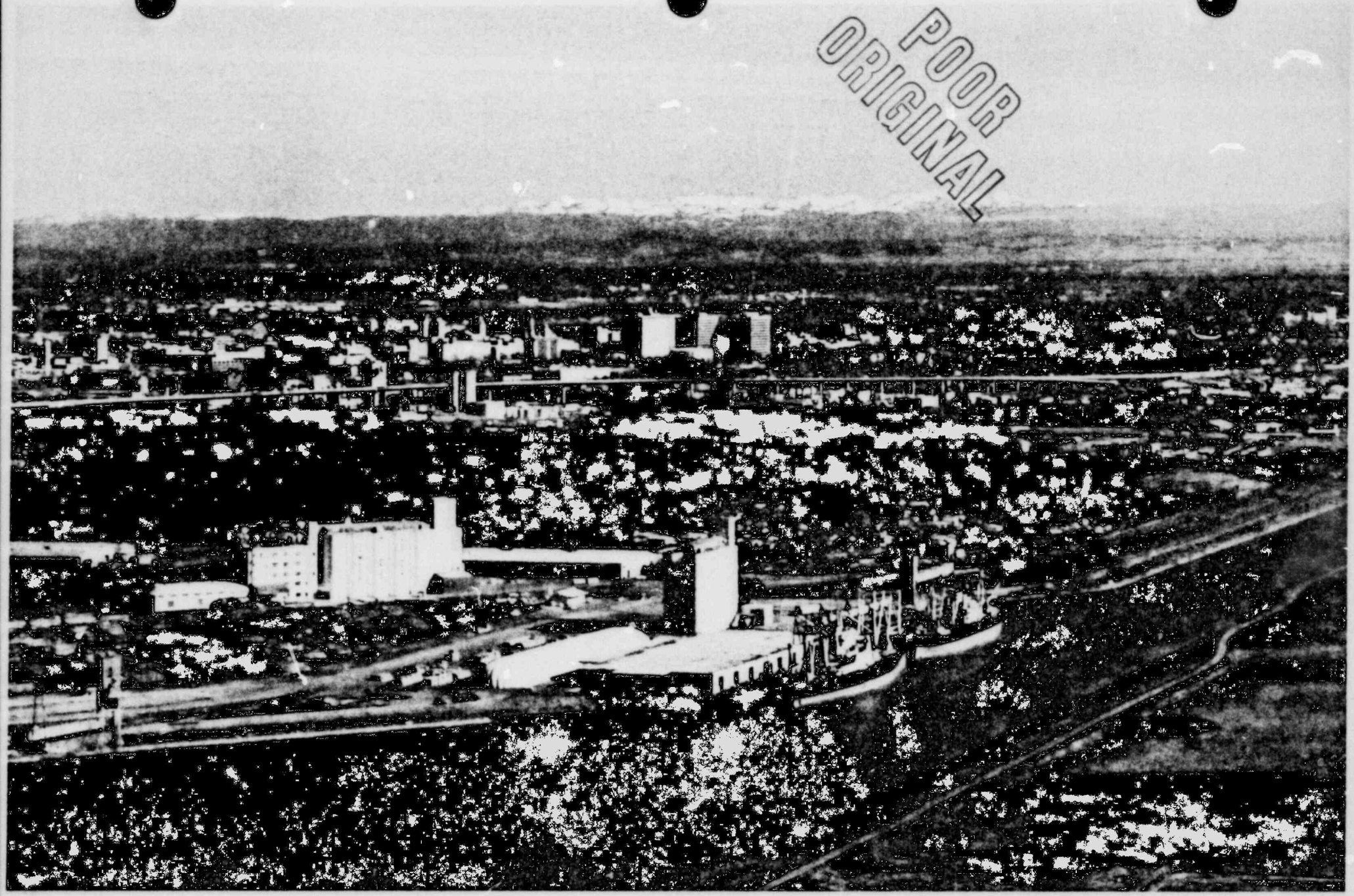


Shown above is a view of the center of metropolitan Sacramento with Interstate Highway 80 crossing between the deepwater port and downtown Sacramento. The District's hydroelectric development is located 60 miles east in the Sierra, visible in the background, and the Rancho Seco Generating Station No. 1 is 25 miles to the southeast.

# OFFICIAL STATEMENT

Relating to

## $50,000,000

## Electric Revenue Bonds, Series D

### INTRODUCTION

Sacramento, California
June 1, 1972

The Sacramento Municipal Utility District, located in Central California, has a 656-square-mile service area with a population of approximately 650,000. It provides electric service to the major portion of Sacramento County and a small portion of adjoining Placer County. Within the service area is Sacramento, the capital of the State of California (located 85 miles northeast of San Francisco).

The District, formed in 1923, became a revenue-producing entity on December 31, 1946, when it acquired the electric distribution system within its boundaries from the Pacific Gas and Electric Company (PG&E) and commenced operations. Through 1959 the District financed the system acquisition and additions and betterments to the electric system in the service area by the issuance of general obligation bonds and internally generated funds. The debt service on these general obligation bonds has been paid from electric revenues since the outset of operations.

Commencing in 1959 the District issued revenue bonds to supplement internally generated funds to finance a hydroelectric generation project, a nuclear generating plant and additions and betterments to the electric system within its service area. All issues of outstanding revenue bonds (Electric System Revenue Bonds, White Rock Project Revenue Bonds, Upper American River Project Refunding Revenue Bonds and Electric Revenue Bonds, Series A, B and C) and the Bonds of Series D offered herein will hold parity status and have an equal lien on the Revenues of the Electric System after providing for operating and maintenance expenses. Parity Bonds as used in this Official Statement means the currently outstanding revenue bonds and the Bonds of Series D.

In March 1972 the District sold $28,000,000 principal amount of short-term general obligation notes to finance nuclear fuel for its Rancho Seco Generating Station.

On April 30, 1972, the bonded debt of the District amounted to $369,769,000, consisting of $46,339,000 of general obligation bonds and notes and $323,430,000 of revenue bonds holding parity status.

The District is engaged in a continuing program of additions and betterments to its system and the development of new sources of power. Planning studies by the District have indicated that the continued growth of demand makes it necessary to develop additional power generating facilities. Such studies also have indicated that any new generating facilities must utilize methods other than hydroelectric generation.

To meet the expected increase in demand at the lowest cost and with the most reliable source of generation, the District began preliminary planning in 1965 for the construction of nuclear-fueled generating facilities. The initial nuclear plant, Rancho Seco No. 1, is now being constructed on a 2,500-acre site located 25 miles southeast of Sacramento. The construction permit for the project was issued by the Atomic Energy Commission (AEC) in October 1968. The construction of Rancho Seco No. 1 is approximately 70% complete and the plant is expected to be in commercial operation in late 1973.

The proceeds from the sale of the Bonds being offered herein will be used to finance a portion of the nuclear generation and service area construction program of the District. See pages 18 and 19 of the text for a description of the proposed construction program and for the projected scheduled sale of additional bonds through 1981.

This Official Statement is not to be construed as a contract with the purchasers of the Bonds. Copies of the Resolutions which form a contract with the bondholders will be made available upon request. Any statements contained in this Official Statement which involve estimates, forecasts or matters of opinion, whether or not expressly so described, are intended solely as such and not as representations of fact.

All legal matters incident to the authorization, issuance and sale of the Bonds of Series D are subject to the approval of Messrs. Orrick, Herrington, Rowley & Sutcliffe, San Francisco, California, Bond Counsel to the District.

# THE BONDS

## Authority for Issuance

The Electric Revenue Bonds, Series D, (Bonds) are authorized pursuant to the provisions of Sections 12850 to 12857, inclusive, of the Municipal Utility District Act constituting Division 6 of the Public Utilities Code of the State of California.

The Bonds are the fourth issue of a $350,000,000 revenue bond authorization under which the Board of Directors has authority to issue revenue bonds in series from time to time. ($50,000,000 principal amount of Bonds of Series A was sold on January 20, 1971, $40,000,000 principal amount of Bonds of Series B was sold on May 5, 1971, and $50,000,000 principal amount of Bonds of Series C was sold on October 27, 1971.) This authority was obtained by the Board of Directors adopting Resolution No. 6457 on July 23, 1970, a preliminary resolution which was subject to a 60-day referendum period which ended on October 2, 1970. No petition for referendum was filed during that period and the authorization of the bonds is now fully effective.

This preliminary resolution sets forth the following:

(a) The proceeds of the bonds may be used for the purpose of financing the construction, reconstruction, replacement, acquisition or improvement of any facility necessary for the generation, transmission or distribution of electricity to serve the inhabitants of the District.

(b) The maximum principal amount of the bonds proposed to be issued shall not exceed $350,000,000.

(c) The maximum term of the bonds shall not exceed 40 years from the date of the bonds, calculated in each case from the date of each separate series.

(d) The maximum annual interest rate payable on such bonds shall not exceed 8½%.

On January 7, 1971, the Board of Directors adopted a resolution entitled "Resolution No. 6649 Providing for the Issuance of Electric Revenue Bonds" (Master Resolution) and on June 1, 1972, the Board adopted Resolution No. 7317 called "Fourth Supplemental Resolution" to which references are made for a full description of the conditions governing the issuance of bonds and particulars relating to the Bonds.

The maximum principal amount of bonds which may be issued pursuant to the Master Resolution shall not be limited to the $350,000,000 authority obtained as a result of the preliminary resolution, provided that the Board shall have adopted an amendatory or supplemental preliminary resolution which shall then be in full force and effect authorizing the issuance of additional series of bonds in excess of $350,000,000 in aggregate principal amount.

## Principal Amount, Date, Maturities and Interest

Bonds are to be issued in the principal amount of $50,000,000, consisting of $12,200,000 of serial bonds and $37,800,000 of term bonds, are to be dated July 1, 1972, will bear interest at annual rates payable semiannually on January 1, 1973, and on each July 1 and January 1 thereafter and will mature as follows:

| Maturity Date (July 1) | Principal Amount | Maturity Date (July 1) | Principal Amount |
|---|---|---|---|
| 1975 | $100,000 | 1984 | $ 800,000 |
| 1976 | 100,000 | 1985 | 900,000 |
| 1977 | 100,000 | 1986 | 1,000,000 |
| 1978 | 200,000 | 1987 | 1,100,000 |
| 1979 | 300,000 | 1988 | 1,200,000 |
| 1980 | 400,000 | 1989 | 1,300,000 |
| 1981 | 500,000 | 1990 | 1,400,000 |
| 1982 | 600,000 | 1991 | 1,500,000 |
| 1983 | 700,000 | 2012 | 37,800,000 |

## Mandatory Sinking Fund Payments

Periodic deposits to a sinking fund are required in amounts sufficient to retire Bonds due July 1, 2012, by purchase or by call at par on or after July 1, 1992, in the following amounts:

| Year (July 1) | Principal Amount | Year (July 1) | Principal Amount |
|---|---|---|---|
| 1992 | $ 800,000 | 2003 | $1,800,000 |
| 1993 | 900,000 | 2004 | 1,900,000 |
| 1994 | 1,000,000 | 2005 | 2,000,000 |
| 1995 | 1,000,000 | 2006 | 2,200,000 |
| 1996 | 1,100,000 | 2007 | 2,300,000 |
| 1997 | 1,200,000 | 2008 | 2,500,000 |
| 1998 | 1,300,000 | 2009 | 2,600,000 |
| 1999 | 1,400,000 | 2010 | 2,800,000 |
| 2000 | 1,500,000 | 2011 | 3,000,000 |
| 2001 | 1,600,000 | 2012 | 3,200,000 |
| 2002 | 1,700,000 | | |

## Redemption of Bonds

Bonds maturing on or before July 1, 1982, are not redeemable prior to their fixed maturity dates. Bonds maturing on and after July 1, 1983, are subject to call and redemption prior to their fixed maturity dates from any source of available funds as a whole on any date or in part on any interest payment date in inverse order of maturities (or by lot within a maturity) on and after July 1, 1982, at the following redemption prices (expressed as percentages of the principal amount), together with accrued interest to the date of redemption.

| Bonds Redeemed | | |
|---|---|---|
| On or After July 1 | And Prior to July 1 | Redemption Price |
| 1982 | 1983 | 103 % |
| 1983 | 1984 | 102½ |
| 1984 | 1985 | 102 |
| 1985 | 1986 | 101½ |
| 1986 | 1987 | 101 |
| 1987 | 1988 | 100¾ |
| 1988 | 1989 | 100½ |
| 1989 | 1990 | 100¼ |
| 1990 | 1991 | 100⅛ |
| 1991 | Maturity | 100 |

## Form, Registration and Denominations

Bonds may be issued in coupon form, registrable as to principal only, in the denomination of $5,000, or in fully registered form in the denomination of $5,000 and any multiple thereof.

Coupon bonds and fully registered bonds will be interchangeable without charge, except for payment of any tax or governmental charge.

## Trustee and Paying Agents

Bank of America National Trust and Savings Association, San Francisco, California, is the Trustee and will act as fiscal agent for the District for payment of principal and interest of the Bonds and for their registration. First National City Bank, New York, New York, and Harris Trust and Savings Bank, Chicago, Illinois, are named as co-paying agents. The principal and interest on the Bonds will be payable, at the option of the holder, in any of the aforementioned cities.

## Legal Opinion

The legal opinion of Messrs. Orrick, Herrington, Rowley & Sutcliffe of San Francisco, California, approving the validity of the Bonds will be made available to purchasers at the time of original delivery of the Bonds. A copy of the legal opinion, certified by the Secretary of the District, in whose office the original opinion will be filed, will be printed on each Bond.

## Tax Exemption

In the opinion of Bond Counsel, interest on the Bonds is exempt from present Federal income taxes and from State of California personal income taxes under existing statutes, regulations and court decisions, and the Bonds are exempt from all California taxes except inheritance, gift and franchise taxes.

The exemption from Federal income taxes may not apply to any particular Bonds for any period during which such Bonds are held by a person who is a substantial user of the facilities or a related person.

## Legality for Investment in California

The State Superintendent of Banks has certified that the Bonds, when issued, will qualify as legal investments for savings banks in California. Such certification is subject to continuing review and revocation.

## Disposition of Bond Proceeds

The Treasurer of the District, after depositing the accrued interest in the Electric Revenue Bond Interest Fund, will deposit the remaining proceeds from the sale of the Bonds, including any premium received, as follows:

(a) In the Electric Revenue Bond Reserve Fund an amount equal to the interest payment on the Bonds due on January 1, 1973.

(b) In the Electric Revenue Bond Fund the balance of the proceeds to be used in the manner provided in the Master Resolution including repayment of funds advanced from surplus earnings of the District.

## Security of the Bonds

The Bonds, together with the outstanding revenue bonds of the District, are secured by a first lien and charge upon Net Revenues (as that term is defined in the Master Resolution) of the electric system of the District including any and all additions and betterments thereto which may be acquired or constructed (Electric System).

The Bonds are not general obligations of the District and no exercise of the District's taxing power may be compelled on their behalf.

**Pledge of Revenues.** All Revenues from the existing electric system of the District and Revenues from all subsequent improvements and additions thereto, which Revenues include income of every kind derived from the Electric System (excluding money, if any, derived from the levy and collection of taxes by th District), are pledged in the following order:

*First:* There shall be applied all sums required for maintenance and operation costs of the Electric System, and

*Second:* There shall be applied all sums required for the payment of the principal of (including premium thereon, if any) and interest, together with any sinking fund or reserve fund payments on the Parity Bonds.

All remaining Revenues will be available to the District for all lawful District purposes. This pledge of Revenues is irrevocable as long as any of the Bonds or any refunding or other revenue bonds issued on a parity therewith as described in the Resolution shall remain outstanding or unprovided for.

## Allocation of Revenues

The Treasurer is required to set aside moneys, out of Net Revenues, on an equal priority with all Parity Bonds, as follows:

*First:* To the Electric Revenue Bond Interest Fund, on or before the first day of each month (commencing on or before August 1, 1972), an amount not less than one-fifth of the next semiannual interest payment coming due on the Bonds, until the amount in the Interest Fund shall be at least sufficient to meet such payment.

*Second:* To the Electric Revenue Bond Redemption Fund, on or before the first day of each month (commencing on or before August 1, 1974, for the Bonds), at least one-tenth of the principal amount of the next scheduled serial maturity or mandatory sinking fund payment required to be made until a sufficient amount has been accumulated to meet the serial maturity or mandatory sinking fund payment next due.

*Third:* Any amount which under the terms of the Master Resolution may be required for deposit in other bond reserve funds.

## Reserve Funds

Pursuant to the requirements of the Upper American River Project Refunding Revenue Bond Resolution for the protection of all Parity Bond issues, the District is required to maintain a Parity Bond Reserve Fund. Deposits to this Fund are required to be made in a manner which assures that at least the current year's bond interest requirements on all outstanding Parity Bonds (except bonds for which payment has been provided in advance) will be held in combined bond reserves. Pursuant to the resolutions of issuance of the Parity Bonds, the amounts so held in the reserve funds will be systematically increased in the event that the District's debt service ratio, as defined in the resolutions, shall drop below 1.75 times in the case of the Electric System Revenue Bonds, 1.60 times in the case of certain other parity bonds and 1.40 times in the case of the District's Electric Revenue Bonds.

The debt service ratio so calculated for the fiscal year ending December 31, 1971, was 1.51, slightly below the 1.75 and the 1.60 ratios. This was forecast in the Official Statement of the District relating to the Electric Revenue Bonds, Series C, dated October 7, 1971, and is due to the large nuclear plant construction work in progress which is in a non-revenue producing status. In accordance with the provisions of the resolutions, the Treasurer is making additional monthly deposits into the reserve funds to satisfy the terms of such resolutions.

A deposit equal to the interest due January 1, 1973, will be made to the Electric Revenue Bond Reserve Fund upon delivery of the Bonds. This deposit is presently estimated to be $1,500,000.

## Application of Funds

Moneys in the Electric Revenue Bond Interest Fund must be applied only to the payment of interest on the Electric Revenue Bonds, and moneys in the Electric Revenue Bond Redemption Fund must be applied only to the retirement of Electric Revenue Bonds.

Moneys in the Electric Revenue Bond Reserve Fund or the Parity Reserve will be applied to the extent necessary, together with moneys in the reserve funds of any Parity Bonds, to cover any deficiency in the Interest Fund or Redemption Fund of the Bonds or any Parity Bonds.

## Investment of Funds

Moneys held in the funds may be invested in bonds, notes, certificates of indebtedness, bills, acceptances or other securities in which funds of the District may now or hereafter be legally invested as provided by the law in effect at the time of such investment. At present this investment authority includes obligations of the United States and certain of its agencies, deposits in banks as time or demand deposits, certain bankers' acceptances and certain securities in which savings banks in California may invest their funds. All bank deposits must be secured to the extent and in a manner provided by law. The maximum maturity of investments within funds is limited to the following: *Electric Revenue Bond Fund* investments must mature not later than six months after the dates needed as estimated by the District; *Interest Fund* investments must mature on or before the respective interest payment dates; *Redemption Fund* investments must mature on or before the respective principal payment dates and mandatory sinking fund payment dates; and *Reserve Fund* investments must mature on or before the final maturity date of the Bonds, and at least 50% of the moneys in the Reserve Fund must be invested in obligations which mature within 12 years from the date of the investment.

## Rates and Charges

The District covenants that as long as any of the Bonds are outstanding it will establish and at all times maintain and collect rates and charges for the sale or use of electric energy generated, transmitted, distributed or furnished by the District which, together with other income, will yield Revenues at least sufficient with respect to the ensuing 12 months to meet all maintenance and operation costs, and to provide an aggregate of one and one-fifth (1-1/5) times the total amount of principal and interest (together with any sinking fund or reserve fund payments) becoming due during such 12 months on all Parity Bonds payable out of Revenues.

## Limitations on Issuance of Additional Obligations Payable from Revenues

As long as any of the Bonds are outstanding, the District covenants not to issue any other obligations payable from Revenues except as follows:

(a) Refunding bonds issued solely to refund all or part of the Parity Bonds then outstanding;

(b) General obligation bonds secured by the full faith and credit of the District including its taxing power;

(c) Additional revenue bonds, including additional series issued under the Master Resolution, payable on a parity with the Bonds, but only under the following conditions:

(1) Such additional revenue bonds shall have been authorized for and proceeds therefrom shall be applied to additions, betterments, extensions or improvements to the Electric System;

(2) Rates shall be fixed to produce Revenues in an amount not less with respect to such additional revenue bonds than the amounts required with respect to the Bonds authorized under the Master Resolution;

(3) No default shall exist under the Master Resolution or other resolutions authorizing the issuance of Parity Bonds;

(4) A report of an independent engineer, filed with the Trustee, certifying (i) that Net Revenues, after completion of the improvements to be financed from the additional revenue bonds, will be sufficient to pay the principal of and interest (and bond reserve fund

requirements) on all of the Parity Bonds then outstanding and the additional revenue bonds proposed to be issued; and (ii) that for a period of 12 consecutive months during the 24 months immediately preceding the issuance of the additional revenue bonds, the Net Revenues have been sufficient (after allowances mentioned below) to provide coverage of one and one-quarter (1¼) times for all interest, principal and mandatory sinking fund payments required on outstanding Parity Bonds and on the proposed additional revenue bonds, as computed for the year in which such requirements shall be a maximum. The Master Resolution provides for an adjustment in the computation in the event of rate increases or the acquisition of revenue-producing electric systems; and

(d) Revenue bonds junior and subordinate in lien to the lien upon Revenues for all interest, principal, sinking fund, and reserve fund requirements of the Bonds or Parity Bonds.

## Additional Covenants

Under the Resolution the District covenants with the bondholder, among other things:

(a) That the validity of the Bonds is not dependent upon completion of the improvements to the Electric System, and that the Bonds will be paid from all Net Revenues however and whenever received by the District;

(b) That no lease or agreement that would impair the Revenues will be entered into;

(c) That no electric energy shall be supplied free. A reasonable wholesale charge will be made for water distributed at any cost to the District and such charge will be deemed Revenues;

(d) That the Electric System will be operated efficiently and maintained in good repair and working order;

(e) That proper records and accounts will be maintained, to be audited annually by an independent certified public accountant, and copies of financial statements will be supplied to bondholders on request, within 90 days after close of the fiscal year;

(f) That inspection of any records and accounts by any holders of 10% of the Bonds will be permitted;

(g) That proper insurance on the Electric System and fidelity bonds on its employees, and liability insurance of not less than $1,000,000 per accident and a like amount of property damage insurance will be maintained (see pages 14 and 15 and page 25 for a detailed description of the District's insurance);

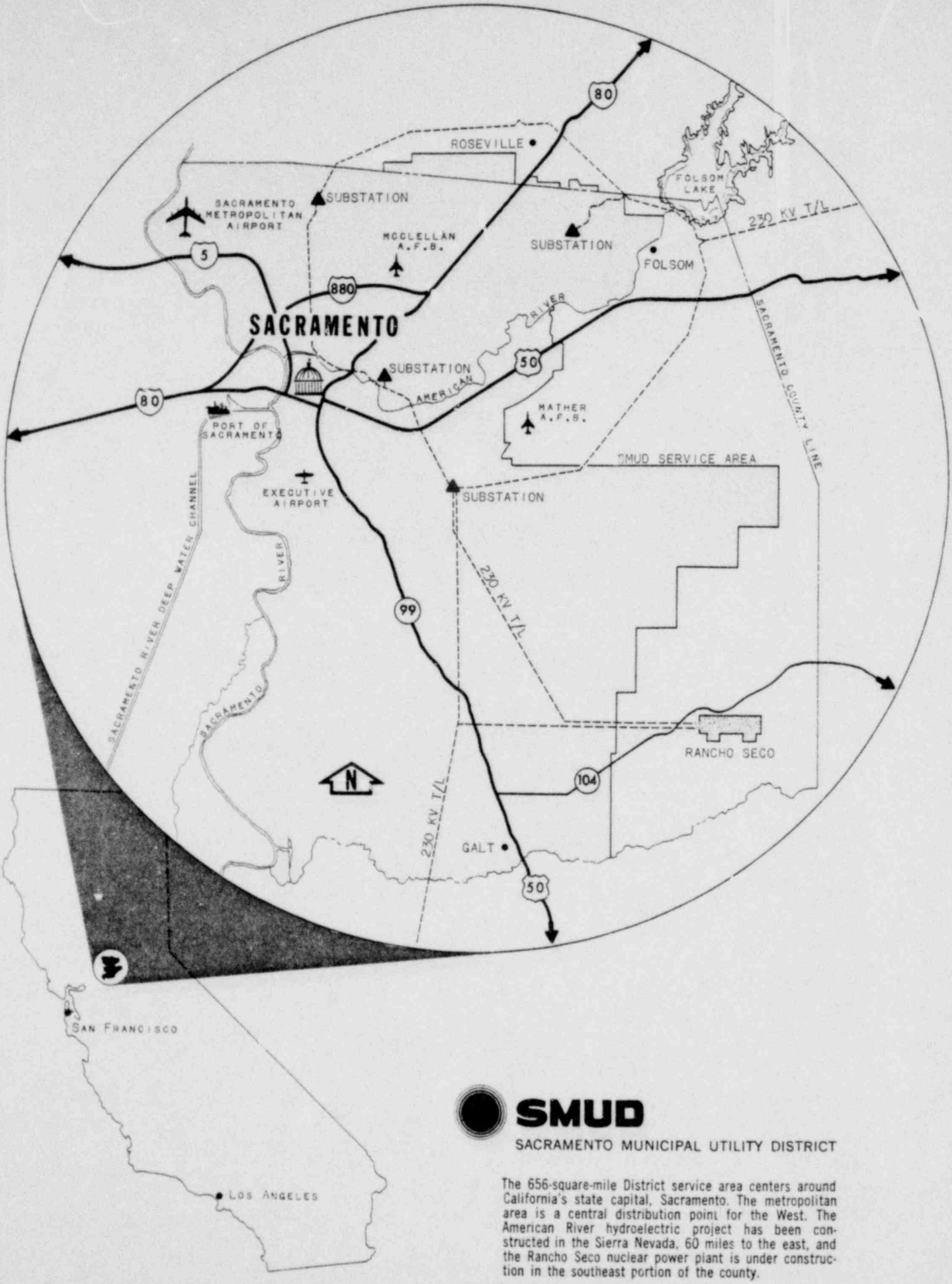
(h) That all taxes and governmental charges and other lawful claims which might otherwise become a lien on the Electric System or upon the Revenues or impair the security of the Bonds will be paid and discharged when due;

(i) That facilities will be replaced or Parity Bonds retired pro rata from any indemnification received for properties taken from it under eminent domain proceedings which have any substantial effect upon the security of the Bonds;

(j) That any rights necessary to maintain and operate the Electric System will be preserved and maintained;

(k) That no amendment or modification of the Master Resolution affecting the rights of the bondholders will be made without the consent of 60% of the bondholders;

(l) That compliance will be made with permits and licenses issued by the Atomic Energy Commission.




**SMUD**

SACRAMENTO MUNICIPAL UTILITY DISTRICT

The 656-square-mile District service area centers around California's state capital, Sacramento. The metropolitan area is a central distribution point for the West. The American River hydroelectric project has been constructed in the Sierra Nevada, 60 miles to the east, and the Rancho Seco nuclear power plant is under construction in the southeast portion of the county.

# THE DISTRICT

## Organization and Powers

The Sacramento Municipal Utility District was formed by vote of the electors in 1923, under provisions of a statute (Municipal Utility District Act) approved by the State Legislature in 1921 and subsequently codified as Division 6 of the California Public Utilities Code. District headquarters are in the city of Sacramento and its service area includes the principal parts of Sacramento County and a small portion of Placer County.

Districts formed under the Municipal Utility District Act (Act) have broad powers to acquire, construct, own and operate works for the supplying of light, water, heat, power, transportation and other services for their inhabitants. The sole activity of the District has been the generation, transmission and distribution of electric energy.

The District is governed by a board of five directors elected for staggered four-year terms. The Board appoints a General Manager responsible for the District's operations. On June 1, 1971, E. Kendell Davis, who has been with the District since 1956, was appointed General Manager. He had served most recently as Assistant General Manager and General Counsel for the District. The Board also appoints the Accountant, Secretary, Treasurer and Attorney, all of whom serve at its pleasure. The appointment and removal of other officials and employees fall under the jurisdiction of the General Manager. Except for special administrative and technical personnel, employment is under a civil service system adopted and administered by the General Manager.

Financial administration of the District is under the supervision of Wm. C. Walbridge. A District employee since 1959, he was appointed Assistant General Manager and Treasurer in May 1972, having previously served as Assistant Treasurer since 1967.

The Assistant General Manager and Chief Engineer of the District, John J. Mattimoe, has responsibility for the Engineering and Power Production Departments and for the construction of Rancho Seco No. 1. Prior to his appointment to the position in June 1971, he served as Assistant Chief Engineer, as Project Manager of the Upper American River Project and as Manager of the Hydro and General Construction Department.

The Act confers upon the District the necessary rights and powers for the conduct of its business, including the right to sue and be sued, to exercise the power of eminent domain, to enter into contracts of all kinds, to take property and construct works, to fix rates and charges for commodities or services furnished, to incur indebtedness and issue bonds or other obligations, to invest its funds, and to levy and collect ad valorem property taxes for any of its lawful purposes. The Act contemplates that revenues shall be made as nearly as possible sufficient to defray all costs and expenses, but permits the levying of taxes as an alternative to setting unreasonably high charges for service and requires the levying of taxes, if necessary, for the support of general obligation debt.

The Act provides that municipal utility districts, under certain qualifications met by the District, may issue bonds in accordance with the Revenue Bond Law of 1941. An amendment to the Act, passed in 1965, permits issuance of bonds subject to referendum only by petition of at least three percent of the voters. The Bonds are being issued in accordance with such amendment.

The Legislature of the State of California in 1971 amended the Act to enable the District, by a four-fifths vote of its Board of Directors, to issue short-term general obligations of the District. Such securities shall have a maximum term of five years and shall be used only for the purpose of financing fuel for nuclear generating facilities. This authority provides that not more than $50,000,000 of such securities shall be outstanding at any one time. The District's utilization of this authority and its plans for future use are shown on page 19 under "Financing of Capital Expenditures."

## Previous Financing

The District has obtained its capital requirements through the sale of general obligation bonds and notes, revenue bonds and from internally generated funds.

**General Obligation Bonds and Notes.** Since its inception, the District has issued $69,589,000 principal amount of general obligations. Such obligations were sold to provide funds for: 1) acquisition of the original electric system and to provide working capital for the commencement of operations; 2) furtherance of the Rural Electrification Administration's program of aiding in the construction of electric facilities outside incorporated cities; 3) construction of an office building and warehouse facilities in Sacramento; and 4) purchase of nuclear fuel for the Rancho Seco Generating Station.

The following tabulation shows the principal amount issued and the balance outstanding as of April 30, 1972, of each category of general obligations:

| | Principal Amount Issued | Principal Amount Outstanding as of April 30, 1972 |
|---|---|---|
| Power Bonds of 1938 | $12,000,000 | $ 4,435,000 |
| Rural Electrification Bonds | 23,239,000 | 11,524,000 |
| Building Bonds of 1958 | 5,650,000 | 2,380,000 |
| Building and Warehouse Notes | 700,000 | — |
| Notes of Series A | 28,000,000 | 28,000,000 |
| Total | $69,589,000 | $46,339,000 |

The average net annual interest rate on all outstanding general obligation bonds and notes as of April 30, 1972, was 3.15%.

**Revenue Bonds.** Since 1959 the District has issued $424,500,000 principal amount of revenue bonds to finance construction of generating facilities, additions and betterments within the service area and to refund the initial revenue bonds. All presently outstanding revenue bonds are on a parity.

The following tabulation shows the principal amount issued and the balance outstanding as of April 30, 1972, of each category of revenue bonds:

| Issue | Date of Issue | Principal Amount Issued | Principal Amount Outstanding as of April 30, 1972 |
|---|---|---|---|
| Hydroelectric Revenue Bonds | | | |
| Upper American River Project Revenue Bonds | | | |
| Series A, 3¼%-5% | January 1959 | $ 25,000,000 | $ — |
| Series B, 3-9/10%-5% | April 1960 | 30,000,000 | — |
| Series C, 3¾%-5% | June 1961 | 30,000,000 | — |
| Total | | $ 85,000,000① | $ — |
| White Rock Project Revenue Bonds | | | |
| Series A, 3¼%-5% | Augu 1964 | $ 12,000,000 | $ 11,670,000 |
| Series B, 3%-5% | July 1965 | 30,000,000 | 29,000,000 |
| Series C, 6¼%-7% | January 1970 | 29,000,000 | 28,500,000 |
| Series D, 6-8/10%-7% | April 1970 | 29,000,000 | 29,000,000 |
| Total | | $100,000,000 | $ 98,5 0,000 |
| Upper American River Project Refunding Revenue Bonds, 3%-3-4/5% | March 1965 | $ 79,500,000 | $ 71,700,000 |
| Total Hydroelectric Revenue Bonds | | $264,500,000 | $170,270,000 |
| Electric System Revenue Bonds | | | |
| Series A, 2¾%-3-1/10% | May 1962 | $ 10,000,000 | $ 6,490,000 |
| Series B, 2¾%-3-3/20% | June 1963 | 10,000,000 | 6,670,000 |
| Total Electric System Revenue Bonds | | $ 20,000,000 | $ 13,160,000 |
| Electric Revenue Bonds | | | |
| Series A, 4-8/10%-6-8/10% | February 1971 | $ 50,000,000 | $ 50,000,000 |
| Series B, 5¼%-7% | June 1971 | 40,000,000 | 40,000,000 |
| Series C, 4¾%-6¾% | December 1971 | 50,000,000 | 50,000,000 |
| Total Electric Revenue Bonds | | $140,000,000 | $140,000,000 |
| Total Revenue Bonds | | $424,500,000 | $323,430,000 |

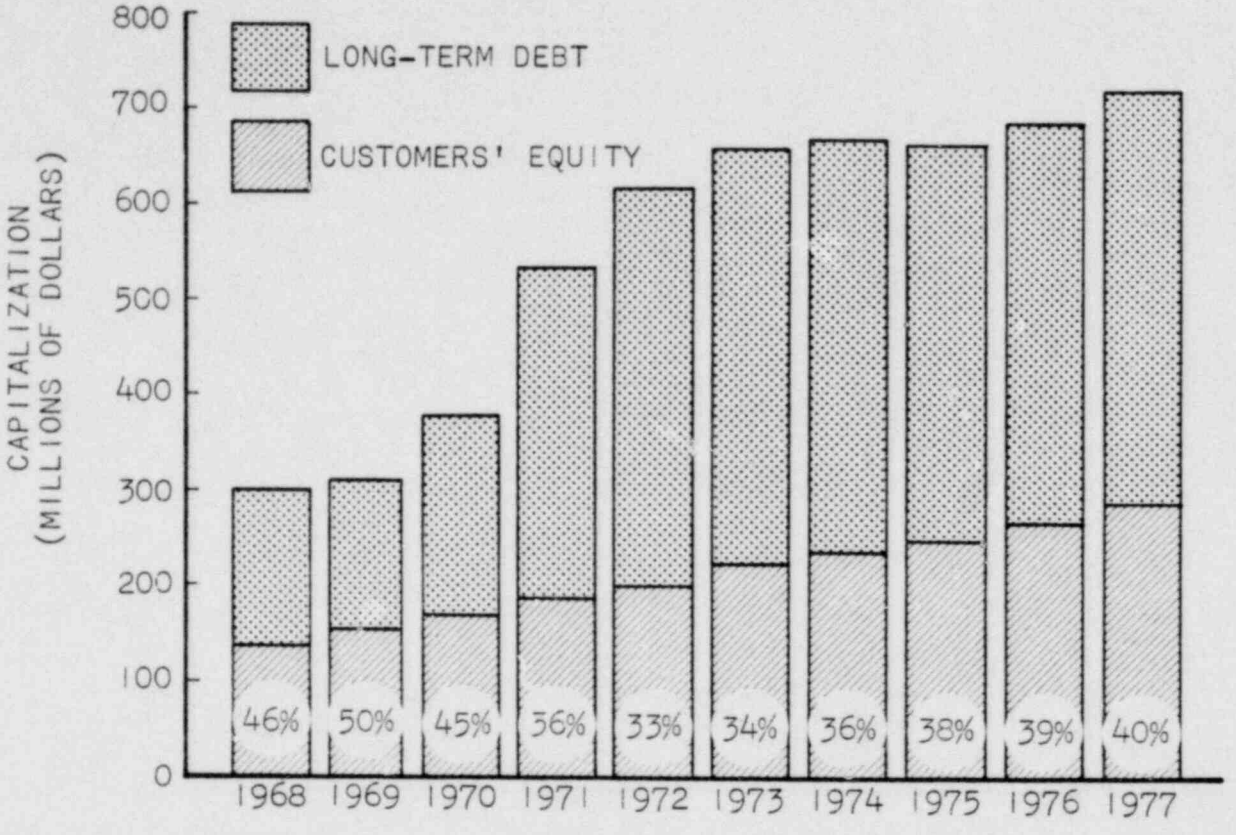
① Bonds outstanding as of February 15, 1969, were redeemed by Upper American River Project Refunding Revenue Bonds dated March 1, 1965.

The average net annual interest rate on outstanding revenue bonds as of April 30, 1972, was 4.95%.

## Capitalization

As of April 30, 1972, the capitalization of the District was $558,315,000 composed of customers' equity amounting to $193,063,000, or 35%, and long-term debt of $365,252,000, or 65%. In contrast, capitalization as of December 31, 1962, amounted to $194,234,000 of which 34% was customers' equity.

The following chart illustrates the year-end relationship of long-term debt and customers' equity for the period 1968 through 1971 and projections for the period 1972 through 1977:




## Accounting and Depreciation

The District's books and accounts are based upon the Uniform System of Accounts for Public Utilities and Licensees prescribed by the Federal Power Commission, the same accounting system which investor-owned electric utilities operating in California are legally required to follow. The District employs modern methods and cost-saving techniques to the fullest extent practicable.

The District provides for depreciation on the historical cost of electric properties on a straight-line basis at rates determined by engineering studies.

## Policies and Practices

**Employee Relations.** Approximately 1,225 District employees have civil service status and the benefits of the Public Employees' Retirement System, Federal Social Security and a disability insurance program. The District's employees are represented by recognized employee organizations of their own choosing. Physical force employees are represented by the International Brotherhood of Electrical Workers, and clerical employees are represented by the Organization of SMUD Employees. The District's management meets and confers with these organizations regarding wages, hours, and other terms and conditions of employment. Agreements reached in these meetings and conferences are set forth in written memoranda of understanding. These memoranda are not legally binding but have always been adhered to by the parties. The District's wages and fringe benefits are comparable to those paid by large private utilities in California. The District has never had a strike in more than 25 years of operating history and enjoys good relations with its employees.

**Customer Relations.** Alert and cooperative customer services in response to routine and emergency calls are maintained on a 24-hour basis. A large, modern office building adapted to the District's present and future needs and located convenient to the majority of District customers was completed and occupied in May 1960. Power disturbances and failures have been minimized by continual modernization of facilities and by conversion of the distribution system to higher voltages wherever required.

**Marketing Program.** The District conducts a comprehensive marketing program. With an appropriate economic and environmental concern, it promotes those uses of electricity which mutually aid the District and the customers it serves. It places emphasis on those applications which are off-peak or have a high load factor and that are in the public interest. In the residential field, the District does not merchandise appliances but works closely with dealers, distributors, electrical contractors, and home and apartment builders to increase electric appliance sales and electric heating installations. A staff of home economists carries on group programs in schools, the District's Electric Living Center and on local television, giving instructions and demonstrations in the efficient use of appliances. The average residential consumption was 7,928 kwh for the year ended December 31, 1971, 33% above that in other areas of Northern California and 8% above the national average. Residential programs are coordinated with promotional efforts of major manufacturers and national organizations. More than 60% of the homes in the area are equipped with electric kitchens and nearly 90% of the dryers sold in the District in the past year were electric. The growing popularity of air conditioning has created higher system load supply demands in the summer. The District actively promotes electric heating to help offset this imbalance and has a special heating rate that provides its residential customers with one of the lowest electric heating costs in the nation. The success of this heating promotion effort is evident in that nearly one-half of all new residential construction completed during 1971 featured whole-house electric heating. Commercial and industrial power use is promoted with emphasis placed on lighting, space and water heating, electric cooking in restaurants, and the use of heat pumps—all of which are good revenue producers.

The District has recently strengthened the public service aspects of its marketing program to better inform and advise its customers how to efficiently utilize electricity in their home and business lives. Use of advertising media, including newspapers, radio and television, is made to enhance its marketing activities and to further the District's customer relations.

**Residential Underground Service.** Commencing in 1963 the District's Board of Directors approved an 18-month pilot program of free underground installations for subdivisions in master-planned areas. This program was then extended for a 12-month period to all subdivisions. After gaining this experience and successfully reducing costs of this type of distribution, the District adopted a policy of serving all new residential developments with underground distribution at a nominal charge to the contractor. This charge is waived if the home contains appropriate connected load.

## Insurance (Other Than Nuclear)

The District maintains a broad insurance program designed to furnish protection against losses which would have serious adverse effect on its financial position. See page 25 for reference to nuclear insurance.

Mund, McLaurin & Company of San Francisco is retained as insurance adviser to review all policies and to recommend expansion or modification of the insurance program, if necessary, because of construction and operation exposures or new innovations in the insurance industry.

The District has in force catastrophe insurance in the amount of $10,000,000 subject to deductibles ranging from $100,000 to $500,000. This policy was negotiated principally to furnish coverage against catastrophic physical damage loss not provided under other policies for hydroelectric generating facilities, although coverage generally extends to most properties of the District. While the catastrophe insurance applies also to other perils, the District considers the principal coverage as being against losses resulting from fire, earthquake, flood, collapse and faulty design. The same policy also extends coverage to the value of lost generation, additional purchased power costs and other expenses arising from physical damage to the insured properties while replacements are in course of manufacture in the United States,

transportation in the United States or Canada, and during construction, installation and testing operations. This policy excludes coverage of the District's nuclear project.

The District presently carries comprehensive public liability and property damage insurance, including coverage for non-owned aircraft liability, with limits up to $34,000,000 per occurrence.

Other types of insurance presently in force include workmen's compensation; crime, including faithful performance of all officers and employees, money and securities, forgery and counterfeiting of securities, theft of inventories, furniture and fixtures; transportation, installation and testing; loss of accounts receivable and loss of valuable papers.

The District's insurer of its hydroelectric generating equipment and bulk power receiving stations in the service area against the perils of mechanical and electrical breakdown (sometimes referred to as boiler and machinery insurance) cancelled the policy on August 10, 1971. This act by the District's insurer is consonant with the growing experience of other electric utilities with insurers of this type of coverage.

Due to extremely adverse conditions existing in the insurance market, the District has been unable to replace this insurance under acceptable insuring provisions and at a reasonable premium. Accordingly, the District is currently self-insuring the mechanical and electrical breakdown risks to its hydroelectric generating equipment and bulk power receiving stations until insurance companies again are receptive to covering electric utilities on reasonable terms.

The cancellation of the aforementioned insurance does not place the District in a potentially hazardous financial position as the District's management policy has always been one of carrying substantial amounts of unrestricted funds to meet extraordinary contingencies. These resources are deemed more than sufficient to cover any uninsured maximum possible loss.

## Claims Under Adjudication

On April 23, 1957, the District entered into a contract with the Georgetown Divide Public Utility District (Georgetown) under which it acquired from Georgetown certain water rights. On October 15, 1971, Georgetown filed a complaint in the El Dorado County Superior Court seeking declaratory relief. Georgetown contends that the District's obligations are not limited to 41 payments of $97,000 each specifically provided for in the contract but that those payments should be increased to such sums as may be necessary to enable Georgetown to repay to the United States Bureau of Reclamation funds which it borrowed to construct its substitute water supply facilities. If Georgetown's contentions are upheld, the District's obligation could be increased as much as $1,400,000. It is the opinion of legal counsel for the District that the District's obligations to Georgetown are limited to the 41 payments of $97,000 provided for in the contract, that there is no merit to the Georgetown claim, and that the District will be able to defend against it successfully.

Other than the above and tort claims fully covered by the District's insurance, there are no actions in progress other than those associated with normal business operations, and there are no single claims against the District in excess of $250,000.

## Direct and Overlapping Debt

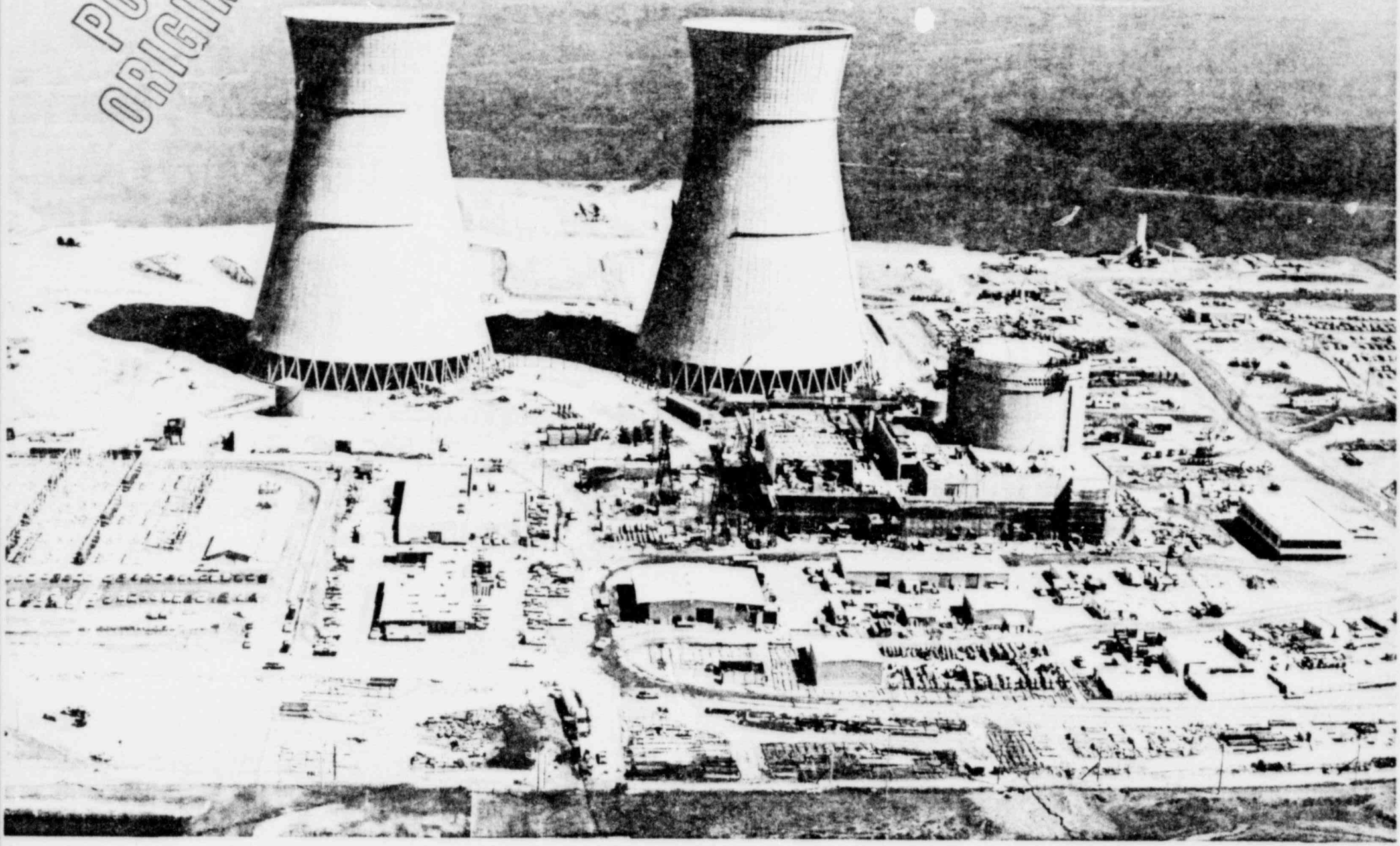
According to the State Board of Equalization, the average ratio of 1971-1972 assessed valuation to full value is 22.2% in Sacramento County and 23.2% in Placer County. Public utility property, estimated at an assessed valuation of $98,093,000, is uniformly assessed at 29% of full value.

Total 1971-1972 assessed valuation of property within the District is approximately $1,228,000,000 according to a review made by California Municipal Statistics, Inc. The Municipal Utility District Act limits general obligation debt to 20% of assessed valuation, but allows exclusion of bonds fully supported from net revenues. Present general obligation debt of the District is 3.77% of assessed valuation before such exclusion and the debt is supported from net revenues.

Following is a tabulation of direct and estimated overlapping municipal debt of taxable property within the District as of June 21, 1972:

| | | |
|---|---|---|
| Gross Direct Debt | | $ 45,879,000 |
| Net Direct Debt | | — |
| Estimated Overlapping Debt (a): | | |
| Sacramento County (91.96%) | $ 3,112,846 | |
| Sacramento-Yolo Port District (87.45%) | 12,737,093 | |
| Sacramento Unified School District | 34,364,000 | |
| Other Unified School Districts | 39,627,885 | |
| Junior College Districts | 11,362,332 | |
| High School Districts | 5,275,050 | |
| Elementary School Districts | 3,437,171 | |
| City of Sacramento (general purpose) | 15,114,000 | |
| City of Sacramento (special assessment 1915 Act) | 17,503,505 (b) | |
| City of Sacramento Parking and Convention Authorities | 27,035,000 | |
| Sanitary and Sanitation Districts | 7,652,400 | |
| Irrigation and Water Districts | 3,126,000 | |
| Other Cities and Special Districts | 3,168,370 | |
| Southeast and Elk Grove Sewer Assess. District (1915 Act) | 6,120,000 | |
| Gross Overlapping Debt | | 189,635,652 (c) |
| Gross Direct and Overlapping Debt | | $235,514,652 |
| Less Self-Supporting Bonds: | | |
| General Obligations of the District | $45,879,000 | |
| Other Self-Supporting Bonds | 7,336,635 | 53,215,635 |
| Net Direct and Overlapping Debt | | $182,299,017 |

(a) Data provided by California Municipal Statistics, Inc.
(b) As of June 30, 1971.
(c) Excludes redevelopment and revenue bonds.



Aerial view of District's nuclear power plant, Rancho Seco No. 1, showing construction as of May 1, 1972.

# PROJECTIONS OF GROWTH, CAPITAL EXPENDITURES, FINANCING, OPERATING RESULTS AND DEBT SERVICE COVERAGE

The District's engineers, the Bechtel Corporation, forecast that during the next decade the system peak demand will increase 112% from 1,020,000 kw peak in 1971 to 2,160,000 kw in 1981. During this period sales are expected to increase 106% from 3,650 million kwh to 7,525 million kwh. The following tab'e illustrates the forecasted growth within the District's service area:

**PROJECTED GROWTH DATA**

| Year | Population | Customers (Average) | System Maximum Demand-KW (in thousands) | KWH Sales (in millions) | Operating Revenue (in thousands) |
|---|---|---|---|---|---|
| 1971 (actual) | 649,000 | 229,394 | 1,020 | 3,650 | $ 47,675 |
| 1972 | 657,000 | 234,000 | 1,085 | 3,921 | 53,957 |
| 1973 | 670,200 | 241,000 | 1,180 | 4,214 | 62,366 |
| 1974 | 683,600 | 248,200 | 1,282 | 4,533 | 86,171 |
| 1975 | 697,200 | 255,700 | 1,394 | 4,871 | 88,003 |
| 1976 | 711,200 | 263,400 | 1,504 | 5,241 | 91,281 |
| 1977 | 725,400 | 271,200 | 1,617 | 5,632 | 93,343 |
| 1978 | 739,900 | 279,400 | 1,738 | 6,055 | 95,257 |
| 1979 | 754,700 | 287,800 | 1,869 | 6,510 | 96,381 |
| 1980 | 769,800 | 296,400 | 2,009 | 6,999 | 104,054 |
| 1981 | 785,200 | 305,300 | 2,160 | 7,525 | 124,671 |
| Percent increase (1971-81) | 21.0% | 33.1% | 111.8% | 106.2% | 161.5% |

The indicated growth trend shows a need for additional generating capacity by 1981 to serve the increasing electric energy requirements in the service area. The District formerly planned to follow Rancho Seco No. 1 with Rancho Seco No. 2, a nuclear unit of similar size. At the present time this plan and other generation alternatives are being evaluated. As of this date the District has not let any supply or construction contracts for generation subsequent to Rancho Seco No. 1.

For purposes of their economic forecast, the Bechtel Corporation included $295,410,000 for construction of future generation during the 1974-1981 period. This approximates a one-half interest in a large nuclear generating unit. Total capital expenditures for the 11-year period 1971 through 1981 have been estimated to be $821,845,000.

The following table shows estimated capital expenditures for the period 1971 through 1981:

**ESTIMATED CAPITAL EXPENDITURES**

*(in thousands)*

| | Construction Expenditures — Generating Facilities | | | | Nuclear Fuel Expenditures | | |
|---|---|---|---|---|---|---|---|
| Year | Hydroelectric | Rancho Seco #1 | Future Generation | Service Area | Rancho Seco #1 | Future Generation | Total Capital Expenditures |
| 1971 (actual) | $4,436 | $ 85,260 | $ — | $ 14,819 | $ 14,743 | $ — | $119,258 |
| 1972 | 4,323 | 88,389 | — | 18,951 | 12,952 | — | 124,615 |
| 1973 | — | 31,061 | — | 13,208 | 75 | — | 44,344 |
| 1974 | — | 2,143 | 643 | 13,236 | 9,509 | — | 26,531 |
| 1975 | — | — | 339 | 13,169 | 11,075 | — | 27,583 |
| 1976 | — | — | 19,319 | 13,971 | 12,552 | — | 45,842 |
| 1977 | — | — | 30,766 | 14,816 | 10,546 | 18 | 56,146 |
| 1978 | — | — | 70,835 | 15,719 | 9,484 | 9,072 | 105,110 |
| 1979 | — | — | 83,713 | 16,675 | 8,053 | 8,856 | 117,297 |
| 1980 | — | — | 26,951 | 17,660 | 7,515 | 2,861 | 54,987 |
| 1981 | — | — | 2,146 | 18,767 | 8,752 | 7,224 | 36,889 |
| Total | $8,759 | $206,853 | $238,712 | $170,991 | $105,256 | $28,031 | $758,602 |
| Interest During Construction | 1,182 | 27,519 | 26,500 | 1,180 | 4,695 | 2,167 | 63,243 |
| Total Expenditures | $9,941 | $234,372 | $265,212 | $172,171 | $109,951 | $30,198 | $821,845 |
| Percent | 1.2% | 28.5% | 32.3% | 20.9% | 13.4% | 3.7% | 100.0% |

## Financing of Capital Expenditures

The following is an estimated schedule for the sale of bonds and notes:

| Year | | Principal Amount — Revenue Bonds | Principal Amount — General Obligation Notes | Total |
|---|---|---|---|---|
| 1971 | Electric Revenue Bonds (actual) | $140,000,000 | $ | $140,000,000 |
| 1972 | Bonds of Series D | 50,000,000 | | |
| | Notes, Series A | | 28,000,000 | 78,000,000 |
| 1973 | Electric Revenue Bonds | 30,000,000 | | 30,000,000 |
| 1974 | Nuclear Fuel Notes | | 15,000,000 | 15,000,000 |
| 1975 | | — | — | — |
| 1976 | Electric Revenue Bonds | 25,000,000 | | 25,000,000 |
| 1977 | Electric Revenue Bonds | 25,000,000 | | 25,000,000 |
| 1978 | Electric Revenue Bonds | 65,000,000 | | |
| | Nuclear Fuel Notes | | 46,000,000 | 111,000,000 |
| 1979 | Electric Revenue Bonds | 70,000,000 | | 70,000,000 |
| 1980 | Electric Revenue Bonds | 25,000,000 | | |
| | Nuclear Fuel Notes | | 15,000,000 | 40,000,000 |
| 1981 | Electric Revenue Bonds | 15,000,000 | | 15,000,000 |
| | Total | $445,000,000 | $104,000,000 | $549,000,000 |

In accordance with the practice of the District, the debt service on the general obligations will be paid from Net Revenues. The District's Net Revenues, as forecast by the Bechtel Corporation, are sufficient for this purpose. (See page 46.)

## Financial History and Projections

A record of earnings for each of the last ten years of operations is presented in Exhibit A(1). This tabulation, however, is presented in a form in which the District's books and records are maintained and includes charges for depreciation. For purposes of computing debt service coverage, it is proper to consider the flow of funds which would be available for the payment of revenue bond debt service falling due in accordance with the Master Resolution. This computation is shown below using results for 1971 and unaudited figures for the 12 months ended April 30, 1972.

| | Twelve Months Ended April 30, 1972 | Year Ended December 31, 1971 |
|---|---|---|
| Operating Revenues | $49,447,682 | $47,675,127 |
| Other Revenues: | | |
| Interest (principally) | 3,950,726 | 3,980,031 |
| Unused balance of White Rock Project Revenue Bond Construction Fund① | 3,937,505 | — |
| Total Revenues | $57,335,913 | $51,655,158 |
| Operating Expenses (excluding depreciation): | | |
| Purchased Power | $ 8,874,559 | $ 8,660,675 |
| Other Operation and Maintenance Expenses and Taxes | 11,943,460 | 11,435,317 |
| Total Operating Expenses | $20,818,019 | $20,095,992 |
| Net Revenues per Master Resolution | $36,517,894 | $31,559,166 |
| Revenue Bond Debt Service Due | $16,875,218 | $15,330,699 |
| Times Revenue Bond Debt Service Coverage | 2.16① | 2.06 |

① The overage between $100,000,000 of bond proceeds and project costs which, according to the Resolution of Issuance, becomes Revenues when the project is completed and all bills are paid. When this amount is excluded, the Times Revenue Bond Debt Service Coverage for the 12 months ended April 30, 1972, becomes 1.93.

Based on average water years and historical trends of electric energy sales, population growth, operating expenses, price-level increases and other economic factors, revenues have been projected through 1981 by the Bechtel Corporation, independent engineers.

Such projections as shown in their report (see page 44) are based on the following assumptions:

(a) Actual interest rates on all bonds and notes presently outstanding.

(b) An annual interest rate of 6% on the $50,000,000 Electric Revenue Bonds, Series D, presently offered for sale.

(c) An annual interest rate of 6% on $255,000,000 of Electric Revenue Bonds forecast to be sold for plant additions and betterments as follows: $30,000,000 in 1973, $25,000,000 in 1976, $25,000,000 in 1977, $65,000,000 in 1978, $70,000,000 in 1979, $25,000,000 in 1980, and $15,000,000 in 1981.

(d) An annual interest rate of 4½% on the five-year general obligation notes to be sold to finance fuel for nuclear generating facilities as follows: $15,000,000 in 1974, $46,000,000 in 1978, and $15,000,000 in 1980. Not more than $50,000,000 of these notes will be outstanding at any one time.

(e) A 9.7% rate increase, effective June 29, 1972, as enacted by the Board of Directors on May 8, 1972.

The Bechtel Corporation calculates that Net Revenues will provide a minimum coverage of 1.49 times annual debt service on all outstanding and anticipated revenue bonds through 1981. Actual Net Revenues for the 12 months ended April 30, 1972, are sufficient to cover estimated maximum revenue bond service requirements on outstanding parity bonds and on the Bonds of Series D, as well as maximum general obligation bond and note service requirements.

A summary of these findings is shown below.

**FORECAST OF**

**OPERATING REVENUES, NET REVENUES AND REVENUE BOND DEBT SERVICE COVERAGE**

*(in thousands)*

| Year | Estimated Operating Revenues | Estimated Total Net Revenues① | Debt Service — Electric System Revenue Bonds | Debt Service — UARP Refunding Revenue Bonds | Debt Service — WRP Revenue Bonds | Debt Service — Electric Revenue Bonds | Debt Service — All Revenue Bonds | Times Debt Service Coverage② |
|---|---|---|---|---|---|---|---|---|
| 1971 (actual) | $47,675 | $31,559 | $1,550 | $5,079 | $6,045 | $ 2,657 | $15,331 | 2.06 |
| 1972 | 53,957 | 37,613 | 1,524 | 5,059 | 6,210 | 7,923 | 20,716 | 1.82 |
| 1973 | 62,366 | 36,619 | 1,492 | 5,046 | 6,172 | 11,823 | 24,533 | 1.49 |
| 1974 | 86,171 | 52,654 | 1,461 | 5,048 | 6,129 | 13,016 | 25,654 | 2.05 |
| 1975 | 88,003 | 53,398 | 1,429 | 5,060 | 6,287 | 13,192 | 25,968 | 2.06 |
| 1976 | 91,281 | 55,401 | 1,396 | 4,970 | 6,342 | 13,910 | 26,618 | 2.08 |
| 1977 | 93,343 | 55,615 | 1,363 | 5,077 | 6,298 | 15,767 | 28,505 | 1.95 |
| 1978 | 95,257 | 57,115 | 1,329 | 5,080 | 6,254 | 16,946 | 29,609 | 1.93 |
| 1979 | 96,381 | 58,147 | 1,294 | 5,078 | 6,204 | 23,247 | 35,823 | 1.62 |
| 1980 | 104,054 | 60,254 | 1,260 | 5,071 | 6,352 | 25,815 | 38,498 | 1.57 |
| 1981 | 124,671 | 71,872 | 1,225 | 5,059 | 6,293 | 28,298 | 40,875 | 1.76 |

① Net Revenues as defined in the Master Resolution.

② Ratio of Net Revenues to all revenue bond debt service for current year.

## Operation of Reserve Funds

The ratio of Net Revenues to maximum debt service on then outstanding revenue bonds for ensuing three years, as shown on line 10 of Table A (page 47), was 1.51 for the calendar year 1971 and is estimated to fall below 1.75 and/or 1.60 in certain future years. This condition occurs because of large nuclear plant construction work in progress which is in a non-revenue producing status. Deposits are being made to the reserve funds in accordance with the resolutions of issuance. The debt service coverage ratio is estimated to recover when the nuclear facilities become revenue producing.

# REVENUE BOND MATURITY SCHEDULE AND DEBT SERVICE INCLUDING ELECTRIC REVENUE BONDS, SERIES D

| | Serial Maturities and Mandatory Sinking Fund Payments | | | | | | Interest | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | ESR Bonds $20,000,000 | UARP Refunding Bonds $79,500,000 | WRP Bonds $100,000,000 | Electric Revenue Bonds Series A, B & C $140,000,000 | Electric Revenue Bonds Series D $50,000,000 | Total Principal Payments | Presently Outstanding Issues at Actual Interest Rates | Electric Revenue Bonds Series D Assumed 6% Interest Rate | Total Interest Payments Including Issue Presently Offered | Total Debt Service (Estimated) |
| 1972 | $ 1,145,000 | $ 2,700,000 | $ 875,000 | $ — | $ — | $ 4,720,000 | $ 15,995,761 | $ — | $ 15,995,761 | $ 20,715,761 |
| 1973 | 1,145,000 | 2,800,000 | 885,000 | — | — | 4,830,000 | 15,802,573 | 3,000,000 | 18,802,573 | 23,632,573 |
| 1974 | 1,145,000 | 2,900,000 | 890,000 | 300,000 | — | 5,235,000 | 15,619,088 | 3,000,000 | 18,619,088 | 23,854,088 |
| 1975 | 1,145,000 | 3,000,000 | 1,100,000 | 300,000 | 100,000 | 5,645,000 | 15,426,095 | 3,000,000 | 18,426,095 | 24,071,095 |
| 1976 | 1,145,000 | 3,000,000 | 1,205,000 | 360,000 | 100,000 | 5,750,000 | 15,233,335 | 2,994,000 | 18,227,335 | 23,977,335 |
| 1977 | 1,145,000 | 3,200,000 | 1,215,000 | 700,000 | 100,000 | 6,360,000 | 15,021,818 | 2,988,000 | 18,009,818 | 24,369,818 |
| 1978 | 1,145,000 | 3,300,000 | 1,225,000 | 1,000,000 | 200,000 | 6,870,000 | 14,781,330 | 2,982,000 | 17,763,330 | 24,633,330 |
| 1979 | 1,145,000 | 3,400,000 | 1,230,000 | 1,300,000 | 300,000 | 7,375,000 | 14,514,418 | 2,970,000 | 17,484,418 | 24,859,418 |
| 1980 | 1,145,000 | 3,500,000 | 1,440,000 | 1,600,000 | 400,000 | 8,085,000 | 14,214,748 | 2,952,000 | 17,166,748 | 25,251,748 |
| 1981 | 1,145,000 | 3,600,000 | 1,450,000 | 1,800,000 | 500,000 | 8,495,000 | 13,886,078 | 2,928,000 | 16,814,078 | 25,309,078 |
| 1982 | 1,150,000 | 3,700,000 | 1,560,000 | 2,000,000 | 600,000 | 9,010,000 | 13,539,708 | 2,898,000 | 16,437,708 | 25,447,708 |
| 1983 | 560,000 | 3,800,000 | 1,570,000 | 2,300,000 | 700,000 | 8,930,000 | 13,178,223 | 2,862,000 | 16,040,223 | 24,970,223 |
| 1984 | | 4,000,000 | 1,580,000 | 2,500,000 | 800,000 | 8,880,000 | 12,803,633 | 2,820,000 | 15,623,633 | 24,503,633 |
| 1985 | | 4,100,000 | 1,795,000 | 2,800,000 | 900,000 | 9,595,000 | 12,422,758 | 2,772,000 | 15,194,758 | 24,789,758 |
| 1986 | | 4,200,000 | 1,905,000 | 3,000,000 | 1,000,000 | 10,105,000 | 12,031,095 | 2,718,000 | 14,749,095 | 24,854,095 |
| 1987 | | 4,400,000 | 1,915,000 | 3,300,000 | 1,100,000 | 10,715,000 | 11,625,083 | 2,658,000 | 14,283,083 | 24,998,083 |
| 1988 | | 4,500,000 | 2,130,000 | 3,500,000 | 1,200,000 | 11,330,000 | 11,190,670 | 2,592,000 | 13,782,670 | 25,112,670 |
| 1989 | | 4,600,000 | 2,245,000 | 3,700,000 | 1,300,000 | 11,845,000 | 10,743,550 | 2,520,000 | 13,263,550 | 25,108,550 |
| 1990 | | 4,800,000 | 2,255,000 | 4,000,000 | 1,400,000 | 12,455,000 | 10,287,370 | 2,442,000 | 12,729,370 | 25,184,370 |
| 1991 | | 4,900,000 | 2,470,000 | 2,200,000 | 1,500,000 | 11,070,000 | 9,834,900 | 2,358,000 | 12,192,900 | 23,262,900 |
| 1992 | | | 2,585,000 | 2,500,000 | 800,000 | 5,885,000 | 9,502,208 | 2,268,000 | 11,770,208 | 17,655,208 |
| 1993 | | | 2,800,000 | 2,800,000 | 900,000 | 6,500,000 | 9,222,956 | 2,220,000 | 11,442,956 | 17,942,956 |
| 1994 | | | 2,820,000 | 2,800,000 | 1,000,000 | 6,620,000 | 8,925,506 | 2,166,000 | 11,091,506 | 17,711,506 |
| 1995 | | | 2,935,000 | 3,100,000 | 1,000,000 | 7,035,000 | 8,621,563 | 2,106,000 | 10,727,563 | 17,762,563 |
| 1996 | | | 3,150,000 | 3,400,000 | 1,100,000 | 7,650,000 | 8,288,676 | 2,046,000 | 10,334,676 | 17,984,676 |
| 1997 | | | 3,370,000 | 3,700,000 | 1,200,000 | 8,270,000 | 7,924,989 | 1,980,000 | 9,904,989 | 18,174,989 |
| 1998 | | | 3,490,000 | 4,000,000 | 1,300,000 | 8,790,000 | 7,537,101 | 1,908,000 | 9,445,101 | 18,235,101 |
| 1999 | | | 3,710,000 | 4,300,000 | 1,400,000 | 9,410,000 | 7,121,514 | 1,830,000 | 8,951,514 | 18,361,514 |
| 2000 | | | 3,830,000 | 4,600,000 | 1,500,000 | 9,930,000 | 6,681,726 | 1,746,000 | 8,427,726 | 18,357,726 |
| 2001 | | | 4,050,000 | 4,800,000 | 1,600,000 | 10,450,000 | 6,217,301 | 1,656,000 | 7,873,301 | 18,323,301 |
| 2002 | | | 4,270,000 | 5,100,000 | 1,700,000 | 11,070,000 | 5,724,964 | 1,560,000 | 7,284,964 | 18,354,964 |
| 2003 | | | 4,595,000 | 5,400,000 | 1,800,000 | 11,795,000 | 5,201,652 | 1,458,000 | 6,659,652 | 18,454,652 |
| 2004 | | | 4,925,000 | 5,600,000 | 1,900,000 | 12,425,000 | 4,646,752 | 1,350,000 | 5,996,752 | 18,421,752 |
| 2005 | | | 3,000,000 | 6,200,000 | 2,000,000 | 11,200,000 | 4,054,277 | 1,236,000 | 5,290,277 | 16,490,277 |
| 2006 | | | 3,200,000 | 6,400,000 | 2,200,000 | 11,800,000 | 3,498,052 | 1,116,000 | 4,614,052 | 16,414,052 |
| 2007 | | | 3,400,000 | 6,900,000 | 2,300,000 | 12,600,000 | 2,911,864 | 984,000 | 3,895,864 | 16,495,864 |
| 2008 | | | 3,600,000 | 7,200,000 | 2,500,000 | 13,300,000 | 2,287,552 | 846,000 | 3,133,552 | 16,433,552 |
| 2009 | | | 3,800,000 | 7,700,000 | 2,600,000 | 14,100,000 | 1,630,215 | 696,000 | 2,326,215 | 16,426,215 |
| 2010 | | | 4,200,000 | 8,200,000 | 2,800,000 | 15,200,000 | 925,227 | 540,000 | 1,465,227 | 16,665,227 |
| 2011 | | | — | 8,700,000 | 3,000,000 | 11,700,000 | 321,640 | 372,000 | 693,640 | 12,393,640 |
| 2012 | | | — | — | 3,200,000 | 3,200,000 | — | 192,000 | 192,000 | 3,392,000 |
| | $13,160,000 | $74,400,000 | $98,670,000 | $140,000,000 | $50,000,000 | $376,230,000 | $379,397,969 | $83,730,000 | $463,127,969 | $839,357,969 |

(See page 12 for description of revenue bond issues.)

# THE ELECTRIC SYSTEM

## History of Operations

Although organized in 1923, the District did not commence electric operations until the start of 1947. At that time the District acquired, by cash purchase, the electric system of the Pacific Gas and Electric Company which was located within the District's service area. Since 1947 the District has provided all electric service within its service area.

Growth of the District's operations since 1963 is summarized below.

**OPERATING DATA**

| | Twelve Months Ended April 30, 1972 | 1963 | Percent Increase |
|---|---|---|---|
| Operating Revenues | $ 49,448,000 | $ 27,937,000 | 77% |
| Gross plant at cost① | $553,790,000 | $201,886,000 | 174 |
| Number of employees at year-end | 1,224 | 763 | 60 |
| Number of customers at year-end | 238,944 | 183,596 | 30 |
| System peak demand—KW | 1,020,,89 | 465,792 | 119 |
| KWH sold (in thousands) | 3,740,268 | 1,910,521 | 96 |
| Power supply (KWH in thousands): | | | |
| Hydroelectric generation | 1,702,795 | 543,995 | 213 |
| Purchased power | 2,301,757 | 1,547,587 | 49 |
| Average KWH sales per residential customer | 7,988 | 4,959 | 61 |

① Including plant under construction.

A detailed summary of operating and financial statistics for the period since 1963 is given in Exhibit A. Audited financial statements for 1971 and unaudited figures for the 12 months ended April 30, 1972, are shown in Exhibit B.

## Electric Plant

The electric plant had an original cost of $553,789,600 as of April 30, 1972, composed of:

| Type of Facilities | | |
|---|---|---|
| Hydroelectric generating plant | $183,879,203 | |
| Transmission plant | 31,684,197 | |
| Distribution plant | 111,580,724 | |
| General plant | 16,313,915 | $343,458,039 |
| Construction work in progress: | | |
| Hydroelectric generating plant | $ 3,189,385 | |
| Nuclear generating plant | 176,640,392 | |
| Other | 10,922,553 | 190,752,330 |
| Nuclear fuel | | 19,579,231 |
| Total | | $553,789,600 |

## Generating Facilities

The District presently operates six hydroelectric generating plants having an aggregate capacity of 628,000 kw. Final features of the hydroelectric project were completed in early 1972. In addition, upon completion in late 1973 of the Rancho Seco Generating Station having a capacity of 900,000 kw, the District's total generating capacity will amount to 1,528,000 kw.

Upon completion, any power produced by Rancho Seco No. 1 which is surplus to the District's requirements will be sold to the PG&E. (See page 28.)

**Hydroelectric Generation.** In 1957 the Federal Power Commission issued to the District a license for the Upper American River Project. This 50-year license was subsequently amended and now includes all segments of the District's hydroelectric facilities located on the South Fork of the American River and its tributaries.

The overall development is composed principally of three relatively large and eight small lakes, all created by earth, rock-fill, or concrete dams and dikes and having storage capacity of about 420,000 acre-feet of water; eight tunnels with a combined length of over 26 miles; and six powerhouses containing nine turbine generators providing 628,000 kw capable of producing 1,901,000,000 kwh of electric energy during years of normal runoff from the watershed. The total cost of the project is approximately $205,000,000.

The table below lists the hydroelectric power capacities and average energy output in kilowatt-hours of the District's plants.

| Plant | Nameplate Rating-KW | Average Annual Generation KWH (in thousands) | Completion Date |
|---|---|---|---|
| Jaybird Unit 1 | 70,000 | 286,000 | 1961 |
| Jaybird Unit 2 | 70,000 | 286,000 | 1962 |
| Camino Unit 1 | 75,000 | 219,000 | 1963 |
| Union Valley | 35,000 | 112,000 | 1963 |
| Robbs Peak | 25,000 | 57,000 | 1965 |
| Camino Unit 2 | 75,000 | 219,000 | 1968 |
| White Rock Unit 1 | 100,000 | 310,000 | 1968 |
| White Rock Unit 2 | 100,000 | 310,000 | 1968 |
| Loon Lake | 78,000 | 102,000 | 1971 |
| Total | 628,000 | 1,901,000 | |

**Nuclear Generation.** Planning studies have long made it evident that the District would find it necessary to develop power production plants utilizing methods other than hydroelectric generation when the demand for power exceeded that which can be produced by the Upper American River Project together with that available under purchased power agreements. It is now anticipated that power demands will exceed power available from present sources by late 1973 or early 1974. Cost analyses indicate that the cost of power from the completed hydroelectric facilities will be somewhat in excess of six mills per kwh as compared with the cost to purchase additional power from the Pacific Gas and Electric Company of slightly more than eight mills per kwh. In order to meet the demand with the lowest cost and most reliable source of generation, the District began preliminary planning in 1965 for the construction of nuclear-fueled generating plants which are now estimated to be capable of meeting this requirement at a cost of less than six mills per kwh. From this beginning steady progress has been made and the Rancho Seco nuclear plant is now under construction on a 2,500-acre tract of land in the southeast part of Sacramento County. The cost of the first unit including initial loading of nuclear fuel is estimated at $310,000,000. The construction permit for this project was issued by the Atomic Energy Commission (AEC) in October 1968. The construction of the entire project is approximately 70% complete.

Following delays due to labor difficulties, late material delivery and revised design requirements, the District and its architect-engineer conducted a thorough review of the plant construction and start-up schedule. As a result of this review, the estimated commercial operation date for Rancho Seco has been delayed from May 1973 to October 1973. Because of existing power generating facilities and purchased power contracts, this will not impair the District's ability to serve its customers.

The District's Rancho Seco project is planned ultimately to consist of several nuclear generating units. Unit No. 1 will have a net generating capability of 900,000 kw when completed in late 1973. The following table shows the details of the $310,000,000 estimated total cost of Rancho Seco Unit No. 1:

| Feature | Amount |
|---|---|
| Land and land rights | $ 1,140,000 |
| Nuclear steam supply system | 38,000,000 |
| Structures and water supply | 36,000,000 |
| Nuclear fuel—first core | 29,000,000 |
| Mechanical and electrical installation | 42,000,000 |
| Turbine generator | 26,000,000 |
| Mechanical and electrical supply | 38,760,000 |
| Switchyard and transmission | 4,000,000 |
| Subtotal | $214,900,000 |
| Engineering and administration | 54,000,000 |
| Contingency | 12,600,000 |
| Interest during construction | 28,500,000 |
| Total | $310,000,000 |

Contracts with an aggregate cost in excess of $200,000,000 have been awarded. Among these contracts are the following:

| Description | Supplier/Contractor | Value of Contract |
|---|---|---|
| Nuclear Steam Supply System | The Babcock & Wilcox Company | $38,000,000 |
| Turbine Generator | Westinghouse Electric Corporation | 24,500,000 |
| Natural Draft Cooling Towers | Research-Cottrell, Inc. | 7,000,000 |
| Condenser | Westinghouse Electric Corporation | 2,000,000 |
| Major Buildings | C. H. Leavell Co.-Dravo Corporation | 20,000,000 |
| Electrical-Mechanical Installation | Bechtel Corporation | 42,000,000 |
| Reservoir | Lloyd J. Rodoni & Son | 1,000,000 |
| Nuclear Fuel | Utah International, Inc.<br>Allied Chemical Corporation<br>Atomic Energy Commission<br>The Babcock & Wilcox Company | 26,000,000 |
| Main Transformers | ASEA | 1,500,000 |
| Feedwater Heaters | Westinghouse Electric Corporation | 1,500,000 |
| Valves | Anchor Equipment Co. | 1,600,000 |
| Nuclear Service Cooling Units | CVI Corporation | 1,000,000 |

**Licensing and Environmental Considerations.** Rancho Seco No. 1 will be fueled with uranium and will utilize a pressurized water reactor in producing steam to drive a tandem-compound, four-flow turbine generator. The Bechtel Corporation, which has designed and supervised construction of similar plants in the United States and abroad, is the architect-engineer for this project.

Rancho Seco, meaning "dry ranch," is unusual in that it is located inland, far from any large body of water. Plant cooling for the first and all succeeding units will be accomplished by cooling towers which will derive make-up water from the Folsom South Canal, a part of the U. S. Bureau of Reclamation's Central Valley Project. The plant has been designed to minimize adverse environmental and ecological effects. No hydrocarbons, nitrous oxides or sulfur compounds will be emitted during normal operation as there is no combustion process in the nuclear steam cycle. Waste heat will not be discharged into an adjacent body of water, thereby eliminating the possibility of adverse thermal effects. The plant i

extremely well situated geologically and geographically, providing excellent safety with respect to earthquakes, flooding and ground settlement. The site is far removed from any densely populated areas and is 25 miles from downtown Sacramento.

The Final Safety Analysis Report was filed on May 1, 1971, with the Division of Reactor Licensing, Atomic Energy Commission, to obtain an operating license for Rancho Seco No. 1. The first of a series of preliminary meetings was held in late September 1971 to obtain approval for the license. The final review by the Advisory Committee On Reactor Safeguards is scheduled to be completed in early 1973 with the license to be granted shortly thereafter. The District plans to load the nuclear fuel in April 1973. In June 1971 the District filed with the AEC an Environmental Impact Statement related to Rancho Seco. This filing has been under review by the AEC and its contractors and no significant problems have developed.

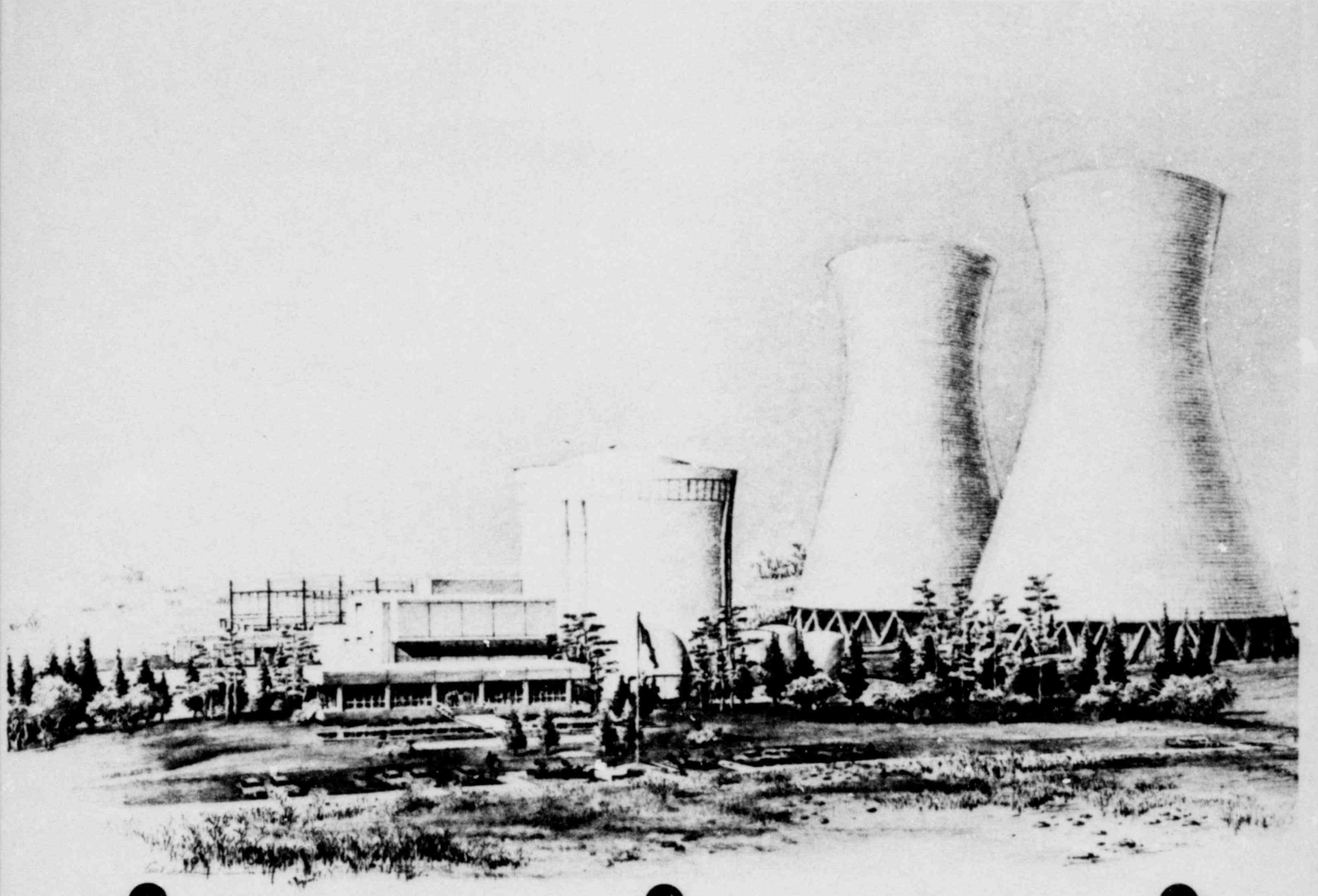
In accordance with the July 23, 1971, decision of the United States Court of Appeals for the District of Columbia *(Calvert Cliffs' Coordinating Committee, Inc. et al. v. United States Atomic Energy Commission, 2ERC1779)*, which directed a full review by the AEC of possible environmental impact in connection with the licensing of nuclear generating plants, including those under construction, the AEC has requested and the District has provided certain information, in accordance with procedures prescribed by the AEC. Following review of this material, the AEC, on November 26, 1971, authorized the District to continue construction of Rancho Seco No. 1. In the meantime the AEC will continue its environmental review. The regulations of the AEC published following the decision in *Calvert Cliffs'* provide that the AEC will, prior to issuing an operating license, prepare and issue a detailed statement on environmental considerations including a cost-benefit analysis evaluating the environmental effects of a nuclear facility and the alternatives available for reducing or avoiding adverse environmental effects, as well as the environmental, economic, technical and other benefits of the facility. Such analysis will consider the radiological effects together with the thermal effects and other environmental effects of the facility. Environmental standards to be applied by the AEC have not yet been fully developed and hence it is not possible at this time to anticipate what effect, if any, on the construction and operation of Rancho Seco No. 1 may result from regulatory action by the AEC.

## Nuclear Insurance

The District has in force multiple peril builder's risk coverage, including earthquake, on Rancho Seco No. 1 for its own protection and that of its prime contractors and their subcontractors of any tier. This coverage is in the amount of $100,000,000 provided by Nuclear Energy Property Insurance Association (NEPIA) and Mutual Atomic Energy Reinsurance Pool (MAERP). The District has obtained sufficient Fire and Extended Coverage Insurance in excess of this $100,000,000 to adequately cover the present values at risk. Upon arrival of nuclear fuel at the site, the nuclear risk exclusion will be removed from the NEPIA and MAERP policies. When the plant becomes operational, NEPIA/MAERP will issue policies of insurance in the amount of $100,000,000 with the District being the sole named insured.

Additionally, not later than arrival of nuclear fuel at the Rancho Seco site, the District will have acquired from Nuclear Energy Liability Insurance Association (NELIA) a policy of third-party liability insurance with limits of at least $1,000,000. This is a requirement of the Atomic Energy Commission (AEC). Concurrently, the District will receive from the AEC an indemnity issued pursuant to the Price-Anderson Act.

When the AEC issues an operating license for Rancho Seco, the indemnity agreement will be amended to require the District to acquire the maximum amount of nuclear public liability insurance for third-party personal injury and property damage available from NELIA and from Mutual Atomic Energy Liability Underwriters (MAELU). NELIA and MAELU presently offer coverage totaling $95,000,000. The indemnity available under the Price-Anderson Act is now $465,000,000, which is in excess of the $95,000,000 of third-party liability coverage offered by NELIA/MAELU.

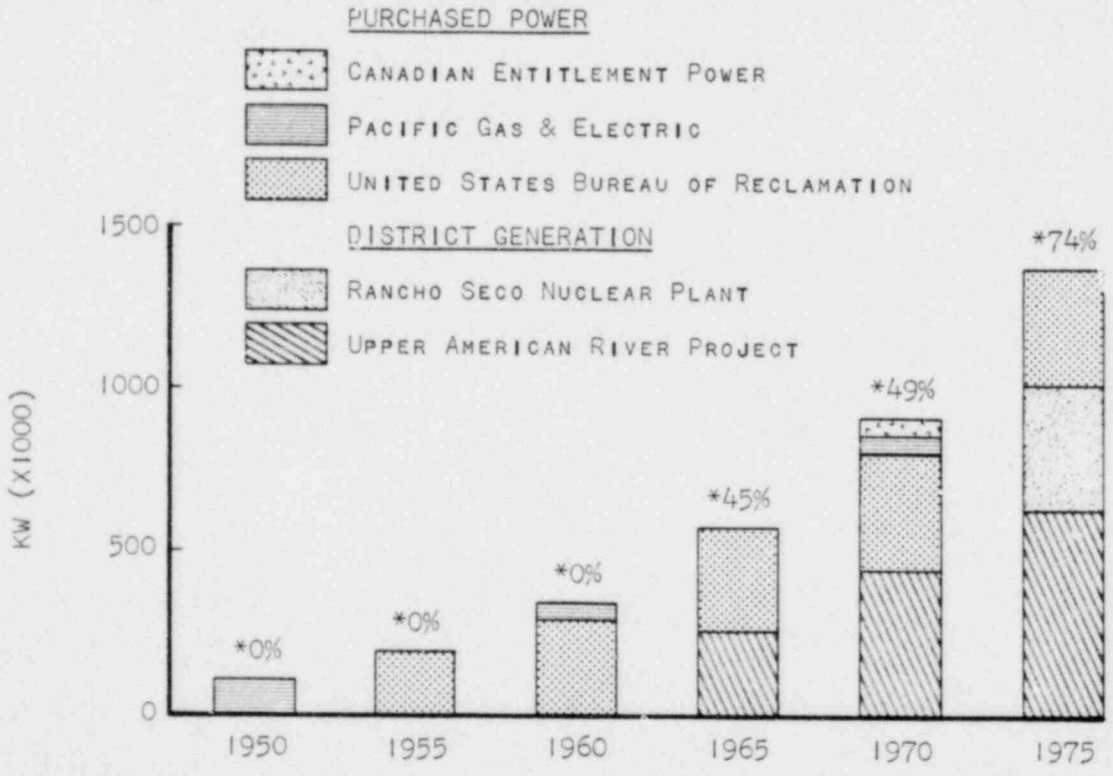


## Transmission and Distribution Facilities

The District's transmission system supplies power to the distribution network through 230,000-volt connections at four separate points. The District's transmission system interconnects its own generating facilities with two other sources, the Pacific Gas and Electric Company and the U. S. Bureau of Reclamation. There is an extensive grid of 69,000-volt subtransmission loops supplying many relatively small, modern, unit-type substations at strategic load centers. This grid services the rural and suburban distribution system while the three downtown underground secondary networks are served by 12,000-volt feeders emanating from two separate 115,000-volt sources, thereby providing the utmost in service reliability. The urban and rural overhead and underground systems are served from 21,000-volt and 12,000-volt distribution facilities, with nearly all new construction being placed underground.

Average annual system losses from point of receipt of power to ultimate consumer have decreased from 10.9% in the first five-year period, 1947-51, to 6.2% in 1971. This attests to the efficiency of the modern, integrated system as developed from the heterogeneous antiquated plant facilities acquired in 1947. This reduction in losses has been accomplished during a period of tremendous growth in power usage. The peak system demand recorded in 1947, the first year of operations, was 76,857 kw which can be compared with the peak in 1971 of 1,020,389 kw. Forecasts indicate a doubling of this peak load in the next nine years and another doubling in the following period of like duration.

**SOURCES OF POWER**




*District Generation as % of District Load.

## Purchased Power Agreements

In 1954 the original agreement with the predecessor owner of the distribution system, the Pacific Gas and Electric Company (PG&E), was terminated and the District contracted with the Central Valley Project (CVP) of the U. S. Bureau of Reclamation for the purchase of power effective for a term of 40 years but terminable prior to that time by the District under certain conditions. Rates (subject to 10% discount) are $0.75 per month per kw of billing demand plus four mills per kwh for the first 130 kwh per kw of billing demand, three mills for the next 130 kwh per kw of billing demand, and two

mills per kwh for all additional energy, with a minimum monthly charge of $1 per kw of contract demand for firm power. The CVP commitment is regulated by the District's load but is not to exceed 290,000 kw at system load factor. According to contract terms, rates are now firm until 1974 and are subject to review every five years thereafter. Since the inception of the contract, the price of CVP power has approximated four mills per kwh. This contract precludes the Federal Government from serving any other electric customer in the District's service area.

In addition the District has purchased 70,000 kw of CVP power under the same general terms and conditions as the basic 290,000 kw except that it is subject to withdrawal on a 17-month notice. However, the possibility of such withdrawal appears remote.

A 16-year contract negotiated in 1966 with PG&E (superseding previous contracts) provides primarily for coordinated operation of available power sources, but also provides for the purchase of up to 300,000 kw of firm demand. Rates under this contract are $1.65 per kw per month plus a base rate of 3.35 mills per kwh, subject to adjustment according to the fluctuation of natural gas prices.

An extra high voltage (EHV) transmission contract was negotiated in 1967 with the California Power Pool (comprising PG&E, Southern California Edison Company and San Diego Gas and Electric Company) which has recently placed in service EHV transmission lines linking the Pacific Northwest and California. This contract provides the District with 200,000 kw of intertie capacity available on a long-term basis with an additional 200,000 kw for the years 1971 through 197-.

The intertie capacity is being used to transmit power purchased pursuant to the Canadian Entitlement Exchange Agreement up to a firm demand of 172,000 kw which, at a load factor of 68%, costs the District approximately 4.5 mills per kwh including all losses and transmission charges. It also can be used to deliver surplus peaking capacity and surplus energy which may be available from the Pacific Northwest. The terms and conditions of such purchases are covered in a 20-year contract executed with the Bonneville Power Administration in 1967. Thus far the District has purchased only surplus energy. This has been available at the favorable price of approximately 2.6 mills per kwh delivered to Sacramento.

A power sale, exchange and integration agreement with PG&E was executed in June 1970. Unless extended, it will expire January 1, 1993. This contract provides that when Rancho Seco No. 1 becomes operable, its generation, along with the District's hydro generation, will be integrated into the Northern California power system. A principal feature of the contract is that the parties agree to share reserves so that when there is an outage of the District's generation or transmission facilities, the resources of the entire interconnected system are available to meet loads. This will be especially important when Rancho Seco No. 1 is taken off the line annually for refueling. Another important feature of the contract is that PG&E has agreed to purchase all capacity and energy produced by the District which is surplus to its requirements. This will enable the District to operate its nuclear plant at a very high load factor so that the cost per kwh can be held to a minimum. This power sale, exchange and integration agreement will supersede the 1966 contract with PG&E at the time Rancho Seco No. 1 becomes commercially operable.

The Northern California Power Agency (NCPA), a public agency created by a joint powers agreement among 11 small Northern California cities, has filed a complaint before the Federal Power Commission alleging that this contract is in violation of the antitrust laws. NCPA has also petitioned the Atomic Energy Commission, on the basis of the same allegations, for leave to intervene in the proceeding through which the District is seeking an operating license for its Rancho Seco No. 1 nuclear generating unit. The chief objective of NCPA, according to the pleadings it has filed before the Federal Power Commission and the Atomic Energy Commission, is to obtain the ability to participate with the District in the second thermal generating unit constructed by the District. Even if NCPA's arguments are accepted by the Commissions and the courts, the resulting modifications of the contract would not alter the business forecast presented in this statement.

The PG&E is an operating investor-owned utility engaged principally in the business of supplying electric and natural gas services throughout most of Northern and Central California, a territory with an estimated population of 8,225,000. The PG&E serves over 2,676,000 electric customers and 2,318,000 gas customers. During 1971 its total operating revenues were $1.34 billion. As of December 31, 1971, its total capitalization was $4.3 billion.

## Rates and Charges

The Board of Directors has full power to establish rates charged for all District services, and such rates are not subject to review or regulation by any other governmental agency, either Federal or State, other than regulations issued under the Economic Stabilization Act of 1970, as amended.

The policy of the Board of Directors is to furnish District customers reliable electric service at the lowest possible rates consistent with sound and prudent business practices which will always maintain a high level of financial stability and credit. In conformity with this policy, the District's management is constantly endeavoring to develop ways to improve service, to lower costs of construction, operation and maintenance and to adjust service rates to levels which are reasonably compensable.

On May 8, 1972, the District's Board of Directors enacted a 9.7% rate increase to become effective June 29, 1972. This increase was necessary due to the continued inflationary trend and the increased costs of borrowing money for its capital expenditure program. This was the third rate increase in the District's 24-year history, compared with five rate reductions during the same period.

Despite this increase, rates within the District remain highly competitive. Charges in effect in adjoining communities served by private utilities are, in general, 30% higher than District rates to become effective June 29, 1972. The ensuing table sets forth charges in certain typical categories for the District and the neighboring territory. This comparison reflects, in addition to the difference in operations, the fact that the District is not subject to Federal or State taxes on income or, in most cases, to local ad valorem taxes, and that interest on District bonds is exempt from Federal income taxes and California personal income taxes. The District is, however, required to add and collect a city use tax of 5% on practically all bills for service within the Sacramento city limits.

**RESIDENTIAL SERVICE**

| | Monthly Energy KWH | District Charge (effective June 29, 1972) | Charge in Neighboring Territory | Percent Charge in Neighboring Territory Exceeds District |
|---|---|---|---|---|
| Urban Areas | 250 | $ 6.30 | $ 7.42 | 17.8% |
| | 500 | 9.37 | 11.30 | 20.6 |
| | 1,000 | 14.00 | 18.94 | 35.3 |
| Rural Areas | 250 | 6.30 | 9.67 | 53.5 |
| | 500 | 9.37 | 13.55 | 44.6 |
| | 1,000 | 14.00 | 21.19 | 51.4 |

**COMMERCIAL-INDUSTRIAL SERVICE**

| | Monthly Demand KW | Monthly Energy KWH | District Charge (effective June 29, 1972) | Charge in Neighboring Territory | Percent Charge in Neighboring Territory Exceeds District |
|---|---|---|---|---|---|
| Urban Areas | 6 | 750 | $ 19.40 | $ 28.47 | 46.8% |
| | 12 | 1,500 | 33.65 | 52.44 | 55.8 |
| | 75 | 15,000 | 269.65 | 342.37 | 27.0 |
| | 75 | 30,000 | 418.15 | 500.98 | 19.8 |
| | 300 | 60,000 | 920.43 | 1,024.28 | 11.3 |
| | 300 | 120,000 | 1,287.09 | 1,553.68 | 20.7 |
| | 1,000 | 200,000 | 2,750.34 | 3,180.19 | 15.6 |
| | 1,000 | 400,000 | 3,836.74 | 4,729.34 | 23.3 |
| Rural Areas | 6 | 750 | 19.40 | 39.62 | 104.2 |
| | 12 | 1,500 | 33.65 | 70.09 | 108.3 |
| | 75 | 15,000 | 269.65 | 345.12 | 28.0 |
| | 75 | 30,000 | 418.15 | 500.98 | 19.8 |
| | 300 | 60,000 | 920.43 | 1,024.28 | 11.3 |
| | 300 | 120,000 | 1,287.09 | 1,553.68 | 20.7 |
| | 1,000 | 200,000 | 2,750.34 | 3,180.19 | 15.6 |
| | 1,000 | 400,000 | 3,836.74 | 4,729.34 | 23.3 |

The average residential customer of the District in 1971 used 7,928 kwh of energy as compared with the estimated national average for residential use of 7,380 kwh as shown in Edison Electric Institute reports. Residential customers of the District paid an average of 1.45¢ per kwh during 1971, or 34% less than the national residential average of 2.19¢ per kwh, as reported by the Edison Electric Institute.

A stabilizing influence in the District's revenue is that a greater than average proportion is derived from residential customers and a less than average share from commercial and industrial consumption, which is normally more sensitive to economic fluctuation.

| | Percent of Total Sales, 1971 | |
|---|---|---|
| | District | National Average* |
| Residential Sales | | |
| KWH | 44.2% | 32.7% |
| Revenue | 48.9 | 42.4 |
| Commercial and Industrial Sales | | |
| KWH | 55.0 | 63.2 |
| Revenue | 50.0 | 53.4 |

*Estimate—Edison Electric Institute statistics for residential, commercial and industrial sales only. This does not add to 100% because certain classes of sales are not included.

Another factor in the stability of the District's sales is the fact that 25% to 30% of commercial and industrial revenue is derived from State and Federal government offices and from Federal military installations classified as permanent.

The District's two largest customers are the State of California and McClellan Air Force Base. The following table shows the electric energy sold to and revenues derived from these two customers and several other major commercial-industrial customers for 1971:

| | 1971 | |
|---|---|---|
| | KWH (in thousands) | Amount |
| State of California | 148,115 | $1,240,516 |
| McClellan Air Force Base | 124,925 | 959,495 |
| Key Fibre Company | 40,229 | 297,050 |
| Campbell Soup Company | 37,362 | 254,990 |
| Broadway-Hale Stores, Inc. | 22,465 | 203,094 |
| The Proctor & Gamble Mfg. Company | 22,324 | 177,564 |
| The Southern Pacific Company | 11,863 | 106,915 |

# THE AREA SERVED

The District is the sole distributor of electric power within an area of 656 square miles in Central California, serving one of the wealthiest and fastest growing areas of the State. Per capita wealth in Sacramento County is 5.9% above the national average. Sales Management, Inc.,① has placed the 1970 per household effective buying income for Sacramento County at $11,191 compared with the national average of $10,565.

The service area includes the State capital, Sacramento, the populous areas principally to the northeast and south of the city and the productive farm lands to the north and south. Sacramento is located 85 miles northeast of San Francisco and is the seventh largest city in California.

The District's electric system supplies power to a population of about 650,000 whose requirements were over 3.7 billion kwh for the 12 months ended April 30, 1972. While almost one-third of the land area of Sacramento County lies outside the District, this portion consists principally of the sparsely populated eastern section in the Sierra Nevada foothills. The District serves an estimated 98% of the population of Sacramento County and includes 90% of the County's assessed valuation.

① 1971, Sales Management Survey of Buying Power; further reproduction is forbidden.

## Sacramento County Growth Statistics

Sacramento enjoys great natural economic advantages by virtue of its proximity to raw materials in the form of minerals, timber and agricultural products. An abundant supply of low-cost water is also present. Moreover, the city is strategically located with respect to transportation for all Northern and Central California. Virtually all transcontinental shipments, both rail and truck, originating in or destined for the San Francisco Bay Area, are routed through Sacramento. Major highway and rail routes running east and west intersect at Sacramento with principal north-south arteries serving the rich central valleys of California and extending northward into Canada and southward to the Mexican border. International shipments are handled through the deepwater Port of Sacramento. Sacramento has long been a vital transshipment point for produce and manufactured goods of all kinds, and a wholesale and distributing center for a large variety of farm and home products in the surrounding counties.

The development of the area is shown in the following statistics compiled for Sacramento County by the Sacramento Metropolitan Chamber of Commerce:

**POPULATION**

| Year | Census Data | Percent Increase |
|---|---|---|
| 1920 | 91,029 | |
| 1930 | 141,999 | 56% |
| 1940 | 170,333 | 20 |
| 1950 | 277,140 | 63 |
| 1960 | 502,778 | 81 |
| 1970 | 631,498 | 26 |

**UTILITY CONNECTIONS AND USAGE**

| Year | Electric Customers District Area (Annual Average) | KWH to Customers (in thousands) | Number of Gas Meters | Telephone Stations |
|---|---|---|---|---|
| 1962 | 172,876 | 1,747,520 | 160,796 | 287,302 |
| 1963 | 180,021 | 1,910,521 | 169,770 | 300,100 |
| 1964 | 187,548 | 2,185,203 | 176,442 | 324,917 |
| 1965 | 193,363 | 2,416,024 | 181,471 | 339,355 |
| 1966 | 199,058 | 2,706,137 | 185,810 | 360,950 |
| 1967 | 203,632 | 2,899,350 | 188,975 | 373,340 |
| 1968 | 208,233 | 3,105,619 | 193,681 | 386,670 |
| 1969 | 213,384 | 3,306,776 | 197,812 | 397,754 |
| 1970 | 220,544 | 3,391,191 | 202,882 | 413,140 |
| 1971 | 229,394 | 3,650,037 | 208,634 | 427,615 |
| Percent Increase 1971 over 1962 | 33% | 109% | 30% | 49% |

**BUILDING ACTIVITY, ASSESSED VALUATION AND BANK DEBITS**

| Year | New Residential Construction All Units | Value of All Building Permits† | Sacramento County Net Assessed Valuation* (in thousands) | Sacramento Metropolitan Statistical Area Bank Debits (in thousands) |
|---|---|---|---|---|
| 1962 | 7,626 | $144,796,876 | $ 915,038 | $17,989,792 |
| 1963 | 12,119 | 172,679,515 | 973,121 | 18,113,568 |
| 1964 | 6,759 | 138,291,887 | 1,050,087 | 21,192,689 |
| 1965 | 5,009 | 114,891,338 | 1,114,568 | 24,722,637 |
| 1966 | 3,234 | 106,433,682 | 1,181,660 | 32,623,646 |
| 1967 | 4,038 | 107,004,219 | 1,180,919 | 38,888,610 |
| 1968 | 4,840 | 105,621,399 | 1,206,663 | 42,579,021 |
| 1969 | 6,528 | 133,183,468 | 1,214,871** | 47,717,806 |
| 1970 | 8,875 | 166,414,140 | 1,240,253** | 51,761,434 |
| 1971 | 10,881 | 227,440,296 | 1,340,045** | 58,483,681 |

†Does not include cities of Galt, Folsom or Isleton.
*For fiscal year beginning July 1.
**Does not include homeowners' or business inventory exemptions.

## Food Production and Processing

Sacramento is the center of a vital food packing, processing and canning industry serving an area whose annual agricultural output approximates $500,000 000, with Sacramento County alone contributing about one-sixth of the total.

Agriculture throughout the area is highly diversified and, in many areas, intensive. Important crops include rice, sugar beets, tomatoes, corn, grain, almonds, walnuts, hops, olives and berries. Livestock and dairy products constitute a large segment of total farm income, particularly in Sacramento County.

The food processing industry is the second largest employer of manufacturing workers in the Sacramento metropolitan area. The principal companies in the food processing industry include California Almond Growers Exchange, Campbell Soup Company, Del Monte Corporation, Libby, McNeill & Libby and Sacramento Foods Division of Bordens Foods.

## Transportation

The location of Sacramento at the foot of the Sierra Nevada and its vital place in the transcontinental railroad system resulted in the early establishment of extensive railroad maintenance and equipment construction yards. These, together with the more recent truck maintenance and repair stations serving long-distance freight lines, afford another important and stable source of employment in the area. Switchyards and depots of the Southern Pacific and the Western Pacific railroads are located in Sacramento, which is also served by a line connecting with the Santa Fe. The Southern Pacific maintains in Sacramento the largest railroad shops west of the Mississippi.

In 1963 the completion of the Port of Sacramento and the associated 90-mile deepwater channel to San Francisco Bay added a new link to Sacramento's extensive rail, highway and air transport facilities by permitting ocean-going vessels to reach Sacramento. The Port provides modern general cargo and bulk storage facilities to allow economical handling of waterborne cargo. In addition, it provides five berths for ocean-going ships, two barge slips, three transit sheds, two gantry cranes and specialized handling equipment. In 1971 the Port handled 1.33 million tons of cargo carried on 137 vessels and valued at $143,762,000.

The new Sacramento Metropolitan Airport is served by four major airlines and one commuter airline offering direct flights to all principal West Coast cities, in addition to Las Vegas, Denver, Salt Lake City and Chicago and one-stop flights to nearly all other major U.S. cities. Airline traffic during 1971 included over 1,450,000 passengers, 7 million pounds of freight and 8 million pounds of mail.

At the crossroads of transportation for California, Sacramento's strategic location, midway between Seattle, Washington, and San Diego, California, offers industries overnight delivery to over one-tenth of the nation's population. At the junction of four major freeway systems, with a new metropolitan airport, three transcontinental rail carriers, and a deepwater port, Sacramento is ideally suited as a major distribution center.

## Other Industry

Sacramento is a center for the manufacture and repair of farm equipment and machinery and the production of fertilizers, insecticides, animal fodder and other farm supplies. Building materials and equipment constitute another important sector of the Sacramento industrial economy. In recent years these long-established activities have been supplemented by chemical and aerospace developments. Industrial establishments located within and adjacent to the District's service area include McDonnell-Douglas Astronautics Company, Aerojet-General Corporation and Union Carbide Corporation.

A large Air Force base located within the District's service area at McClellan Field serves as an engineering center and supply depot for aircraft parts, as inventory manager for space vehicles, their test equipment, heavy radar, ballistic missiles and airborne weapons systems. McClellan also functions as the Sacramento Air Materiel Area, one of the five active subcommands of the Air Force Logistics Command. Two other major military establishments, Mather Field (a B-52 base of the Strategic Air Command) and the Sacramento Army Depot, contribute extensively to employment and residential power sales within the service area.

The tourist industry is gaining in importance in the Sacramento area with some 111,517 delegates attending 291 conventions in Sacramento during 1971, accounting for over $13,939,000 of revenue for the area.

Manufacturing and wholesaling establishments in the Sacramento metropolitan area include nine plants with 1,000 or more employees each, four with between 500 and 999, forty with between 100 and 499, fifty-eight with between 50 and 99 and sixty-five with between 30 and 49.

## Educational and Recreational Facilities

The Sacramento area has a number of colleges and universities with a total enrollment of over 50,000.

The University of California-Davis, established in 1905, presently serves approximately 14,000 students and offers courses in agriculture, physical sciences, arts and sciences, medicine and law. It is anticipated that by 1980, after completion of the new School of Administration, the University will have a total enrollment of 18,000 and 12,000 faculty, staff and research members.

Sacramento State College, which began operation in 1953, has an enrollment of 17,500. The College offers extensive curriculums in liberal arts and science programs and is widely recognized for its superior programs in education for the teaching profession and for business administration. Graduate study is also offered for master of arts, master of science and master of business administration degrees. By 1978 the enrollment is expected to reach 22,500. This growth should have considerable impact on housing requirements in the area since approximately 95% of the students live in off-campus houses and apartments.

The Los Rios and Sierra Junior College Districts are important in meeting the educational needs of the Sacramento metropolitan area. The four campuses of the Los Rios Junior College District now have an enrollment approximating 20,000 with projections that by 1975 there will be five campuses with a total enrollment of 24,000. The Sierra Junior College, at its modern $3,500,000 campus, had a fall 1971 enrollment of 4,500 with plans for a future student body of 5,000.

Sacramento's proximity to the nearby Sierra Nevada and the Pacific Ocean, as well as its museums, art galleries, theaters and symphony orchestra, provides diversified recreational and cultural facilities for its residents and visitors.

## Other Activities

Numerous offices of State and Federal governments and their agencies are located in the metropolitan area of California's capital—Sacramento. These governments employ over 109,000, more than one-third of the County's work force. The State of California alone employs 28,700 with an annual payroll approximating $225,000,000.

The Sacramento Redevelopment Agency is presently engaged in three urban renewal projects in the downtown area. Over $198,000,000 will be expended on new construction for the 14-block Capitol Mall Project, the 10¼-block Capitol Mall Extension Project, and the 40-block Capitol Mall Riverfront Project which incorporates the Old Sacramento development, Chinatown development, heavy commercial corridor, residential area, and an arts and cultural center. The Agency has under construction the Del Paso Heights Neighborhood Development Program in a residential poverty area. The Program will ultimately include a 1,000-acre master plan development. The first eight-block target project of the Program is complete, and the Agency has started development of the second eight-block project.

New construction of $56,000,000 has been completed on the Capitol Mall Project. Completed projects include the IBM Office Building, Wells Fargo Bank Building, Crocker National Bank Building, Capitol Towers and Garden Apartments, Macy's department store, Convenience Shopping Center, Sacramento Savings and Loan Association Building, State Mental Hygiene Building, McKeon Office Building, Bank of America Building, Federal Building, one of the Twin Plaza Towers, and others. An additional $14,000,000 of new construction on the Twin Plaza Towers complex and for a separate multi-story garage is scheduled for completion in June 1973.

The first completed major building in the Capitol Mall Extension Project was The Sacramento Union newspaper's $6,000,000 plant and offices. The first phase of the $50,000,000 Downtown Plaza Properties Project recently opened and now provides extensive commercial and retail facilities. A $4,500,000 parking structure has been completed as has one of the two major high-rise office buildings to be included in this project.

Planning has been completed and construction started on many portions of the 40-block Capitol Mall Riverfront Project. One of these is the Old Sacramento area in which buildings which have stood since the 1850s are presently being reconstructed. This historic area with beaches and parks along the riverfront will feature 80 authentic buildings from the "gold rush" days containing museums, gift shops, restaurants and offices. Land acquisition for the remainder of the project has been completed with over $59,000,000 in construction expenditures scheduled for the total project.

Construction is nearly complete on the $11,000,000 Chinatown which will include landscaped walks and courtyards centered around the existing Confucius Temple. Included is the 12-story Wong Center containing 187 apartment units and commercial space.

In 1970 downtown merchants, in cooperation with the City of Sacramento, completed and dedicated a seven-block, $2,200,000 "Downtown Plaza". This project, 85% of which was financed by assessments on those properties which front the mall, includes fountains, waterfalls, grass areas, trees, playgrounds and decorative lighting and paving. This connects a previously established three-block mall with the recently started $18,000,000 "Downtown Community Center" which will cover a two-block area and provide convention facilities with a 2,300-seat theater, a 50,000-square-foot exhibit hall and auxiliary facilities.

Many new business establishments have been completed and are operating in the heavy commercial corridor. These consist primarily of warehouses, garages and wholesale distributorships.

Eight hundred fifty residential townhouses and garden apartments have been completed as part of the residential community planned for the downtown area. Three hundred fifty residential units are presently under construction in or around the downtown area.

A large regional shopping center northeast of Sacramento, containing 1.25 million square feet of electrically heated and air-conditioned space, opened in early 1972. This shopping center represents a total investment of about $90,000,000 with four major department stores and 100 smaller shops.

Exhibit A(1)

# SACRAMENTO MUNICIPAL UTILITY DISTRICT

## STATEMENTS OF NET REVENUE

### Ten-Year Comparison

*(thousands of dollars)*

| | Twelve Months Ended April 30, 1972 | 1971 | 1970 | 1969 | 1968 | 1967 | 1966 | 1965 | 1964 | 1963 |
|---|---|---|---|---|---|---|---|---|---|---|
| Total Operating Revenues | $49,448 | $47,675 | $41,277 | $39,824 | $37,599 | $35,866 | $33,595 | $31,721 | $30,885 | $27,937 |
| Operating Expenses: | | | | | | | | | | |
| Operation— | | | | | | | | | | |
| Purchased Power | $ 8,874 | $ 8,661 | $ 8,396 | $ 6,158 | $ 9,530 | $ 6,894 | $ 9,107 | $ 6,015 | $ 6,879 | $ 6,946 |
| Hydraulic Generation | 638 | 577 | 459 | 472 | 384 | 345 | 282 | 262 | 212 | 171 |
| Transmission and Distribution | 2,262 | 2,153 | 1,883 | 1,581 | 1,366 | 1,223 | 1,135 | 1,307 | 1,266 | 1,249 |
| Customer Accounts | 1,811 | 1,756 | 1,607 | 1,441 | 1,437 | 1,582 | 1,377 | 1,286 | 1,175 | 1,140 |
| Sales | 909 | 970 | 1,086 | 1,063 | 956 | 874 | 771 | 756 | 704 | 641 |
| Administrative and General | 2,689 | 2,559 | 2,218 | 1,829 | 1,607 | 1,527 | 1,365 | 1,318 | 1,345 | 1,164 |
| Total Operation | $17,183 | $16,676 | $15,649 | $12,546 | $15,280 | $12,445 | $14,037 | $10,944 | $11,581 | $11,311 |
| Maintenance | 3,425 | 3,205 | 3,185 | 2,435 | 1,827 | 1,627 | 1,440 | 1,322 | 1,245 | 1,000 |
| Provision for Depreciation | 6,881 | 6,483 | 6,000 | 5,748 | 5,421 | 4,558 | 4,452 | 4,496 | 4,343 | 3,657 |
| Taxes | 210 | 215 | 166 | 255 | 279 | 264 | 242 | 186 | 140 | 100 |
| Total Operating Expenses | $27,699 | $26,579 | $25,000 | $20,984 | $22,807 | $18,894 | $20,171 | $16,948 | $17,309 | $16,068 |
| Net Operating Revenue | $21,749 | $21,096 | $16,277 | $18,840 | $14,792 | $16,972 | $13,424 | $14,773 | $13,576 | $11,869 |
| Other Income | 11,036 | 10,098 | 7,048 | 3,550 | 3,089 | 3,460 | 4,044 | 2,770 | 1,649 | 2,157 |
| Gross Income | $32,785 | $31,194 | $23,325 | $22,390 | $17,881 | $20,432 | $17,468 | $17,543 | $15,225 | $14,026 |
| Income Deductions: | | | | | | | | | | |
| Interest on Long-Term Debt (Net) | $14,964 | $12,983 | $ 7,985 | $ 5,254 | $ 5,201 | $ 5,361 | $ 5,516 | $ 5,209 | $ 4,916 | $ 4,652 |
| Amortization of Bond Premium, Bond Redemption Premium, Discount and Expense, Net | 125 | 122 | 103 | 45 | 43 | 36 | 30 | (16) | (139) | (150) |
| Total Income Deductions | $15,089 | $13,105 | $ 8,088 | $ 5,299 | $ 5,244 | $ 5,397 | $ 5,546 | $ 5,193 | $ 4,777 | $ 4,502 |
| Net Revenue | $17,696 | $18,089 | $15,237 | $17,091 | $12,637 | $15,035 | $11,922 | $12,350 | $10,448 | $ 9,524 |

# SACRAMENTO MUNICIPAL UTILITY DISTRICT

## FINANCIAL STATISTICS

### Ten-Year Comparison

*(thousands of dollars)*

| | Twelve Months Ended April 30, 1972 | 1971 | 1970 | 1969 | 1968 | 1967 | 1966 | 1965 | 1964 | 1963 |
|---|---|---|---|---|---|---|---|---|---|---|
| Debt Service | | | | | | | | | | |
| Net Revenue Available for Debt Service | $ 32,580 | $ 31,559 | $ 25,978 | $ 27,162 | $ 25,920 | $ 27,404 | $ 23,924 | $ 23,645 | $ 19,256 | $ 16,770 |
| Debt Service Requirements— | | | | | | | | | | |
| Principal | $ 6,098 | $ 5,898 | $ 5,759 | $ 4,676 | $ 4,549 | $ 4,377 | $ 4,251 | $ 1,295 | $ 1,256 | $ 1,236 |
| Interest | 14,900 | 12,919 | 7,919 | 5,585 | 8,311 | 8,469 | 8,624 | 7,519 | 4,844 | 4,579 |
| Total | $ 20,998 | $ 18,817 | $ 13,678 | $ 10,261 | $ 12,860 | $ 12,846 | $ 12,875 | $ 8,814 | $ 6,100 | $ 5,815 |
| Times Interest Coverage | 2.2 | 2.4 | 3.3 | 4.9 | 3.1 | 3.2 | 2.8 | 3.1 | 4.0 | 3.7 |
| Times Debt Service Coverage | 1.6 | 1.7 | 1.9 | 2.6 | 2.0 | 2.1 | 1.9 | 2.7 | 3.2 | 2.9 |
| Balance Sheet Items | | | | | | | | | | |
| Electric Utility Plant | | | | | | | | | | |
| Production | $183,879 | $183,873 | $147,603 | $144,993 | $145,089 | $100,473 | $100,363 | $101,920 | $ 96,882 | $ 95,913 |
| Transmission and Distribution | 143,265 | 140,682 | 125,081 | 119,270 | 113,828 | 102,537 | 95,605 | 97,427 | 91,765 | 86,013 |
| General | 16,314 | 16,185 | 13,713 | 13,282 | 12,552 | 12,154 | 11,445 | 11,037 | 10,907 | 9,710 |
| Construction Work in Progress | 190,753 | 161,571 | 107,974 | 60,328 | 24,707 | 62,760 | 50,746 | 31,564 | 19,902 | 10,210 |
| Nuclear Fuel | 19,579 | 14,979 | — | — | — | — | — | — | — | — |
| Total | $553,790 | $517,290 | $394,371 | $337,873 | $296,176 | $277,924 | $258,159 | $241,948 | $219,456 | $201,886 |
| Reserve for Depreciation | $ 53,182 | $ 51,200 | $ 46,216 | $ 41,683 | $ 36,853 | $ 32,009 | $ 28,435 | $ 24,657 | $ 20,689 | $ 17,462 |
| Capitalization | | | | | | | | | | |
| Long-Term Debt | $365,252 | $340,565 | $206,908 | $154,921 | $160,805 | $165,616 | $170,308 | $174,835 | $146,944 | $136,403 |
| Customers' Equity | $193,063 | $188,738 | $170,648 | $155,411 | $138,321 | $125,684 | $110,648 | $ 98,726 | $ 86,376 | $ 75,928 |
| Percent Long-Term Debt | 65.4 | 64.3 | 54.8 | 49.9 | 53.8 | 56.9 | 60.6 | 63.9 | 63.0 | 64.2 |
| Percent Customers' Equity | 34.6 | 35.7 | 45.2 | 50.1 | 46.2 | 43.1 | 39.4 | 36.1 | 37.0 | 35.8 |

Exhibit A(3)

# SACRAMENTO MUNICIPAL UTILITY DISTRICT

## OPERATING STATISTICS

### Ten-Year Comparison

| | Twelve Months Ended April 30, 1972 | 1971 | 1970 | 1969 | 1968 | 1967 | 1966 | 1965 | 1964 | 1963 |
|---|---|---|---|---|---|---|---|---|---|---|
| Customers at End of Period | | | | | | | | | | |
| Residential | 212,061 | 207,712 | 199,100 | 191,514 | 186,505 | 181,814 | 177,725 | 172,776 | 167,656 | 161,533 |
| Commercial and Industrial | 26,178 | 25,718 | 25,113 | 24,644 | 24,243 | 23,592 | 23,432 | 23,162 | 22,668 | 21,892 |
| Other | 705 | 698 | 466 | 250 | 228 | 209 | 199 | 174 | 183 | 171 |
| Total | 238,944 | 234,128 | 224,679 | 216,408 | 210,976 | 205,615 | 201,356 | 196,112 | 190,507 | 183,596 |
| KWH Sales (in thousands) | | | | | | | | | | |
| Residential | 1,649,199 | 1,611,792 | 1,437,918 | 1,354,488 | 1,202,511 | 1,171,195 | 1,021,223 | 922,256 | 863,183 | 785,005 |
| Commercial and Industrial | 2,059,671 | 2,007,620 | 1,926,778 | 1,926,232 | 1,879,166 | 1,705,403 | 1,663,890 | 1,474,096 | 1,303,651 | 1,108,322 |
| Other | 31,398 | 30,625 | 26,495 | 26,056 | 23,942 | 22,752 | 21,024 | 19,672 | 18,369 | 17,194 |
| Total | 3,740,268 | 3,650,037 | 3,391,191 | 3,306,776 | 3,105,619 | 2,899,350 | 2,706,137 | 2,416,024 | 2,185,203 | 1,910,521 |
| Source of Electric Energy Sold KWH (in thousands) | | | | | | | | | | |
| Generated by District | 1,702,795 | 1,664,528 | 1,893,027 | 2,546,344 | 1,121,252 | 1,331,779 | 785,400 | 1,483,597 | 788,121 | 543,995 |
| Purchased from Others | 2,301,757 | 2,240,277 | 1,737,889 | 981,575 | 2,204,914 | 1,786,336 | 2,135,910 | 1,124,540 | 1,577,951 | 1,547,587 |
| Total | 4,004,552 | 3,904,805 | 3,630,916 | 3,527,919 | 3,326,166 | 3,118,115 | 2,921,310 | 2,608,137 | 2,366,072 | 2,091,582 |
| Less System Losses | 264,284 | 254,768 | 239,725 | 221,143 | 220,547 | 218,765 | 215,173 | 192,113 | 180,869 | 181,061 |
| Total | 3,740,268 | 3,650,037 | 3,391,191 | 3,306,776 | 3,105,619 | 2,899,350 | 2,706,137 | 2,416,024 | 2,185,203 | 1,910,521 |
| Operating Revenues (in thousands) | | | | | | | | | | |
| Residential | $ 24,130 | $ 23,302 | $ 19,711 | $ 18,692 | $ 17,178 | $ 16,859 | $ 15,323 | $ 14,225 | $ 14,006 | $ 12,989 |
| Commercial and Industrial | 24,732 | 23,815 | 21,103 | 20,688 | 20,003 | 18,609 | 17,909 | 17,171 | 16,584 | 14,672 |
| Other | 586 | 558 | 463 | 444 | 418 | 398 | 363 | 325 | 295 | 276 |
| Total | $ 49,448 | $ 47,675 | $ 41,277 | $ 39,824 | $ 37,599 | $ 35,866 | $ 33,595 | $ 31,721 | $ 30,885 | $ 27,937 |
| System Peak Demand (KW) | 1,020,389 | 1,020,389 | 908,388 | 855,589 | 793,188 | 740,388 | 682,391 | 576,590 | 545,590 | 465,792 |
| Average KWH Sales per Residential Customer | 7,988 | 7,928 | 7,365 | 7,179 | 6,534 | 6,508 | 5,821 | 5,417 | 5,232 | 4,959 |
| Average Revenue per KWH Sold | | | | | | | | | | |
| Residential | 1.46¢ | 1.45¢ | 1.37¢ | 1.38¢ | 1.43¢ | 1.44¢ | 1.50¢ | 1.54¢ | 1.62¢ | 1.65¢ |
| Commercial and Industrial | 1.20¢ | 1.19¢ | 1.10¢ | 1.07¢ | 1.06¢ | 1.09¢ | 1.08¢ | 1.16¢ | 1.27¢ | 1.32¢ |

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# SACRAMENTO MUNICIPAL UTILITY DISTRICT

## STATEMENTS OF NET REVENUE

| | Twelve Months Ended April 30, 1972 (Unaudited) | Year Ended December 31, 1971 |
|---|---|---|
| OPERATING REVENUES: | | |
| Residential | $ 24,130,052 | $ 23,301,630 |
| Commercial and industrial | 24,732,442 | 23,814,982 |
| Other | 585,188 | 558,515 |
| Total operating revenues | $ 49,447,682 | $ 47,675,127 |
| OPERATING EXPENSES: | | |
| Operation— | | |
| Purchased power | $ 8,874,559 | $ 8,660,675 |
| Other | 8,308,902 | 8,015,167 |
| Maintenance | 3,424,894 | 3,204,815 |
| Provision for depreciation (Note 3) | 6,880,752 | 6,482,924 |
| Taxes | 209,664 | 215,335 |
| Total operating expenses | $ 27,698,771 | $ 26,578,916 |
| Net operating revenue | $ 21,748,911 | $ 21,096,211 |
| OTHER INCOME: | | |
| Allowance for funds used during construction | $ 7,085,610 | $ 6,118,360 |
| Interest income | 3,950,726 | 3,980,031 |
| Gross income | $ 32,785,247 | $ 31,194,602 |
| INCOME DEDUCTIONS: | | |
| Interest on long-term debt | $ 14,963,933 | $ 12,983,340 |
| Amortization of bond premium, bond redemption premium, discount and expense, net | 124,849 | 122,016 |
| Total income deductions | $ 15,088,782 | $ 13,105,356 |
| Net revenue for the year | $ 17,696,465 | $ 18,089,246 |

The accompanying notes are an integral part of these statements.

**Exhibit B(2)**

# SACRAMENTO MUNICIPAL UTILITY DISTRICT

## BALANCE SHEETS

### Assets

| | April 30, 1972 (Unaudited) | December 31, 1971 |
|---|---|---|
| ELECTRIC UTILITY PLANT, at original cost: | | |
| Plant in service | $343,458,039 | $340,740,327 |
| Less—Reserve for depreciation | 53,181,678 | 51,199,525 |
| | $290,276,361 | $289,540,802 |
| Construction work in progress— | | |
| Nuclear | 176,640,392 | 150,209,875 |
| Hydroelectric | 3,189,385 | 2,387,690 |
| Other | 10,922,553 | 8,973,342 |
| Nuclear fuel | 19,579,231 | 14,979,091 |
| | $500,607,922 | $466,090,800 |
| SEGREGATED FUNDS, consisting of cash and securities, at cost: | | |
| For construction purposes (Note 4) | $ 47,971,917 | $ 64,015,982 |
| In reserve funds for Revenue Bonds (Note 2) | 16,924,595 | 12,546,197 |
| | $ 64,896,512 | $ 76,562,179 |
| CURRENT ASSETS: | | |
| Cash | $ 169,368 | $ 171,556 |
| Segregated cash and securities for payment of debt service | 8,620,118 | 8,658,235 |
| Accrued interest receivable | 735,438 | 934,783 |
| Accounts receivable, less reserves of $83,094 and $87,372, respectively | 3,314,075 | 3,574,686 |
| Materials and supplies, at average cost | 2,741,539 | 2,451,660 |
| Prepayments and special deposits | 930,553 | 1,625,580 |
| | $ 16,511,091 | $ 17,416,500 |
| DEFERRED CHARGES | $ 4,132,513 | $ 4,093,255 |
| | $586,148,038 | $564,162,734 |

The accompanying notes are an integral part of these balance sheets.

# SACRAMENTO MUNICIPAL UTILITY DISTRICT

## BALANCE SHEETS

### Liabilities

| | April 30, 1972 (Unaudited) | December 31, 1971 |
|---|---|---|
| CAPITALIZATION: | | |
| Customers' equity employed in the business— | | |
| Balance beginning of year | $188,737,554 | $170,648,308 |
| Net revenue for the year | 4,325,890* | 18,089,246 |
| Total customers' equity | $193,063,444 | $188,737,554 |
| Long-term debt (Note 1) | 365,252,037 | 340,565,218 |
| | $558,315,481 | $529,302,772 |
| CURRENT LIABILITIES: | | |
| Accounts payable | $ 10,434,682 | $ 19,454,688 |
| Accrued salaries, wages and vacation pay | 1,817,113 | 1,164,767 |
| Long-term debt due within one year | 6,337,000 | 6,237,000 |
| Accrued interest on long-term debt | 5,379,447 | 4,397,097 |
| Customers' deposits | 1,206,355 | 1,148,144 |
| Other | 498,083 | 426,391 |
| | $ 25,672,680 | $ 32,828,087 |
| CONTRIBUTIONS IN AID OF CONSTRUCTION | $ 2,159,877 | $ 2,031,875 |
| | $586,148,038 | $564,162,734 |

*For four months ended April 30, 1972.

The accompanying notes are an integral part of these balance sheets.

# SACRAMENTO MUNICIPAL UTILITY DISTRICT

## STATEMENTS OF CHANGES IN FINANCIAL POSITION

| | Twelve Months Ended April 30, 1972 (Unaudited) | Year Ended December 31, 1971 |
|---|---|---|
| Funds provided from: | | |
| Operations— | | |
| Gross income | $ 32,785,247 | $ 31,194,602 |
| Items not affecting funds— | | |
| Add—Depreciation | 6,880,752 | 6,482,924 |
| Deduct—Allowance for funds used during construction | 7,085,610 | 6,118,360 |
| Total available for debt service | $ 32,580,389 | $ 31,559,166 |
| Sale of Bonds and Notes— | | |
| Electric Revenue Bonds | 90,000,000 | 140,000,000 |
| SMUD Notes | 28,000,000 | — |
| Decrease in segregated construction funds | 5,933,664 | — |
| Reduction in working capital | 3,037,736 | 6,624,292 |
| Other | 827,723 | 611,564 |
| Total funds provided | $160,379,512 | $178,795,022 |
| Funds used for: | | |
| Debt service— | | |
| Revenue bonds | $ 18,924,047 | $ 16,781,828 |
| General obligation bonds | 2,073,534 | 2,034,759 |
| Total debt service | $ 20,997,581 | $ 18,816,5 |
| Increase in bond reserve funds | 7,132,611 | 6,741,678 |
| Increase in segregated construction funds | — | 33,978,611 |
| Additions to plant (exclusive of allowance for funds used during construction) | 132,249,320 | 119,258,146 |
| Total funds used | $160,379,512 | $178,795,022 |
| Number of times debt service is covered by funds available: | | |
| Revenue bonds | 1.72 | 1.88 |
| Total debt | 1.55 | 1.68 |

The accompanying notes are an integral part of these statements.

## ARTHUR ANDERSEN & CO.

To the Board of Directors of
Sacramento Municipal Utility District:

650 California Street
San Francisco 94108

We have examined the balance sheet of Sacramento Municipal Utility District as of December 31, 1971, and the related statements of net revenue and changes in financial position 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.

In our opinion, the accompanying balance sheet and statements of net revenue and changes in financial position present fairly the financial position of Sacramento Municipal Utility District as of December 31, 1971, the results of its operations and the changes in financial position for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

ARTHUR ANDERSEN & CO.

January 28, 1972

# NOTES TO FINANCIAL STATEMENTS

*(Including Notes Applicable to Unaudited Period)*

1. *Long-term Debt*

Long-term debt outstanding at April 30, 1972, and December 31, 1971, was as follows:

| | April 30, 1972 (Unaudited) | December 31, 1971 |
|---|---|---|
| GENERAL OBLIGATION BONDS AND NOTES— | | |
| Power Bonds of 1938 including premium, | | |
| 3%-5%, 1972 to 1979 | $ 4,830,048 | $ 4,863,229 |
| Electric Bonds, 2%, 1972 to 1990 | 11,524,000 | 11,904,000 |
| Building Bonds of 1958— | | |
| 2½%-2¾%, 1972 to 1978 | 2,380,000 | 2,380,000 |
| Notes, Series A | | |
| 3½%-4-2/5%, 1974 to 1977 | 28,000,000 | — |
| REVENUE BONDS— | | |
| Upper American River Project Refunding Bonds, | | |
| 3%-4½%, 1973 to 1991 | 71,700,000 | 74,400,000 |
| White Rock Project Bonds— | | |
| Series A, 3¼%-5%, 1972 to 2004 | 11,670,000 | 11,670,000 |
| Series B, 3%-5%, 1972 to 2004 | 29,000,000 | 29,000,000 |
| Series C, 6¼%-7%, 1972 to 2010 | 28,900,000 | 29,000,000 |
| Series D, 6-8/10%-7%, 1972 to 2010 | 29,000,000 | 29,000,000 |
| Electric System Bonds— | | |
| 2¾%-3-3/20%, 1972 to 1983 | 13,160,000 | 13,160,000 |
| Electric Revenue Bonds— | | |
| Series A, 4-4/5%-6-4/5%, 1974 to 2011 | 50,000,000 | 50,000,000 |
| Series B, 5¼%-7%, 1974 to 2011 | 40,000,000 | 40,000,000 |
| Series C, 4¾%-6¾%, 1974 to 2011 | 50,000,000 | 50,000,000 |
| Total bonds | $370,164,048 | $345,377,229 |
| Less—Amount due within one year | 6,337,000 | 6,237,000 |
| | $363,827,048 | $339,140,229 |
| Purchase Agreement, 3¾%, 1972 to 2000 | 1,424,989 | 1,424,989 |
| | $365,252,037 | $340,565,218 |

2. *Reserve Funds for Revenue Bonds*

Reserve funds for revenue bonds at April 30, 1[illegible], and December 31, 1971, were as follows:

| | April 30, 1972 (Unaudited) | December 31, 1971 |
|---|---|---|
| Electric System Bonds | $ 1,011,702 | $ 1,037,537 |
| Electric Revenue Bonds | 7,856,537 | 3,961,270 |
| All Parity Bonds | 7,738,403 | 7,547,390 |
| White Rock Project Bonds | 317,953 | — |
| | $16,924,595 | $12,546,197 |

3. *Provision for Depreciation*

The District provides for depreciation on the historical cost of electric properties on a straight-line basis at rates determined by engineering studies.

4. *Construction Program and Financing*

Estimated construction expenditures in 1972 are $106,719,000, including $35,086,000 for the Rancho Seco nuclear generation project. The District estimates total financing requirements for the nuclear generation project over the next two years to be about $96,000,000, most of which will be raised through the sale of additional revenue bonds.

5. *Retirement Pension Plan*

The District's employees are covered by a contributory retirement plan administered by the State of California. Contributions by the District for the twelve-month period ended April 30, 1972, and the year ended December 31, 1971, amounted to $976,000 and $935,000, respectively.

**Exhibit C**


# Bechtel Corporation

Engineers - Constructors

Fifty Beale Street
San Francisco, California 94119


May 18, 1972

Sacramento Municipal Utility District
6201 S Street
Sacramento, California 95813

Attention: Mr. E. Kendell Davis, General Manager

Gentlemen:

As requested, we have completed a study of the estimated future revenues, expenses and funds requirements of the District. We are pleased to submit herewith a report summarizing the results of this study.

The purpose of this report is to present the District's financial position for the near future and to provide the basis for the engineer's certificates required by District Resolutions Nos. 4187, 4775, 4938 and 6649 in connection with your planned issuance of $50,000,000 of Electric Revenue Bonds, Series D.

Very truly yours,

John P. Buehler

JOHN P. BUEHLER
*Vice President and Manager*
Hydro and Community
Facilities Division

May 18, 1972

# Economic Report on the Electric System of the Sacramento Municipal Utility District

In connection with the proposed issuance of $50,000,000 of Electric Revenue Bonds, Series D, the Sacramento Municipal Utility District has requested Bechtel Corporation to make a study of the District's future power sales, generation and purchases plus a forecast of the future income and operating costs of the District. This report summarizes that study with Table A showing the forecast of revenue and expenses, total net revenues and debt service for each year of the period from 1972 to 1981, inclusive.

This study parallels the Economic Reports relating to the District's Electric Revenue Bonds, Series A, Series B and Series C. In those reports, Bechtel Corporation reported favorably on the economic outlook for the District.

The District's present power sources include the U. S. Bureau of Reclamation's Central Valley Project (CVP), the Pacific Gas and Electric Company (PG&E), the Bonneville Power Administration, the Canadian Entitlement Exchange Agreement and its own hydroelectric generation capacity in the Upper American River Project.

Up to 360,000 kilowatts of power is available from CVP at District load factor at a cost of approximately 4 mills per kilowatt-hour. A contract negotiated in 1966 with PG&E provides for coordinated operation of power sources and for the purchase of up to 300,000 kilowatts of firm demand. Rates under this contract are $1.65 per kilowatt per month plus a base rate of 3.35 mills per kilowatt-hour, subject to adjustment according to the fluctuation of the price of natural gas.

Up to 172,000 kilowatts of Canadian power is available to the District at about 70% load factor at a cost of about 4.5 mills per kilowatt-hour. Bonneville energy is available for credit against energy taken from the PG&E system in the amount up to 225 million kilowatt-hours per year at a cost of 2.6 mills per killowatt-hour delivered to the District system.

The Upper American River Project, completed in early 1972, has a capability of 628,000-kilowatt demand and 1.9 billion kilowatt-hours of energy during a normal water year.

Construction is under way on the District's 900-megawatt Rancho Seco nuclear generating plant which is scheduled to go on line October 1, 1973. The District is still evaluating alternatives for generation to be installed after Rancho Seco No. 1. However, for purposes of this Economic Report, construction costs of $295,410,000 were included for future generation during the 1974 through 1981 period. This approximates the estimated cost of a one-half ownership of a large nuclear unit for operation in 1980. During the first years of operation, Rancho Seco will produce considerable power in excess of District needs and such power will be sold to PG&E under terms of a contract signed in 1970. PG&E will provide capacity to the District during outages of the nuclear plant.

During the period of study, 1971 through 1981, the number of District customers (average annual) is estimated to increase from 229,394 to 305,300. Energy sales are estimated to reach 7,525 million kilowatt-hours in 1981 compared with 3,650 million kilowatt-hours in 1971. Peak demand on the system is forecast to increase from 1,020,000 kilowatts to 2,160,000 kilowatts.

The business forecast indicates that annual operating revenue from sales will increase from $47,675,000 in 1971 to $124,671,000 in 1981 while total net revenues available for debt service and other purposes will increase from $31,559,000 to $71,872,000 in the same period. The forecast was made on the basis of a rate increase of 9.7% adopted by the District's Board of Directors to become effective June 29, 1972. The increased rates are necessitated primarily by the increased costs for the District's expansion program.

As shown in Table A, the forecast ratio of total annual Net Revenues to revenue bond debt service is never less than 1.49. The ratio of Net Revenues to interest on revenue bonds is not less than 1.86.

Growth after 1981 should be self-sustaining. In addition to the District's power to adjust rates at its discretion, the District also has taxing power which can be used to meet debt service on general obligation bonds and notes and other costs as necessary. The District is planning to finance nuclear fuel for Rancho Seco through issuance of short-term general obligation notes, of which the first series was sold in early 1972.

Based on the financial study for the period 1971 through 1981, assuming a 6% interest rate on the Electric Revenue Bonds, Series D, and subsequent series, a 4.50% interest on the short-term general obligation notes to be used to finance nuclear fuel, the District's adjusted rate schedule and other related factors, it is concluded that the District will have the ability to: (1) service the UARP Refunding, Electric System, White Rock Project and Electric Revenue Bonds, as well as its general obligation indebtedness; (2) finance necessary additions and betterments to its distribution system; (3) service the proposed Electric Revenue Bonds, Series D, and additional series, to finance construction of the Rancho Seco Unit No. 1 and future generation; (4) service Notes, Series A and future nuclear fuel general obligation notes; (5) establish and maintain required reserve funds; and (6) provide adequate working capital. It is also concluded that, with Net Revenue of $36,517,894 for the 12 months ended April 30, 1972, the following prerequisites for the issuance of Electric Revenue Bonds, Series D, under District Resolutions Nos. 4187, 4775, 4938 and 6649 will be satisfied:

(a) The Net Revenues, after the completion of the additions, betterments, extensions or improvements proposed to be financed from the proceeds of the Additional Revenue Bonds, will be sufficient to pay the principal of and interest (and bond reserve fund requirements, if any) on the principal amount of $71,700,000 Upper American River Project Refunding Revenue Bonds, $12,570,000 of Electric System Revenue Bonds, $98,470,000 of White Rock Project Revenue Bonds, and $140,000,000 of Electric Revenue Bonds, Series A, Series B and Series C, now outstanding and the Additional Revenue Bonds now proposed to be issued, and

(b) The Net Revenues, for a period of 12 consecutive months during the 24 months immediately preceding the date upon which the Additional Revenue Bonds will become outstanding, have been at least equal to one and one-fourth (1¼) times the sum of:

(i) the annual interest,

(ii) the principal amount of serial bonds falling due, and

(iii) the amount of minimum sinking fund payments required for the payment of term bonds,

as computed for the year in which such sum shall then be a maximum, including the outstanding Parity Revenue Bonds and the Additional Revenue Bonds proposed to be issued.

# SACRAMENTO MUNICIPAL UTILITY DISTRICT

## TABLE A

## BUSINESS FORECAST 1971-1981

## TOTAL NET REVENUES AND DEBT SERVICE COVERAGE

*(thousands of dollars)*

| | 1971 (Actual) | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Operating Revenue from Sales: | | | | | | | | | | | |
| Sales to Ultimate Customers(A) | $47,675 | 53,957 | 59,818 | 63,649 | 67,654 | 71,979 | 76,605 | 81,702 | 85,691 | 91,680 | 97,407 |
| Sales to PG&E | — | — | 2,548 | 22,522 | 20,349 | 19,302 | 16,738 | 13,555 | 10,690 | 12,374 | 27,264 |
| Total | $47,675 | 53,957 | 62,366 | 86,171 | 88,003 | 91,281 | 93,343 | 95,257 | 96,381 | 104,054 | 124,671 |
| 2. Operating Expenses: | | | | | | | | | | | |
| Purchased Power | $ 8,661 | 9,559 | 9,847 | 7,770 | 7,772 | 7,775 | 7,773 | 7,774 | 7,775 | 7,775 | 7,775 |
| Operation and Maintenance: | | | | | | | | | | | |
| Hydro Generation | 1,008 | 1,401 | 1,264 | 1,329 | 1,399 | 1,472 | 1,550 | 1,632 | 1,720 | 1,813 | 1,911 |
| Nuclear Generation | — | — | 4,386 | 12,884 | 13,057 | 13,411 | 13,804 | 13,665 | 13,750 | 15,917 | 23,704 |
| Other | 10,212 | 11,923 | 12,578 | 14,400 | 15,372 | 16,426 | 17,565 | 18,801 | 20,143 | 21,691 | 23,546 |
| Taxes | 215 | 214 | 225 | 242 | 254 | 267 | 280 | 294 | 309 | 324 | 340 |
| Total | $20,096 | 23,097 | 28,300 | 36,625 | 37,854 | 39,351 | 40,972 | 42,166 | 43,697 | 47,520 | 57,276 |
| 3. Net Operating Revenue | $27,579 | 30,860 | 34,066 | 49,546 | 50,149 | 51,930 | 52,371 | 53,091 | 52,684 | 56,534 | 67,395 |
| 4. Other Income (principally interest) | 3,980 | 2,815 | 2,553 | 3,108 | 3,249 | 3,471 | 3,244 | 4,024 | 5,463 | 3,720 | 4,477 |
| 5. Unused Balance of White Rock Project Revenue Bond Construction Fund(B) | — | 3,938 | — | — | — | — | — | — | — | — | — |
| 6. Total Net Revenue | $31,559 | 37,613 | 36,619 | 52,654 | 53,398 | 55,401 | 55,615 | 57,115 | 58,147 | 60,254 | 71,872 |
| 7. Debt Service on Revenue Bonds: | | | | | | | | | | | |
| Electric System Revenue Bonds | $ 1,550 | 1,524 | 1,492 | 1,461 | 1,429 | 1,396 | 1,363 | 1,329 | 1,294 | 1,260 | 1,225 |
| UARP Refunding Revenue Bonds | 5,079 | 5,059 | 5,046 | 5,048 | 5,060 | 4,970 | 5,077 | 5,080 | 5,078 | 5,071 | 5,059 |
| White Rock Project Revenue Bonds | 6,045 | 6,210 | 6,172 | 6,129 | 6,287 | 6,342 | 6,298 | 6,254 | 6,204 | 6,352 | 6,293 |
| Electric Revenue Bonds—Series A, B, and C | 2,657 | 7,923 | 7,923 | 8,216 | 8,195 | 8,175 | 8,544 | 8,788 | 9,014 | 9,217 | 9,304 |
| Electric Revenue Bonds—Future(C) | — | — | 3,900 | 4,800 | 4,997 | 5,735 | 7,223 | 8,158 | 14,233 | 16,598 | 18,994 |
| Total | $15,331 | 20,716 | 24,533 | 25,654 | 25,968 | 26,618 | 28,505 | 29,609 | 35,823 | 38,498 | 40,875 |
| 8. Revenue After Revenue Bond Debt Service | $16,228 | 16,897 | 12,086 | 27,000 | 27,430 | 28,783 | 27,110 | 27,506 | 22,324 | 21,756 | 30,997 |
| 9. G.O. Debt Service(D) | $ 2,048 | 2,549 | 3,048 | 7,281 | 13,653 | 13,786 | 13,791 | 6,265 | 6,961 | 14,000 | 16,955 |
| 10. Ratio—Total Net Revenue to: | | | | | | | | | | | |
| Debt Service—All Revenue Bonds | 2.06 | 1.82 | 1.49 | 2.05 | 2.06 | 2.08 | 1.95 | 1.93 | 1.62 | 1.57 | 1.76 |
| Maximum Debt Service on Outstanding Revenue Bonds for Ensuing Three Years(E) | 1.51 | 1.56 | 1.41 | 2.01 | 2.01 | 1.96 | 1.83 | 1.65 | 1.49 | 1.49 | 1.71 |
| Total Interest on All Revenue Bonds | 2.89 | 2.36 | 1.86 | 2.59 | 2.65 | 2.67 | 2.53 | 2.54 | 2.06 | 2.01 | 2.28 |

(A) Tabulation includes 9.7% rate increase beginning June 29, 1972.

(B) The overage between $100,000,000 of bond proceeds and the project costs which, according to the Resolution of Issuance, becomes Revenues when project is completed and all bills are paid.

(C) $50,000,000 in 1972; $30,000,000 in 1973; $25,000,000 in 1976; $25,000,000 in 1977; $65,000,000 in 1978; $70,000,000 in 1979; $25,000,000 in 1980; $15,000,000 in 1981 (6% net annual interest assumed).

(D) Includes debt service on Notes, Series A and future issues of nuclear fuel notes in the amount of $15,000,000 in 1974; $46,000,000 in 1978; $15,000,000 in 1980 (4½% net annual interest assumed). G.O. debt service has been paid from revenues since the commencement of operations on December 31, 1946.

(E) Ratio of Total Net Revenue to debt service for maximum of three ensuing years. (Debt Service Ratio per terms of Electric System, White Rock, UARP Refunding and Electric Revenue Bond Resolutions.)

Amendment 5

SACRAMENTO MUNICIPAL UTILITY DISTRICT
BALANCE SHEETS
FEBRUARY 28, 1971 AND 1970

## ASSETS

| | February 28 1971 | February 28 1970 |
|---|---|---|
| ELECTRIC UTILITY PLANT, at original cost: | | |
| Plant in service | $287 852 516 | $278 460 779 |
| Less - Reserve for depreciation | 47 279 832 | 42 560 560 |
| | $240 572 684 | $235 900 219 |
| Construction work in progress - | | |
| Hydroelectric | 38 232 626 | 29 488 320 |
| Nuclear | 66 968 149 | 27 914 594 |
| Other | 10 408 300 | 5 952 472 |
| | $356 181 759 | $299 255 605 |
| SEGREGATED FUNDS: | | |
| Consisting of cash and securities, at cost - | | |
| For construction purposes - | | |
| System construction fund | $ 59 834 787 | $ 6 706 172 |
| From W.R.P. Revenue Bonds | 7 421 451 | - |
| In reserve funds for revenue bonds - | | |
| For Electric System Bonds | 539 285 | 532 659 |
| For Electric Revenue Bonds | 1 427 400 | - |
| For all Parity Bonds | 5 371 151 | 4 366 504 |
| | $ 74 594 074 | $ 11 605 335 |
| CURRENT ASSETS: | | |
| Cash | $ 170 247 | $ 90 809 |
| Cash and securities for payment of debt service | 15 343 367 | 12 680 062 |
| Accounts receivable, less reserves of $75,838 and $74,043, respectively | 3 430 373 | 3 101 847 |
| Interest receivable | 1 055 195 | 931 584 |
| Material and supplies, at average cost | 2 112 034 | 1 930 255 |
| Prepayments and special deposits | 1 072 975 | 432 418 |
| | $ 23 184 191 | $ 19 166 975 |
| DEFERRED CHARGES: | | |
| Unamortized bond redemption premium, debt discount, and expense | $ 3 745 081 | $ 2 037 657 |
| Other | 107 815 | 364 946 |
| | $ 3 852 896 | $ 2 402 603 |
| | $457 812 920 | $332 430 518 |

## LIABILITIES

| | February 28 1971 | February 28 1970 |
|---|---|---|
| CAPITALIZATION: | | |
| Customers' equity employed in the business - | | |
| Accumulated net revenue - | | |
| Balance beginning of year | $170 648 308 | $155 811 331 |
| Net revenue for the year | 2 672 991 | 2 760 793 |
| Total customers' equity | $173 321 299 | $158 572 124 |
| Long-term debt (Note 1) | 256 659 449 | 154 671 362 |
| | $429 980 748 | $313 243 486 |
| CURRENT LIABILITIES: | | |
| Accounts payable | $ 13 294 213 | $ 7 010 063 |
| Accrued salaries and wages | 225 670 | 187 841 |
| Accrued vacation | 895 033 | 710 929 |
| Long-term debt due within one year | 5 898 000 | 5 759 000 |
| Accrued interest on long-term debt | 4 332 868 | 2 616 159 |
| Customers' deposits | 1 050 484 | 922 361 |
| Other | 338 637 | 301 789 |
| | $ 26 034 905 | $ 17 508 142 |
| STORM DAMAGE RESERVE | $ 300 000 | $ 300 000 |
| CONTRIBUTIONS IN AID OF CONSTRUCTION | $ 1 497 267 | $ 1 378 890 |
| | $457 812 920 | $332 430 518 |

Amendment 5

SACRAMENTO MUNICIPAL UTILITY DISTRICT
STATEMENT OF NET REVENUE
FEBRUARY 1971

| | Current Month | | Two Months to Date | | Twelve Months to Date | |
|---|---|---|---|---|---|---|
| | Amount | Over (Under) Prior Year | Amount | Over (Under) Prior Year | Amount | Over (Under) Prior Year |
| OPERATING REVENUES: | | | | | | |
| Sales of electric energy - | | | | | | |
| Residential | $1 704 416 | $ 148 906 | $3 521 826 | $ 293 114 | $20 003 903 | $ 1 208 265 |
| Commercial and industrial | 1 680 597 | 63 465 | 3 315 595 | 42 044 | 21 145 064 | 397 202 |
| Street lighting | 33 854 | 8 333 | 71 136 | 10 768 | 393 120 | 23 668 |
| Sales for resale | 1 988 | 291 | 3 937 | 383 | 21 878 | 1 210 |
| Total sales of electric energy | $3 420 855 | $ 221 045 | $6 912 494 | $ 346 309 | $41 563 965 | $ 1 630 345 |
| Other electric revenue | 990 | (852) | 51 060 | 6 033 | 65 868 | 8 549 |
| Total operating revenues | $3 421 845 | $ 220 193 | $6 963 554 | $ 352 342 | $41 629 833 | $ 1 638 894 |
| OPERATING EXPENSES: | | | | | | |
| Operation - | | | | | | |
| Purchased power | $ 672 170 | $ 420 296 | $1 296 585 | $ 567 972 | $ 8 964 005 | $ 2 774 486 |
| Production | 76 106 | 43 753 | 116 485 | 53 213 | 512 171 | 43 520 |
| Transmission and distribution | 155 233 | 24 463 | 300 650 | 36 845 | 1 919 873 | 330 452 |
| Customer accounts | 136 905 | 16 072 | 274 212 | 21 720 | 1 628 484 | 162 080 |
| Sales | 72 505 | (12 758) | 151 535 | (21 090) | 1 065 256 | (21 483) |
| Administrative and general | 166 031 | 49 219 | 404 814 | 89 373 | 2 306 927 | 475 095 |
| Total operation | $1 278 950 | $ 541 045 | $2 544 281 | $ 748 033 | $16 396 716 | $ 3 764 150 |
| Maintenance | 223 517 | 27 764 | 435 392 | 23 872 | 3 208 690 | 733 616 |
| Provision for depreciation | 512 365 | 20 893 | 1 023 017 | 41 422 | 6 041 267 | 260 606 |
| Taxes | 29 904 | 23 717 | 78 439 | 32 790 | 199 230 | (28 531) |
| Total operating expenses | $2 044 736 | $ 613 419 | $4 081 129 | $ 846 117 | $25 845 903 | $ 4 729 841 |
| Net operating revenue | $1 377 109 | $(393 226) | $2 882 425 | $(493 775) | $15 783 930 | $(3 090 947) |
| OTHER INCOME (principally interest) | 288 172 | 172 717 | 522 988 | 290 656 | 3 991 411 | 2 021 781 |
| Gross income | $1 665 281 | $(220 509) | $3 405 413 | $(203 119) | $19 775 341 | $(1 069 166) |
| INCOME DEDUCTIONS: | | | | | | |
| Interest on long-term debt | $ 844 134 | $ 436 355 | $1 610 626 | $ 754 168 | $ 8 739 349 | $ 3 461 898 |
| Amortization of bond redemption premium, discount, and expense | 19 023 | 4 879 | 38 047 | 9 759 | 228 454 | 58 294 |
| Less - | | | | | | |
| Amortization of premium on Series D bonds | 9 151 | (820) | 18 302 | (1 640) | 113 914 | (9 717) |
| Interest charged to construction | 440 435 | 228 162 | 897 949 | 480 884 | 3 827 723 | 2 182 638 |
| Total income deductions | $ 413 571 | $ 213 892 | $ 732 422 | $ 284 683 | $ 5 026 166 | $ 1 347 271 |
| Net revenue | $1 251 710 | $(434 401) | $2 672 991 | $(487 802) | $14 749 175 | $(2 416 437) |

Amendment 5

SACRAMENTO MUNICIPAL UTILITY DISTRICT
NOTES TO FINANCIAL STATEMENTS
FEBRUARY 28, 1971

(1) Long-term debt outstanding at February 28, 1971 and 1970, was as follows:

| | February 28 1971 | February 28 1970 |
|---|---|---|
| General Obligation Bonds - | | |
| Power Bonds of 1938 - | | |
| Series A, 3%, 1971 to 1974 | $ 60 000 | $ 75 000 |
| Series D, 5%, 1971 to 1979 | 4 843 000 | 5 277 000 |
| Electric Bonds, 2%, 1971 to 1990 | 12 394 000 | 13 114 000 |
| Building Bonds of 1958 - | | |
| 2-1/2% - 2-3/4%, 1971 to 1978 | 2 680 000 | 2 970 000 |
| Revenue Bonds - | | |
| Upper American River Project Refunding Bonds, 3% - 4-1/2%, 1971 to 1991 | 77 000 000 | 79 500 000 |
| White Rock Project Bonds - | | |
| Series A, 3-1/4% - 5%, 1971 to 2004 | 11 840 000 | 12 000 000 |
| Series B, 3% - 5%, 1971 to 2004 | 29 500 000 | 30 000 000 |
| Series C, 6-1/4% - 7%, 1972 to 2010 | 29 000 000 | - |
| Series D, 6-8/10% - 7%, 1972 to 2010 | 29 000 000 | - |
| Electric System Bonds - | | |
| Series A, 2-3/4% - 3-1/10%, 1971 to 1982 | 7 075 000 | 7 660 000 |
| Series B, 2-3/4% - 3-3/20%, 1971 to 1983 | 7 225 000 | 7 780 000 |
| Electric Revenue Bonds - | | |
| Series A, 4-4/5% - 6-4/5%, 1974 to 2011 | 50 000 000 | - |
| Total Bonds | $260 617 000 | $158 376 000 |
| Less - Amount due within one year | 5 898 000 | 5 759 000 |
| | $254 719 000 | $152 617 000 |
| Premium on Power Bonds of 1938, Series D | 515 460 | 629 373 |
| | $255 234 460 | $153 246 373 |
| Purchase Agreement with Georgetown Divide Public Utility District, 3-3/4%, 1971 to 2000 | 1 424 989 | 1 424 989 |
| | $256 659 449 | $154 671 362 |

TECHNICAL QUALIFICATIONS

BECHTEL CORPORATION

Bechtel Corporation has furnished Applicant with the following information:

GENERAL

Bechtel Corporation, originated by W. A. Bechtel, has been continuously engaged in construction or engineering activities since 1898. For the last twenty years, Bechtel has been active in the fields of petroleum, power generation and distribution, harbor development, mining and metallurgy, and chemical and industrial processing. The Bechtel organization has grown progressively to be one of the world's largest engineer-constructors for industrial facilities and for development of natural resources.

Since the close of World War II, Bechtel has been responsible for the design of over 165 power generating units, representing more than 38 million kilowatts of new generating capacity which includes units of the largest and most modern types. Of this number, more than 11 million kwe is capacity-generated by over 20 nuclear-fueled units.

The current Bechtel business volume is at an annual rate in excess of $500,000,000. The total cost of engineering and construction of the power plants is in excess of $1,000,000,000. The majority of these contracts include complete responsibility

for both engineering and construction, although several are strictly engineering design assignments.

NUCLEAR EXPERIENCE

For over 18 years, Bechtel has been engaged in the study, design and construction of nuclear installations. Their experience includes design or construction, or both, of such facilities as accelerators, nuclear research laboratories, hot cells, experimental reactors, and nuclear fuel processing plants, as well as nuclear power plants. These projects include:

1948 - Design of buildings for the Van de Graf accelerator at Los Alamos, New Mexico, for the Atomic Energy Commission.

1949 - Construction of the first Experimental Breeder Reactor, Arco, Idaho, for the Atomic Energy Commission.

1950 - Engineering for the Mark I and Mark II Materials Testing Accelerator Project, Livermore, California, for the Atomic Energy Commission.

1950 - Construction of the $20,000,000 Atomic Energy Commission Chemical Fuel Processing Plant, Arco, Idaho.

1951 - Investigation of Technical and Economic Feasibility of Nuclear Power for Atomic Energy Commission in cooperation with Pacific Gas and Electric Company.

1953 - Studies of reactor systems by members of Nuclear Power Group leading to selection of dual-cycle boiling water reactor for commercial application.

1955 - Engineer-Constructor for the 210 Mwe Commonwealth Edison Dresden Boiling Water Reactor Nuclear Power Station.

1956 - Engineer-Constructor for Vallecitos Atomic Laboratory of the General Electric Company.

1956 - Engineer-Constructor for the 5,000 kwe Boiling Water Reactor Power Plant of the General Electric Company and Pacific Gas and Electric Company.

1956 - Engineer for Army Package Power Reactor 1-A, Fort Greeley, Alaska.

1958 - Engineer-Constructor and prime contractor for the 70 Mwe Humbolt Bay Boiling Water Reactor Plant for the Pacific Gas and Electric Company.

1958 - Architect-Engineer for the Atomic Energy Commission on the nuclear facility of the 75,000 kwe Sodium Graphite Sheldon Plant for the Consumers Public Power District of Hallam, Nebraska.

1958 - Engineer-Constructor for Hot Cell facilities of Atomic International Division of North American Aviation, Inc.

1958 - Engineer-Constructor for the Hot Cell facilities of the General Atomic Division of General Dynamics Corporation.

1958 - Comparative design study and cost estimates for a 300,000 kwe organic Cooled Reactor Nuclear Power Plant for the Atomic Energy Commission.

1958 - Engineering of the Food Irradiation Center for the U. S. Army, Stockton, California.

1959 - Engineer-Constructor and prime contractor for the 45 Mwe High Temperature Gas Cooled Reactor at Peach Bottom for the Philadelphia Electric Company and High Temperature Reactor Development Associates, Inc.

1959 - Engineer-Constructor and prime contractor for 75 Mwe Big Rock Point Nuclear Power Station for Consumers Power Company of Jackson, Michigan.

1960 - Detailed design and construction of 450 Mwe Pressurized Water Nuclear Power Plant at San Onofre for Southern California Edison Company.

1960 - Design and construction of Nuclear Fuels Reprocessing Plant for Nuclear Fuel Services, Inc.

1960 - Engineering and related services to the Junta de Energia Nuclear of Spain for the DON reactor project, a 30,000 kwe organic cooled heavy water moderated reactor.

1961 - Study of a 250,000 kwe Homogenized Pressurized Heavy Water Reactor for Rederiaktiebolaget Nordstjernan Atomic Power Group (A. Johnson & Company) Nynashamm, Sweden.

1961 - Engineering for the General Electric Company's pulse reactor at their Vallecitos Atomic Laboratory located near Livermore, California.

1963 - Conceptual design and planning studies for Nuclear Rocket Stage Static Test Facilities at Nevada Test Site for NASA.

1963 - Research, theoretical studies, and preliminary design for Vacuum Chamber and Control Instrumentation Studies for Arnold Engineering Development Center. Chamber to be used for operational test of nuclear-powered vehicles.

1964 - Engineering and construction of the Texas A & M Variable Energy Cyclotron (TAMVEC).

1964 - Conceptual design and costing of a Plutonium Americium and Neptunium (PAN) Manufacturing Facility for Nuclear Fuel Services, Inc.

1964 - Comparison study of 300 Mwe Power Plant -- coal, oil, or nuclear fueled -- for Salt River Power District.

1964 - Preliminary design study of 650 Mwe PWR nuclear power plant for Babcock & Wilcox Company.

1964 - Engineering and cost study: Dual purpose plants for Electric Power Generation and Saline Water Conversion for Southern California Edison Company.

1964 - Design and construction of the 380 Mwe twin unit Tarapur Nuclear Power Plant for the Government of India.

1964 - Engineering of Systems for Nuclear Auxiliary Power (SNAP-8) Flight Configuration Test Facility for AEC.

1964 - Study: A combination nuclear power (440 Mwe) and saline water conversion plant (50 mgd) for General Atomic.

1965 - Design of Fast Reactor Test Facility (FARET) for the Argonne National Laboratory to provide a research tool for extending present technology into the field of large, high temperature, fast reactors.

1965 - Engineering and economic feasibility study for a combination nuclear power and desalting plant for MWD, AEC, and OSW.

1965 - Constructor of 435 Mwe Pressurized Water Nuclear Power Plant at Brookwood for Rochester Gas & Electric Company.

1965 - Design and construction of two 760 Mwe units at Turkey Point Plant for Florida Power & Light Company.

1966 - Design and construction of 739 Mwe Palisades Plant for Consumers Power Company.

1966 - Partial design responsibility for two 822 Mwe units for Duke Power Company.

1966 - Design and construction of 545 Mwe Monticello Plant for Northern States Power Company.

1966 - Design and construction of 454 Mwe Point Beach Plant for Wisconsin Michigan Power Company.

1967 - Design and construction of 650 Mwe Pilgrim Nuclear Station for Boston Edison Company.

1967 - Design and construction of 800 Mwe Russellville Unit 1 for Arkansas Power & Light Company.

1967 - Design and construction of two 1,100 Mwe units for Philadelphia Electric Company.

1967 - Engineering consulting services for 750 Mwe nuclear generating station services for Southern Services, Inc.

EXHIBIT C

# TECHNICAL QUALIFICATIONS

## THE BABCOCK & WILCOX COMPANY

### GENERAL

The Babcock & Wilcox Company was founded as a partnership in 1867 and organized as a corporation in 1881. B&W is a widely diversified company serving the electric utility, transportation, steel, petroleum, chemical, pulp and paper, and machinery industries, as well as one of the world's leading suppliers of specialty steels. B&W is one of the leading suppliers of components for the nuclear Navy.

The Company ranks as one of the larger American industrial enterprises with corporate total current assets of over $262,000,000 at the end of 1966. Orders received in 1966 exceeded $840,000,000 and 1966 income before taxes and minority interest was over $62,400,000. The backlog at the end of June 1967 was more than $1,301,700,000. Current orders for nuclear components, systems, and fuel exceed $500,000,000.

B&W employs over 30,000 persons in facilities throughout the United States, Canada, Great Britain, and Sweden. Of this total, over 1,000 are technical and scientific personnel working in the nuclear power activities.

As the world's largest manufacturer of steam generating equipment, B&W is a recognized leader in the American industrial family. The company has contributed materially to the development of fundamental meterials data, heat transfer data, manufacturing and erection processes, and inspection techniques used in the steam generating equipment industry.

DIVISIONS AND SUBSIDIARIES

The major Divisions and Subsidiaries of the Company located in the United States, and their products, include:

a. Boiler Division

The Boiler Division designs, manufactures, installs and services nuclear and conventional steam generating systems and equipment and heavy pressure vessel equipment for the utility, petrochemical, and other industries. The Division designs and manufactures reactor vessels, steam generators, and pressurizers for the nuclear Navy, for the USAEC, and for commercial nuclear power plants. The Division also manufactures reactor cores for commercial nuclear power plants.

b. Tubular Products Division

The Tubular Products Division is one of the world's leading suppliers of specialty steel tubing, extrusions, and fittings.

c. Refractories Division

The Refractories Division mines raw material and manufactures a complete line of refractory materials and high temperature insulation for use in the utility, glassmaking, metals manufacturing, and space industries.

d. Automated Machine Division

The Automated Machine Division furnishes the automotive and related industries with highly automated production machinery.

e. Atomic Energy Division

The Atomic Energy Division conducts development programs on advanced nuclear power plant concepts, systems designs, and nuclear fuel management programs.

f. Research and Development Division

The Research and Development Division conducts research, development, and testing programs for the other Divisions and Subsidiaries of the Company. Development programs are also conducted under contract in the areas of heat transfer, metallurgy, nuclear fuels development, critical experiments, and radiochemistry programs. The Division's test reactor (BAWTR) and hot cell facilities are utilized for irradiation testing, isotope production, and irradiation encapsulation services.

g. Bailey Meter Company

Bailey Meter Company designs and manufactures instruments, controls, and computers for power generation, industrial processes, and naval and merchant vessels. Bailey also produces a full line of nuclear instrumentation, incore instrumentation, safety systems, and process instrumentation for use in nuclear power plants.

h. Diamond Power Specialty Company

Diamond Power designs and manufactures boiler cleaning equipment, special gauges, industrial television systems, stud tensioners, and reactor control rod drive mechanisms.

i. Babcock & Wilcox of Canada, Limited

This organization is a major Canadian supplier of steam generators, pumps, and process equipment for a variety of uses in the utility, pulp and paper, and chemical industries. It is also a major Canadian supplier of steam generators for nuclear power plants.

NUCLEAR EXPERIENCE

B&W's participation in the development of nuclear power dates from the Manhattan project. B&W's nuclear activities are broad and include applied research to develop fundamental data, design and manufacutre of nuclear systems components, and design and manufacutre of complete nuclear steam generating systems.

The major activities and accomplishments in the water-cooled and moderated reactor field are summarized below.

a. Indian Point 1 (Consolidated Edison Company of New York, Inc.)

In 1955, B&W contracted for the development, design, and supply of the nuclear steam supply system, reactor core, and related control system for Con Edison's Indian Point 1. This unit is a light water-cooled and moderated pressurized water reactor system rated at 585,000 thermal kilowatts. The unit includes a separately fired superheater which heats steam from the reactor system before introduction into a 275,000 kilowatt electric generator. Indian Point 1 went into commercial operation in January 1963.

b. NS Savannah (USAEC)

B&W was awarded a contract in 1957 to develop, design, and supply the entire propulsion plant for the NS Savannah. B&W's initial contract scope included, in addition to the design and supply of equipment and reactor core, the responsibility for safety analysis work, supervision of propulsion plant equipment erection, crew training, and advice in fuel loading, testing, and operation. Through later ancillary contracts, B&W personnel developed and directed the propulsion testing, startup, and initial operational programs.

B&W has continued to supply services in the areas of crew training, upgrading, and operation.

The NS Savannah went into commercial operation in May 1962 and has been in continous service since except for a one-year enforced outage resulting from a labor dispute.

The Savannah nuclear steam supply system is a light water-cooled and moderated pressurized water plant rated at 80,000 thermal kilowatts.

c. Advanced Test Reactor (Ebasco/USAEC)

B&W was retained in 1960 as the nuclear subcontractor to Ebasco Services, Inc., for the design of the Advanced Test Reactor. B&W's final scope of work included the design of the nuclear portion of the reactor complex including the reactor core, critical experiments, control rod drives, reactor vessel internals, and fuel handling tools. In addition, B&W was responsible for supervising the research and development programs including corrosion testing, fuel assembly development and heat transfer testing, and the supply of the reactor control rod drive system, as well as the design of inpile test loops. The Advanced Test Reactor is a light water-cooled and moderated high flux test reactor rated at 250,000 thermal kilowatts.

d. Otto Hahn Power Plant

B&W received in 1960, through its German licensee, Deutsche Babcock & Wilcox, a contract to provide technical and design consultation and assistance on the nuclear steam supply system and reactor core for the German Nuclear Ship, "Otto Hahn". The reactor is an advanced, light water-cooled and moderated, pressurized water reactor in which the core, steam generator, primary pumps, and piping are integrated into a single pressure vessel similar to B&W's Consolidated Nuclear Steam Generator (CNSG). The reactor is rated at 38,000 thermal kilowatts.

e. Oconee Nuclear Station Units 1, 2, and 3 (Duke Power Company)

B&W has a contract to supply three pressurized water nuclear steam supply systems for installation near Seneca, South Carolina. Each system is rated at 2,452 Mwt for a net electrical output of 839 MW. The first unit is scheduled for service in May 1971, the second in May 1972, and the third in June 1973. Each reactor uses chemical shim and control rods for reactivity control, and generates steam with a small amount of superheat in once-through steam generators.

f. Three Mile Island Nuclear Station Unit 1 (Metropolitan Edison Company)

B&W will supply one pressurized water nuclear steam supply system for installation near Harrisburg, Pennsylvania. Initial operation is scheduled for May 1971. The unit is rated at approximately 820 Mwe (net) and will be a near-duplicate of the units to be supplied for Duke Power Company.

g. Jersey Central Power and Light Company

B&W will supply one pressurized water nuclear steam supply system for installation at an undisclosed site. Initial operation is scheduled for May 1973. The unit is rated at approximately 800 Mwe (net) and will be a near-duplicate of the units being supplied for Duke Power Company and Metropolitan Edison Company.

h. Crystal River Station Units 3 and 4 (Florida Power Corporation)

B&W will supply two pressurized water nuclear steam supply systems for installation near Inverness, Florida. Initial operation of Unit 3 is scheduled for April 1972, and of Unit 4, mid-1974. Each unit is rated at approximately 840 Mwe and will be a near-duplicate of the Duke, Met-Ed, and Jersey Central units.

i. Russellville Plant Unit 1 (Arkansas Power and Light Company)

B&W will supply one pressurized water nuclear steam supply system for installation near Russellville, Arkansas. Initial operation is scheduled for December 1972. The unit is rated at approximately 840 Mwe and will be a near-duplicate of the Duke, Met-Ed, Jersey Central, Florida Power, and Sacramento units.

j. Research Reactors

B&W has designed and supplied seven research and test reactors ranging in size from 1,000 to 6,000 thermal kilowatts.

k. Research and Development

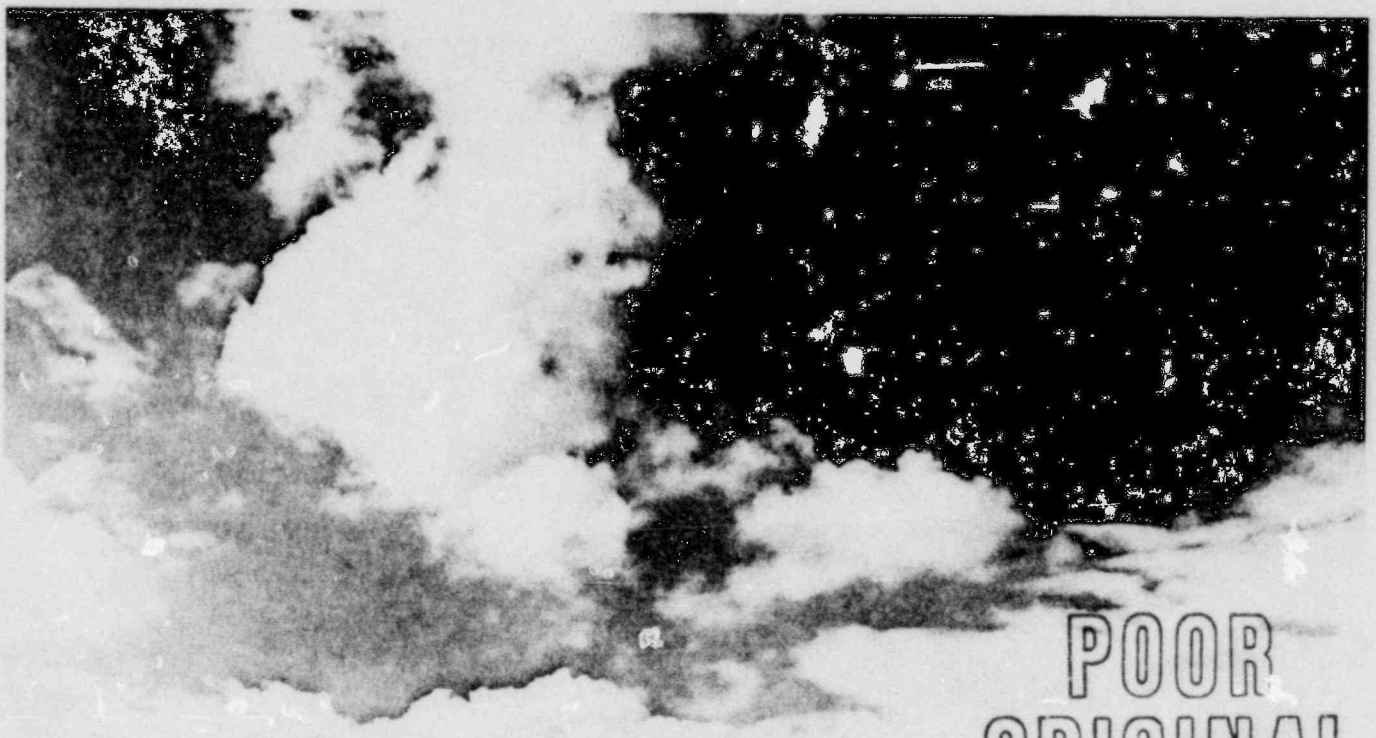
B&W's research and development and study efforts are significant and range from development of basic physics and materials data throught the development of complete reactor systems including a substantial effort in advanced converter and breeder reactor systems.

ORGANIZATION

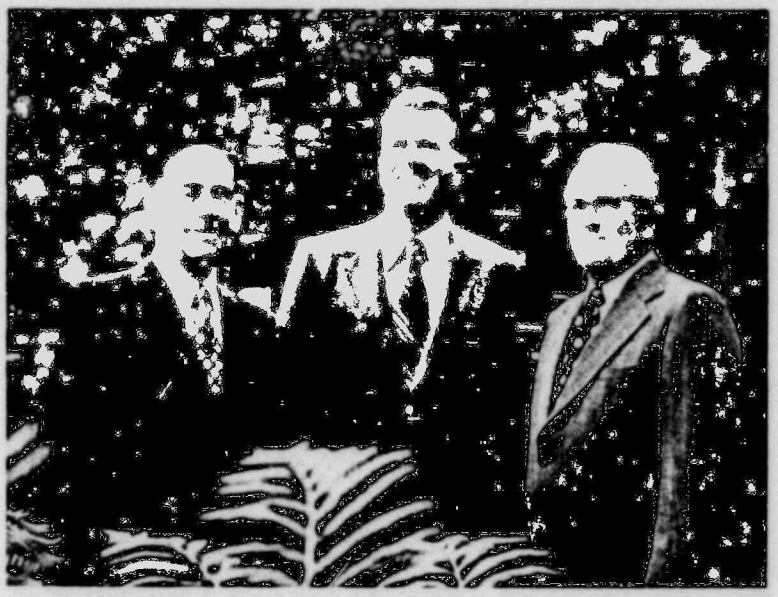
B&W's Boiler Division will execute the Sacramento Municipal Utility District contract with active participation by the other Divisions and Subsidiaries.

SACRAMENTO MUNICIPAL UTILITY DISTRICT

1973 ANNUAL REPORT







*Reginald A. Sweet, left, newly elected vice president of the SMUD board, is pictured with fellow directors William O. Baird, center, and Frederick E. Anderson, Jr.*

*Theodore J. Labhard, left, succeeded Donald E. Wachhorst as president of the Sacramento Municipal Utility District's board of directors following Wachhorst's retirement January 1, 1974 after 43 years of service.*

*Donald C. McClain, left, newly appointed member of the District board of directors, is shown with General Manager E. Kendell Davis.*

**Headquarters Office**

SACRAMENTO MUNICIPAL UTILITY DISTRICT
*6201 S Street, Box 15830*
*Sacramento, California 95813, (916) 452-3211*

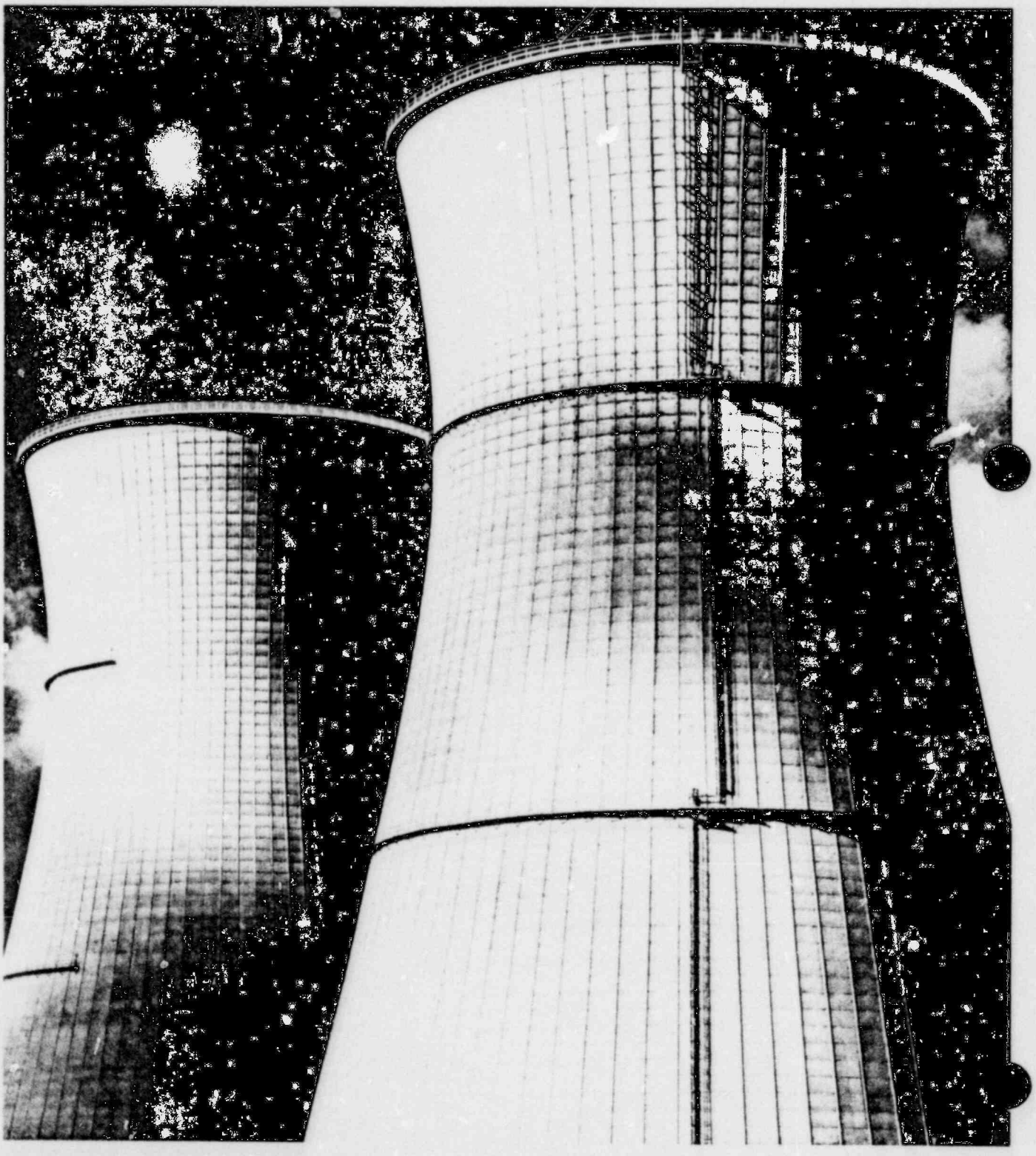
| HIGHLIGHTS | 1973 | 1972 |
|---|---|---|
| Customers at Year-end | 254,646 | 245,449 |
| KWH Sales | | |
| Residential | 1,873,000,000 | 1,733,000,000 |
| Total | 4,208,000,000 | 3,937,000,000 |
| KW Peak Demand | 1,173,588 | 1,099,188 |
| Net Revenue | $ 29,380,000 | $ 19,941,000 |
| Construction Expenditures | $ 84,522,000 | $116,235,000 |
| Capitalization at Year-end | $747,730,000 | $628,772,000 |

**About the cover**

*The twin cooling towers of the Sacramento Municipal Utility District's Rancho Seco Nuclear Power Plant silhouetted above the lakeshore of the Rancho Seco Recreation Area symbolize modern man's quest to improve the quality of his life while he seeks to preserve his environment for those who will come after him.*

*Scheduled for commercial operation by late 1974, SMUD's Rancho Seco Nuclear Power Plant will generate 913,000 kilowatts of electricity to provide for the power needs of the District's residents through this decade, contributing a saving to the nation of about 10-million barrels of fuel oil each year.*





# 1973: YEAR OF COMMEMORATION. YEAR OF CRISIS. YEAR OF CHALLENGE. YEAR OF CHANGE.



SMUD's 50th anniversary year brought with it excitement and stress, imposed by the force of events of these critical times. We were faced with severe problems brought on by fuel shortages, by inflation, by the squeeze on the dollar. Yet, we not only survived; we continued to develop.

**Year of Commemoration**

For SMUD, its 27th year of operation was an important anniversary. We passed the half-century mark with the observance on July 2 of the anniversary of the District's formation by the voters of Sacramento in 1923.

In recognition of SMUD's 50th year, we published a history of the District, tracing our progress from a modest beginning through our acquisition in 1946 of the local electric system to our present status as a publicly owned utility which generates, transmits, and distributes electric power.

We connected our 250,000th customer to the system early in September.

On October 12, we observed another milestone when we turned over the Rancho Seco recreation area to Sacramento County for operation as a regional park. We developed the recreation area on the 2,500-acre site of our Rancho Seco nuclear power plant, 25 miles southeast of Sacramento.

**Year of Crisis**

Although 1973 was a year of commemoration for us, it was a year of crisis, too. Like most in the utility business, we had been aware for several years that the Nation's natural resources were dwindling. In fact, we took a hitch in our belt in 1971, when we began phaseout of our sales activity. By January 1973, we had completed the turnaround from a sizable marketing department to a compact consumer relations operation to advise our customers on efficient use of electricity.

By May, we had inaugurated an energy-conservation program in our own offices, reducing the air conditioning and lighting load by 15 per cent. Consequently, by October, when the Arab oil embargo triggered the acute stage of the energy crisis, we were well into a program of helping our largest consumers individually in a conservation program to curtail electrical usage without imposing economic hardship or impairing production.

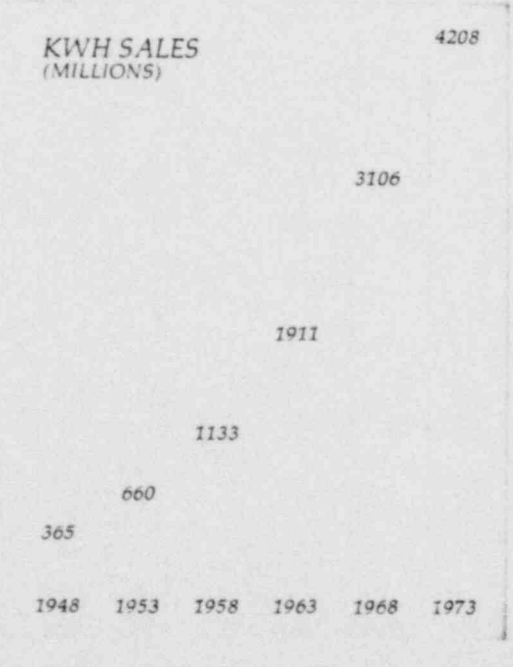
When the Federal Government appealed for a 10 per cent nationwide voluntary reduction in energy consumption, SMUD had already launched an educational campaign through the media and by public contact to inform our customers of the simple but effective ways they could cut down.

The District prepared a tentative plan for curtailment of electric service, should legislation mandate it. This program, in three successive stages, would call for a 5 per cent voltage reduction in the downtown area, rotating blackouts of two hours' duration for residential and small commercial customers and, finally, extending the duration of rotating blackouts and cutting back service to industrial customers and major shopping centers.

**Year of Challenge**

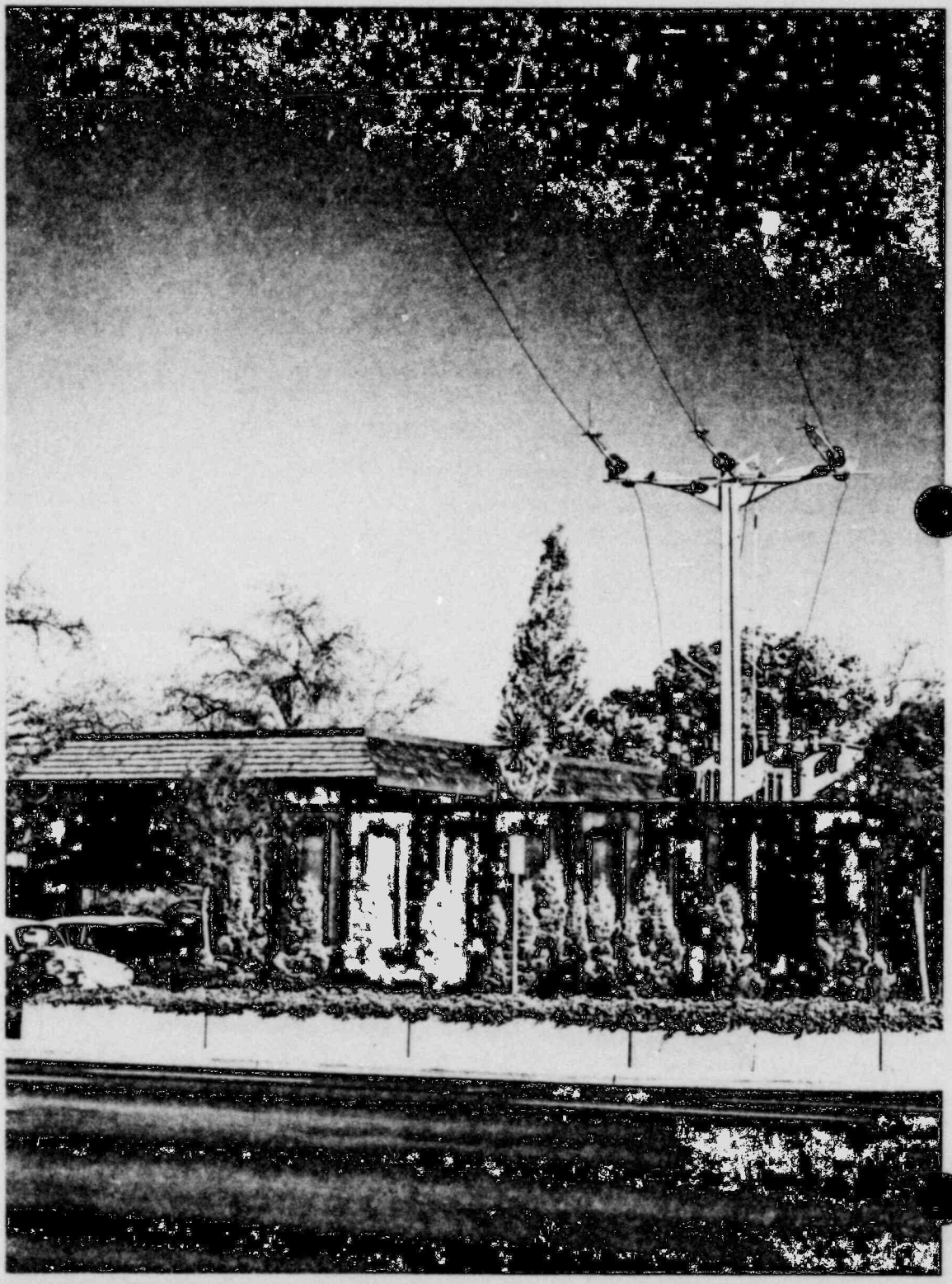
If 1973 was a year of crisis, it was also a year of challenge. We were getting our Rancho Seco nuclear power plant ready for 1974 startup. By year's end, construction at Rancho Seco was 99 per cent complete.

The Advisory Committee on Reactor Safeguards recommended in September that the Atomic Energy Commission grant a full-power license for operation



*The substation at Watt and Robertson Avenues signifies SMUD's long-established practice of keeping the production of electric power compatible with preservation of the environment. The District expends care and money on planning facilities that harmonize with the surroundings.*





of Rancho Seco. And in December, the plant's nuclear system successfully underwent "cold hydro" testing by inspection teams from the AEC, the California Division of Industrial Safety, and SMUD.

In 1974, system startup tests will continue until May when nuclear fuel is scheduled to be loaded. Zero-power physics testing of the core will follow fuel loading. After completion of power escalation tests, the plant will be ready for commercial operation. At this time it will have a generating capacity of 913,000 kilowatts; an oil-fired plant would need 10,000,000 gallons of fuel oil per year to generate an equivalent amount of electricity.

During 1973, our staff was busy looking at possible future sources of power generation... including geothermal, oil-fired and a second nuclear unit at Rancho Seco.

We continued financial support of our industry's research and development programs seeking new power sources. We joined other California utilities in sponsorship of a study of possible solutions to the energy crisis. We extended our support of a program to develop a pollution-free electric automobile.

The increased expenses due to inflation remain a continuing challenge

**Year of Change**

At year's end, the president of our Board of Directors, Donald E. Wachhorst, retired. A veteran of 43 years of service to the District, Wachhorst was first elected a director in 1931 and was returned to office by the voters for ten successive terms.

At their first meeting of 1974, the SMUD directors elected Theodore J. Labhard as the new president, and Reginald A. Sweet as vice president. They appointed Donald C. McClain, a Sacramento River Delta agri-businessman, to fill Wachhorst's unexpired term.

We initiated a marked improvement in the speed of service to our customers at the end of 1973, when the Customer Information Display System went on-line in SMUD's Customer Services Department. Twenty-seven video terminals were installed to speed handling of telephone orders and customer inquiries through instant retrieval of billing and credit information. The installation reduces to seconds the time needed to obtain information to be relayed to a customer. The District handles an average of 1,200 customer inquiries a day.

Following, at a glance, are other highlights of our 1973 operation:

**Construction Program**

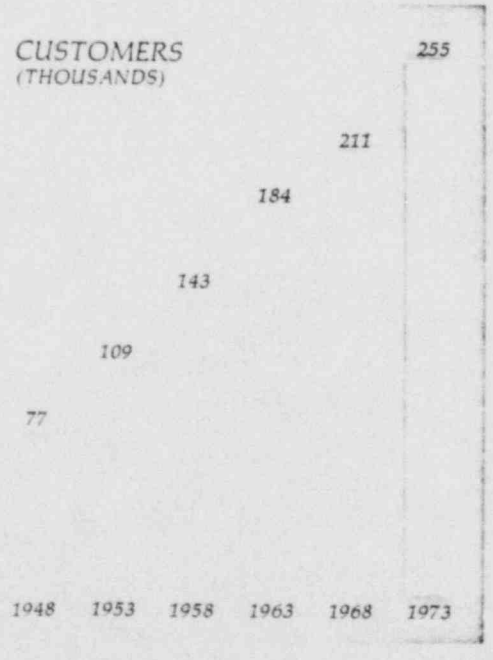
Total construction expenditures were $84,522,000. Continued construction of the Rancho Seco nuclear plant and procurement of nuclear fuel acccounted for $62,606,000.

Service area construction cost $19,917,000. Included were the Pocket Substation, a major new bulk power receiving station to service the fast-growing south area of Sacramento, and 47 miles of 230-kv transmission line to provide firmer ties with the Northern California power network.

The second 230/115-kv transformer was installed at Hedge Substation to provide more power to the older section of Sacramento.

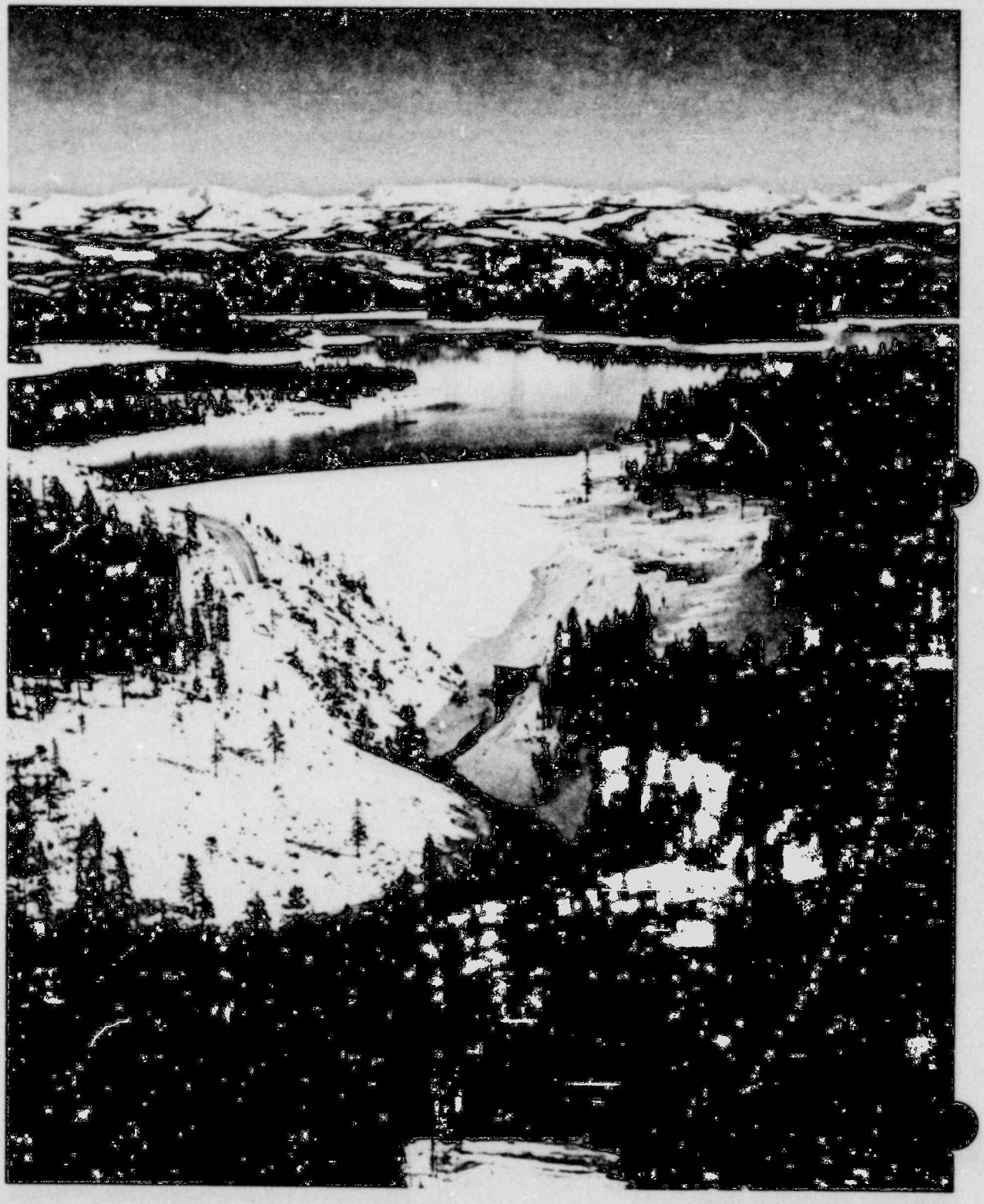
A new microwave system, at a cost of $788,000, was installed. This system connects the Rancho Seco nuclear plant, the upper American River hydroelectric plants and SMUD's central dispatching operation.

A $344,000 warehouse was built at our Fresh Pond



*Containment of runoff from the snowpack in SMUD's reservoirs on the Upper American River Project provides Sacramentans with a clean source of electric energy, offers a summer recreation retreat to thousands of people, and contributes to the water supply and flood control for the Sacramento area.*





headquarters on the Upper American River Project to centralize storage and control of materials formerly stored at several locations.

**Future Growth**

We began acquisition of land for SMUD s new East City Substation scheduled for construction start in 1975. It will strengthen service to a fast-growing area of Sacramento. The District also purchased the final land parcel needed for the proposed pumped-storage reservoir on the Upper American River Project.

**Financing**

SMUD sold $100,000,000 worth of revenue bonds during 1973. The first, $50,000,000 of Electric Revenue Bonds, Series E, was sold in April at a net interest rate of 5.298 per cent. Another $50,000,000 of Electric Revenue Bonds, Series F, were sold in November at a net interest rate of 5.472 per cent. These helped finance construction at Rancho Seco and in the SMUD service area. Because Rancho Seco construction is nearly finished, the District does not now plan a bond issue in 1974.

**Personnel**

Equivalent full-time employees of the District totaled 1,299 at the end of the year, an increase of 57 over the previous year. In August, the District contracted with the California Department of Employment Development to train 24 future full-time employees under a program paid for by State and Federal funds.

**Energy Sales**

SMUD customers purchased 4.208 billion kilowatt-hours of electricity in 1973, an increase of 6.9 per cent over the previous year. Residential customers, with an average consumption of 8,416 kilowatt-hours, accounted for 44.5 per cent of the total. Commercial and industrial consumers used 54.7 per cent, with street lighting and other miscellaneous uses accounting for the remainder.

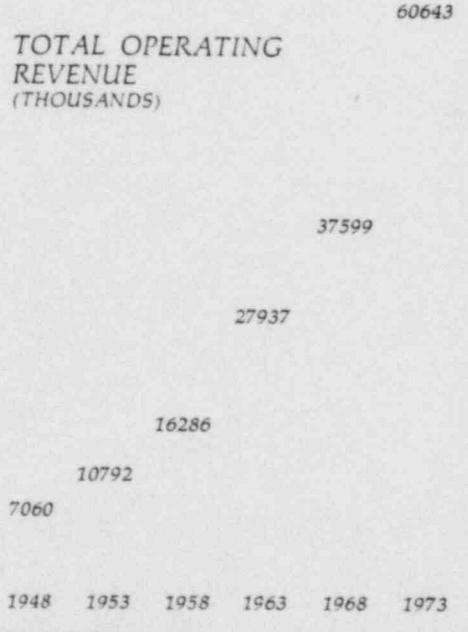
The effects of SMUD's energy conservation program were evidenced when the system peak in December was the lowest for any month in 1973. Historically SMUD has experienced its minimum monthly peak in January or February. This winter peak of 680,788 kilowatts occurred at 5:30 p.m. December 10. The impact of these appeals to the public to conserve energy was reflected by an 11 per cent reduction in kilowatt-hours consumed by SMUD customers during December 1973 as compared with the same month in 1972.

The annual peak demand on the system of 1,174,000 kilowatts was served at 6 p.m. on June 27.

As of December 31, 1973, SMUD served 254,646 customers, an increase of 9,197 over year-end 1972. Of the 8,301 new residential customers, 49 per cent selected electric space heating, an off-peak load which helps to increase the system load factor. New business, while below 1972's record level, remained high with 11,627 new meters connected.

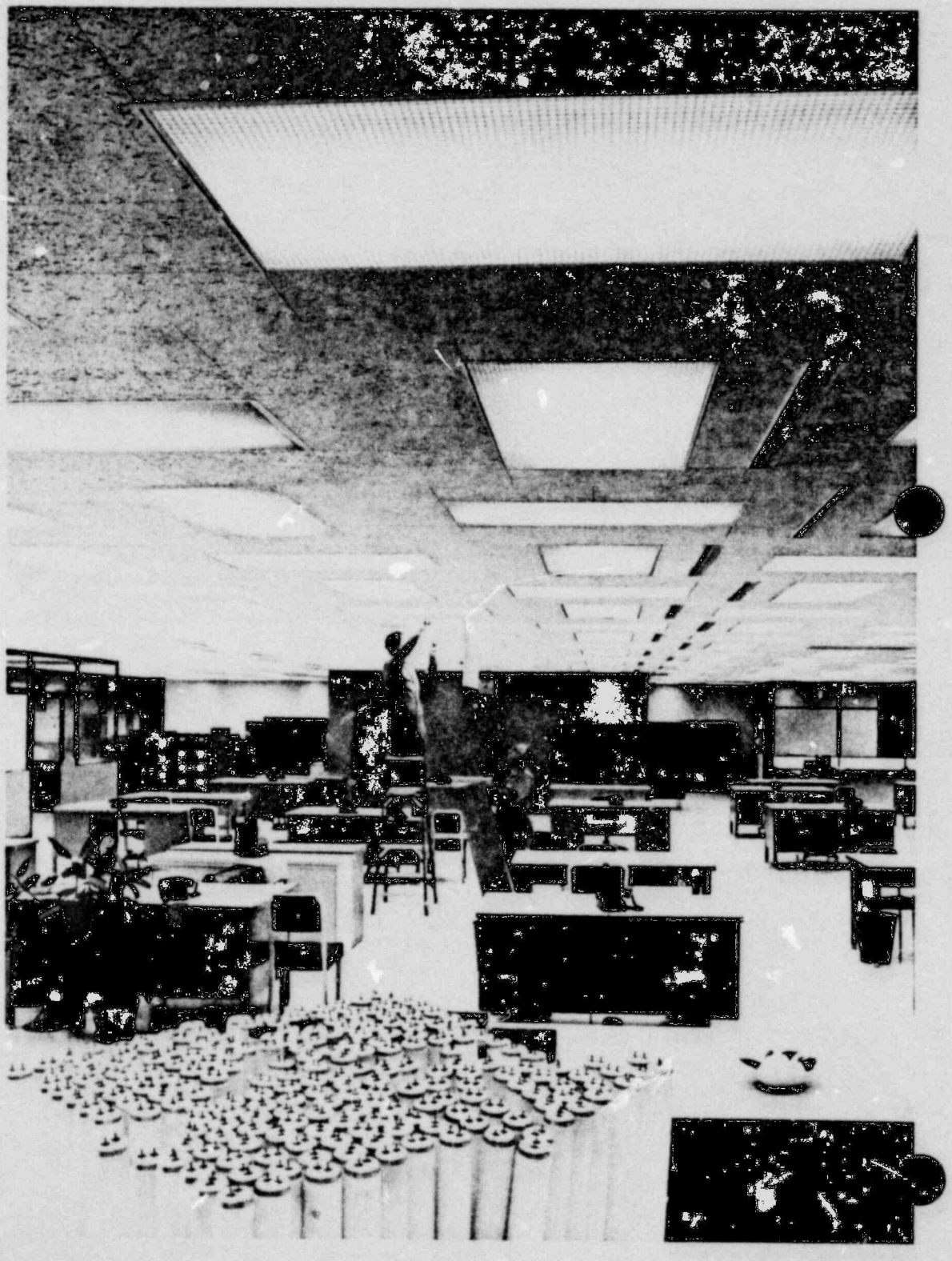
**Power Sources**

SMUD has a long-term contract with the United States Bureau of Reclamation for the purchase of 360,000 kilowatts of power developed by the Central Valley Project. During 1973, SMUD purchased 1.89 billion kilowatt-hours under this contract at an average rate of 4.1 mills per kilowatt-hour. The 1973 water year was above normal. The runoff to storage reservoirs was 443,000 acre-feet, 111,000 more than that of the 1972 water year, and 14 per cent above average. Consequently, SMUD's upper American River



*Confronted in 1973 by the energy crisis, SMUD reduced the electric load in its offices and other buildings by 15 per cent and urged its customers to cooperate with State and Federal Government requests to curtail the use of electricity through voluntary energy conservation programs.*





hydroelectric project provided 1.85 billion kilowatt-hours, or 41.7 per cent of 1973 requirements. This represents an increase of 261,877,000 kilowatt-hours over the generation for the previous year. An additional .92 billion kilowatt-hours were purchased from utilities in the Pacific Northwest.

When the 913,000-kilowatt Rancho Seco nuclear plant goes into operation in 1974, SMUD will sell to Pacific Gas and Electric Company capacity and energy which are surplus to our customers' needs. The contract with Pacific Gas and Electric Company provides for the integrated operation of the generation and transmission of the two systems and for a sharing of reserve requirements.

**Revenue and Other Income**

Revenue from energy sales for the year was $60,543,000, a 10.9 per cent increase over 1972, reflecting greater energy sales and a rate increase which was effective the last six months of 1972.

Other income during 1973 was $23,378,000, consisting of $16,819,000 of allowance for funds used during construction and $6,559,000 of interest earned on invested funds.

**Expenses**

Operating expenses were $32,116,000 in 1973, a 3.3 per cent increase over 1972. Operating expenses consist of purchased power, operation, maintenance, depreciation and taxes.

Purchased power costs in 1973 were $9,914,000, down 6.5 per cent from 1972. This reduction was the result of a better-than-average water year energy production from SMUD's hydroelectric generation.

Operation and maintenance expenses were $14,112,000, up 9.5 per cent from 1972. This increase reflects the higher level of business and continuing inflationary trends. Depreciation for 1973 was $7,698,000, an increase of 4.9 per cent. Depreciation is computed on historical cost of electric plant on a straight-line basis at rates set by engineering studies.

Taxes paid by SMUD and which are charged as such to operations amounted to $392,000 in 1973. Included are a portion of Social Security contributions and ad valorem taxes paid to Sacramento County on the Rancho Seco plant site and to El Dorado County on lands and water rights related to the District's hydroelectric generation project. SMUD also pays state and local sales and use taxes.

**Net Revenue**

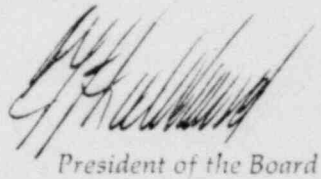
Net revenue was $29,380,000 in 1973, up $9,438,000 from 1972. Greater revenue from sales accounted for $5,953,000 of this increase. Other major factors include reduced purchased power cost due to above-normal hydroelectric generation, increased allowance for funds used during construction and greater interest earned on invested funds.

**Utility Plant**

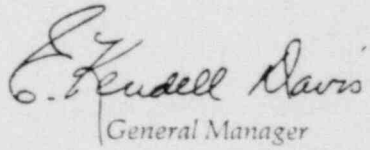
Utility plant stated at original cost less depreciation totaled $649,036,000 as of December 31, 1973. This was an increase of 13.5 per cent over the previous year. Of the total, $307,271,000 was for construction work in progress, including $290,631,000 for Rancho Seco. Another $32,748,000 was for nuclear fuel.

**Accounting System**

SMUD follows the Uniform System of Accounts for Public Utilities and Licensees prescribed by the Federal Power Commission. This is the same system privately owned utilities are legally required to follow.



*President of the Board*



*General Manager*

## BALANCE SHEETS December 31, 1973 and 1972



| ASSETS | | 1973 | 1972 |
|---|---|---|---|
| **ELECTRIC UTILITY PLANT, at original cost:** | Plant in service | $372,378,627 | $355,488,072 |
| | Less–Reserve for depreciation | 63,362,209 | 57,210,984 |
| | | $309,016,418 | $298,277,088 |
| | Construction work in progress– | | |
| | Nuclear | 290,630,821 | 233,484,316 |
| | Hydroelectric | – | 37,008 |
| | Other | 16,640,401 | 13,228,998 |
| | Nuclear fuel | 32,748,096 | 26,868,921 |
| | | $649,035,736 | $571,89[illegible] |
| **SEGREGATED FUNDS, consisting of cash and securities, at cost:** | For construction purposes (Note 4) | $ 82,666,081 | $ 40,316,528 |
| | For nuclear fuel | – | 1,228,198 |
| | In reserve funds for Revenue Bonds (Note 3) | 21,718,388 | 20,295,529 |
| | | $104,384,469 | $ 61,840,255 |
| **CURRENT ASSETS:** | Cash | $ 356,350 | $ 120,993 |
| | Segregated cash and securities for payment of debt service | 14,212,844 | 10,592,100 |
| | Accrued interest receivable | 1,640,832 | 1,299,848 |
| | Accounts receivable, less reserves of $133,761 and $103,981, respectively | 4,516,603 | 4,533,082 |
| | Materials and supplies, at average cost | 4,019,590 | 3,017,252 |
| | Prepayments, notes, and special deposits | 770,988 | 574,038 |
| | | $ 25,517,207 | $ 20,137,313 |
| **DEFERRED CHARGES** | | $ 3,667,719 | $ 4,107,199 |
| | | $782,605,131 | $657,981,[illegible] |

The accompanying notes are an integral part of these balance sheets.

| LIABILITIES | | 1973 | 1972 |
|---|---|---|---|
| CAPITALIZATION: | Customers' equity employed in the business– | | |
| | Balance beginning of year | $208,678,998 | $188,737,554 |
| | Net revenue for the year | 29,379,805 | 19,941,444 |
| | Total customers' equity | $238,058,803 | $208,678,998 |
| | Long-term debt (Note 2) | 509,671,014 | 420,093,136 |
| | | $747,729,817 | $628,772,134 |
| CURRENT LIABILITIES: | Accounts payable | $ 13,103,282 | $ 13,611,426 |
| | Accrued salaries, wages and vacation pay | 1,586,146 | 1,397,111 |
| | Long-term debt due within one year | 11,408,390 | 6,377,000 |
| | Accrued interest on long-term debt | 6,537,663 | 5,973,045 |
| | Customers' deposits | 1,358,833 | 1,270,183 |
| | Other | 881,000 | 580,199 |
| | | $ 34,875,314 | $ 29,208,964 |
| | | $782,605,131 | $657,981,098 |

Years ended December 31, 1973 and 1972

| | | 1973 | 1972 |
|---|---|---|---|
| OPERATING REVENUES: | Residential | $ 29,685,966 | $ 26,624,407 |
| | Commercial and industrial | 30,221,041 | 27,405,133 |
| | Other | 735,927 | 642,872 |
| | Total operating revenues | $ 60,642,934 | $ 54,672,412 |
| OPERATING EXPENSES: | Operation– | | |
| | Purchased power | $ 9,914,373 | $ 10,600,374 |
| | Other | 9,707,260 | 8,992,845 |
| | Maintenance | 4,404,780 | 3,89[illegible] |
| | Provision for depreciation (Note 1) | 7,698,331 | 7,337,[illegible] |
| | Taxes | 391,642 | 261,740 |
| | Total operating expenses | $ 32,116,386 | $ 31,090,353 |
| | Net operating revenue | $ 28,526,548 | $ 23,582,059 |
| OTHER INCOME: | Allowance for funds used during construction (Note 1) | 16,818,881 | 11,443,507 |
| | Interest income and other | 6,558,785 | 3,573,901 |
| | Gross income | $ 51,904,214 | $ 38,599,467 |
| INCOME DEDUCTIONS: | Interest on long-term debt | $ 22,374,273 | $ 18,520,428 |
| | Amortization of bond premium, bond redemption premium, discount and expense, net | 150,136 | 137,595 |
| | Total income deductions | $ 22,524,409 | $ 18,658,023 |
| | Net revenue for the year | $ 29,379,805 | $ 19,941,4[illegible] |

The accompanying notes are an integral part of these statements.

# STATEMENTS OF CHANGES IN FINANCIAL POSITION

SACRAMENTO MUNICIPAL UTILITY DISTRICT

| Years ended December 31, 1973 and 1972 | | 1973 | 1972 |
|---|---|---|---|
| **FUNDS PROVIDED FROM:** | Operations– | | |
| | Gross income (See Statements of Net Revenue) | $ 51,904,214 | $ 38,599,467 |
| | Add–Depreciation | 7,698,331 | 7,337,322 |
| | Total available for debt service | $ 59,602,545 | $ 45,936,789 |
| | Sale of bonds and notes– | | |
| | Electric revenue bonds | 100,000,000 | 50,000,000 |
| | SMUD notes | – | 28,000,000 |
| | 1972 building bonds | – | 8,000,000 |
| | Reductions in (additions to) segregated construction funds | (41,121,355) | 22,471,256 |
| | Other | (3,957,731) | 189,963 |
| | Total funds provided | $114,523,459 | $154,598,008 |
| **FUNDS USED FOR:** | Debt service– | | |
| | Revenue bonds | $ 25,229,812 | $ 21,918,565 |
| | General obligation bonds and notes | 3,635,232 | 2,775,319 |
| | Total debt service | $ 28,865,044 | $ 24,693,884 |
| | Additions to plant | 84,522,011 | 115,814,856 |
| | Additions to reserve funds | 1,422,860 | 7,749,332 |
| | Additions to (reduction in) working capital | (286,456) | 6,339,936 |
| | Total funds used | $114,523,459 | $154,598,008 |
| **NUMBER OF TIMES DEBT SERVICE IS COVERED BY FUNDS AVAILABLE:** | Revenue bonds | 2.36 | 2.10 |
| | Total debt | 2.06 | 1.86 |

The accompanying notes are an integral part of these statements.

# NOTES TO FINANCIAL STATEMENTS



## 1. Summary of Significant Accounting Policies

ORGANIZATION AND EXEMPTION FROM INCOME TAXES The Sacramento Municipal Utility District was formed and operates under the Municipal Utility District Act. The Act confers upon the District the rights and powers to fix rates and charges for commodities or services furnished, to incur indebtedness and issue bonds or other obligations, and under certain circumstances, to levy and collect ad valorem property taxes. The District is exempt from payment of Federal and State income taxes.

METHOD OF ACCOUNTING The District's books and accounts are based upon the Uniform System of Accounts for Public Utilities and Licensees prescribed by the Federal Power Commission, the same accounting system which investor-owned electric utilities operating in California are required to follow.

CONTRIBUTIONS IN AID OF CONSTRUCTION In 1973, the Federal Power Commission issued an order for companies under its jurisdiction to reduce plant investment for amounts received as contributions in aid of construction. The District has chosen to conform its accounting policies to this recommendation and has reduced its net plant investment by $2,400,806 previously classified, at December 31, 1972, as contributions.

DEPRECIATION METHOD The District provides for depreciation on the historical cost of electric properties on a straight-line basis at rates determined by engineering studies. The average annual depreciation rates for District plant in 1973 and 1972 were:

| | 1973 | 1972 |
|---|---|---|
| Generation | 1.52% | 1.49% |
| Transmission | 2.62 | 2.59 |
| Distribution | 3.12 | 3.14 |
| General | 4.31 | 4.24 |

ALLOWANCE FOR FUNDS USED DURING CONSTRUCTION The allowance, representing the cost of funds used to finance construction, is capitalized as a component of the cost of utility plant and is credited to Other Income. The amount capitalized in 1973 and 1972 amounted to approximately 5.8% and 5.4%, respectively, of eligible plant under construction. Eligible plant includes allowance for funds previously capitalized on nuclear plant and fuel. The increase in the amount capitalized in 1973 is mainly due to continued construction expenditures on nuclear plant.

RETIREMENT PENSION PLAN The District's employees are covered by a contributory retirement plan administered by the State of California. Contributions by the District for 1973 and 1972 amounted to $1,125,000 and $1,018,000, respectively.

## 2. Long-Term Debt

Long-term debt outstanding at December 31, 1973 and 1972, was as follows:

| | 1973 | 1972 |
|---|---|---|
| General Obligation Bonds and Notes– | | |
| Power Bonds of 1938 including premium, 3%-5%, 1974 to 1979 | $ 3,689,956 | $ 4,281,147 |
| Electric Bonds, 2%, 1974 to 1990 | 10,464,000 | 11,184,000 |
| 1958 Building Bonds, 2¾%, 1974 to 1978 | 1,750,000 | 2,070,000 |
| SMUD Notes, Series A, 3½%-4-2/5%, 1974 to 1977 | 28,000,000 | 28,000,000 |
| 1972 Building Bonds, 4%-5-2/5%, 1974 to 1992 | 7,770,000 | 8,000,000 |
| Revenue Bonds– | | |
| Upper American River Project Refunding Bonds, 3%-3-3/10%, 1974 to 1991 | 68,900,000 | 71,700,000 |
| White Rock Project Bonds– | | |
| Series A, 3¼%-3-9/10%, 1974 to 2004 | 11,310,000 | 11,495,000 |
| Series B, 3%-4¾%, 1974 to 2004 | 28,000,000 | 28,500,000 |
| Series C, 6¼%-7%, 1974 to 2010 | 28,800,000 | 28,900,000 |
| Series D, 6-4/5%-7%, 1974 to 2010 | 28,800,000 | 28,900,000 |
| Electric System Bonds, 2¾%-3-3/20%, 1974 to 1983 | 10,870,000 | 12,015,000 |
| Electric Revenue Bonds– | | |
| Series A, 4-4/5%-6-4/5%, 1974 to 2011 | 50,000,000 | 50,000,000 |
| Series B, 5¼%-7%, 1974 to 2011 | 40,000,000 | 40,000,000 |
| Series C, 4¾%-6¾%, 1974 to 2011 | 50,000,000 | 50,000,000 |

| | 1973 | 1972 |
|---|---|---|
| Series D, 5-1/10%-7%, 1975 to 2012 | $ 50,000,000 | $ 50,000,000 |
| Series E, 5%-6%, 1978 to 2013 | 50,000,000 | – |
| Series F, 5⅛%-6½%, 1978 to 2013 | 50,000,000 | – |
| Total bonds and notes | $518,353,956 | $425,045,147 |
| Purchase Agreements, 3¾%-5¾%, 1974 to 2000 | 2,725,448 | 1,424,989 |
| | $521,079,404 | $426,470,136 |
| Less–Amount due within one year | 11,408,390 | 6,377,000 |
| | $509,671,014 | $420,093,136 |

### 3. Reserve Funds for Revenue Bonds

Reserve funds for revenue bonds at December 31, 1973 and 1972, were as follows:

| | 1973 | 1972 |
|---|---|---|
| Electric System Bonds | $ 1,052,448 | $ 1,035,820 |
| Electric Revenue Bonds | 13,146,397 | 10,406,837 |
| White Rock Project Bonds | 929,986 | 929,986 |
| All Parity Bonds | 6,589,557 | 7,922,886 |
| | $21,718,388 | $20,295,529 |

### 4. Construction Program

Estimated construction expenditures in 1974 are $68,334,000, including $48,250,000 for Rancho Seco nuclear generation project.

## AUDITORS' REPORT



To the Board of Directors of
Sacramento Municipal Utility District:

We have examined the balance sheets of Sacramento Municipal Utility District as of December 31, 1973 and 1972, and the related statements of net revenue and changes in financial position for each of the years 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.

In our opinion, the accompanying balance sheets and statements of net revenue and changes in financial position present fairly the financial position of Sacramento Municipal Utility District as of December 31, 1973 and 1972, the results of its operations and the changes in financial position for each of the years then ended, in conformity with generally accepted accounting principles applied on a consistent basis during the periods.

Arthur Andersen & Co.

San Francisco, California
January 31, 1974

# TEN-YEAR SUMMARY

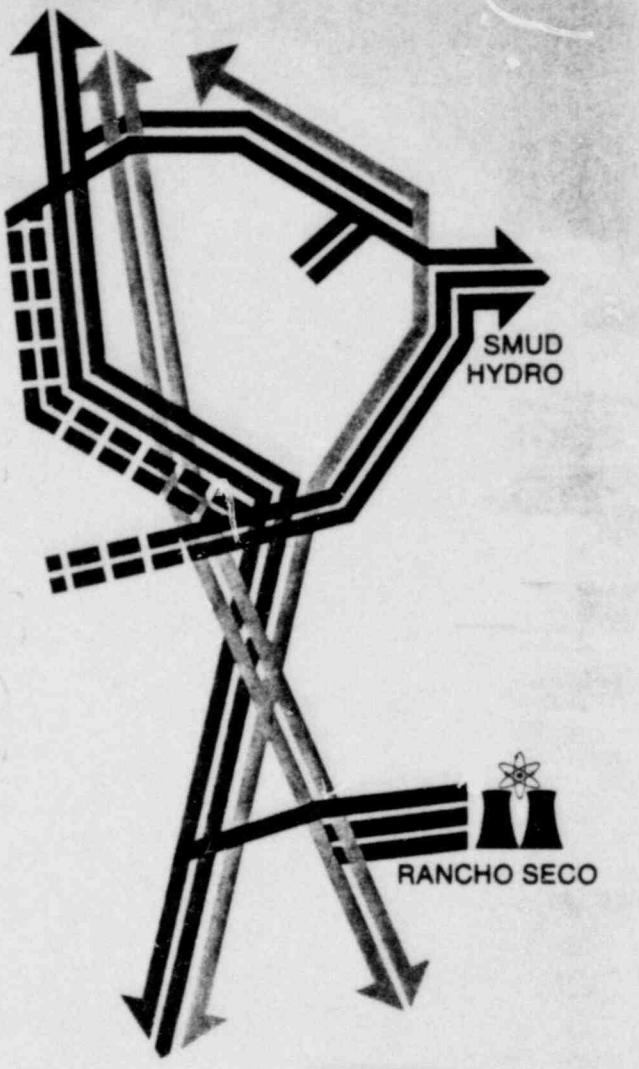


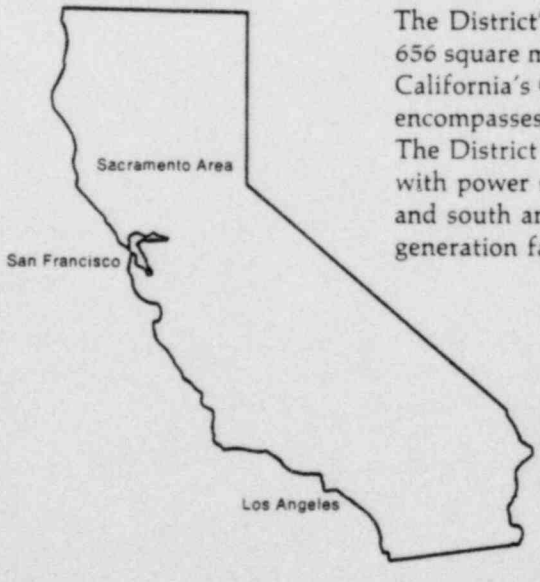
| OPERATING STATISTICS | 1973 | 1972 | 1971 | 1970 | 1969 | 1968 |
|---|---|---|---|---|---|---|
| Customers at Year End | 254,646 | 245,449 | 234,128 | 224,679 | 216,408 | 210,97 |
| KWH Sales (in thousands): | | | | | | |
| Residential | 1,873,373 | 1,732,798 | 1,611,792 | 1,437,918 | 1,354,488 | 1,202,51 |
| Commercial, Industrial, and Other | 2,334,503 | 2,204,425 | 2,038,245 | 1,953,273 | 1,952,288 | 1,903,10 |
| Total | 4,207,876 | 3,937,223 | 3,650,03[illegible] | 3,391,191 | 3,306,776 | 3,105,61 |
| Revenue (in thousands of dollars): | | | | | | |
| Residential | $ 29,686 | $ 26,624 | $ 23,302 | $ 19,711 | $ 18,692 | $ 17,17 |
| Commercial, Industrial, and Other | 30,957 | 28,048 | 24,373 | 21,566 | 21,133 | 20,42 |
| Total | $ 60,643 | $ 54,672 | $ 47,675 | $ 41,277 | $ 39,825 | $ 37,59 |
| Average KWH Sales per Residential Customer | 8,41[illegible] | 8,116 | 7,928 | 7,365 | 7,179 | 6,53 |
| Average Revenue per Residential KWH Sold | 1.58¢ | 1.54¢ | 1.45¢ | 1.37¢ | 1.38¢ | 1.43 |
| Power Supply (KWH in thousands): | | | | | | |
| Hydroelectric Generation | 1,853,006 | 1,591,129 | 1,664,528 | 1,893,027 | 2,546,344 | 1,121,25 |
| Purchases | 2,586,927 | 2,636,552 | 2,240,277 | 1,737,889 | 981,575 | 2[illegible] |
| System Peak Demand-KW | 1,173,588 | 1,099,189 | 1,020,389 | 908,388 | 855,589 | 79[illegible] |
| Equivalent Full-time Employees at Year End | 1,299 | 1,24[illegible] | 1,166 | 1,036 | 963 | 88 |

| FINANCIAL STATISTICS (in thousands of dollars) | | | | | | |
|---|---|---|---|---|---|---|
| TOTAL OPERATING REVENUES | $ [illegible]0,643 | $ 54,672 | $ 47,675 | $ 41,277 | $ 39,825 | $ 37,59 |
| OPERATING EXPENSES | | | | | | |
| Purchased Power | $ 9,914 | $ 10,600 | $ 8,661 | $ 8,396 | $ 6,158 | $ 9,53 |
| Operation, Maintenance, and Taxes | 14,504 | 13,153 | 11,435 | 10,604 | 9,078 | 7,85 |
| Depreciation | 7,698 | 7,337 | 6,483 | 6,000 | 5,749 | 5,42 |
| Total operating expenses | $ 32,116 | $ 31,090 | $ 26,579 | $ 25,000 | $ 20,985 | $ 22,80 |
| Net operating revenue | $ 28,527 | $ 23,582 | $ 21,096 | $ 16,277 | $ 18,840 | $ 14,79 |
| OTHER INCOME | 23,377 | 15,017 | 10,098 | 7,048 | 3,550 | 3,08 |
| Gross income | $ 51,904 | $ 38,599 | $ 31,194 | $ 23,325 | $ 22,390 | $ 17,88 |
| INTEREST AND OTHER INCOME DEDUCTIONS | 22,524 | 18,658 | 13,105 | 8,088 | 5,299 | 5,24 |
| Net revenue for the year | $ 29,380 | $ 19,941 | $ 18,089 | $ 15,237 | $ 17,091 | $ 12,63 |
| Times Debt Service Earned | 2.1 | 2.0 | 2.0 | 1.9 | 2.7 | 2.0 |
| Bonds Repaid | $ 6,607 | $ 6,237 | $ 5,898 | $ 5,759 | $ 81,876 | $ 4,54 |
| Electric Utility Plant | $ 649,036 | $ 571,896 | $ 466,091 | $ 348,155 | $ 296,190 | $ 259,32 |
| Capitalization: | | | | | | |
| Long-term Debt | $ 509,671 | $ 420,093 | $ 340,565 | $ 206,908 | $ 154,921 | $ [illegible] |
| Customers' Equity | $ 238,059 | $ 208,679 | $ 188,738 | $ 170,648 | $ 155,411 | $ 138,32 |

| 1967 | 1966 | 1965 | 1964 |
|---|---|---|---|
| 205,615 | 201,356 | 196,112 | 190,507 |
| 1,171,195 | 1,021,223 | 922,256 | 863,183 |
| 1,728,155 | 1,684,914 | 1,493,768 | 1,322,020 |
| 2,899,350 | 2,706,137 | 2,416,024 | 2,185,203 |
| $ 16,859 | $ 15,323 | $ 14,225 | $ 14,006 |
| 19,007 | 18,272 | 17,496 | 16,879 |
| $ 35,866 | $ 33,595 | $ 31,721 | $ 30,885 |
| 6,508 | 5,821 | 5,417 | 5,232 |
| 1.44¢ | 1.50¢ | 1.54¢ | 1.62¢ |
| 1,331,779 | 785,400 | 1,483,597 | 788,121 |
| 6,336 | 2,135,910 | 1,124,540 | 1,577,951 |
| ,388 | 682,391 | 576,590 | 545,590 |
| 838 | 831 | 811 | 780 |
| $ 35,866 | $ 33,595 | $ 31,721 | $ 30,885 |
| $ 6,894 | $ 9,107 | $ 6,015 | $ 6,879 |
| 7,442 | 6,612 | 6,437 | 6,087 |
| 4,558 | 4,452 | 4,496 | 4,343 |
| $ 18,894 | $ 20,171 | $ 16,948 | $ 17,309 |
| $ 16,972 | $ 13,424 | $ 14,773 | $ 13,576 |
| 3,460 | 4,044 | 2,770 | 1,649 |
| $ 20,432 | $ 17,468 | $ 17,543 | $ 15,225 |
| 5,397 | 5,546 | 5,193 | 4,777 |
| $ 15,035 | $ 11,922 | $ 12,350 | $ 10,448 |
| 2.1 | 1.9 | 2.7 | 3.2 |
| $ 4,377 | $ 4,251 | $ 1,295 | $ 1,256 |
| $ 245,915 | $ 229,724 | $ 217,291 | $ 198,767 |
| ,616 | $ 170,308 | $ 174,835 | $ 146,944 |
| $ 125,684 | $ 110,648 | $ 98,726 | $ 86,376 |

## DISTRICT SERVICE AREA




The District's service area of 656 square miles in the heart of California's Central Valley encompasses the State Capital. The District is interconnected with power sources to the north and south and its own generation facilities to the east.