El Paso Electric

Your Energy Service Company

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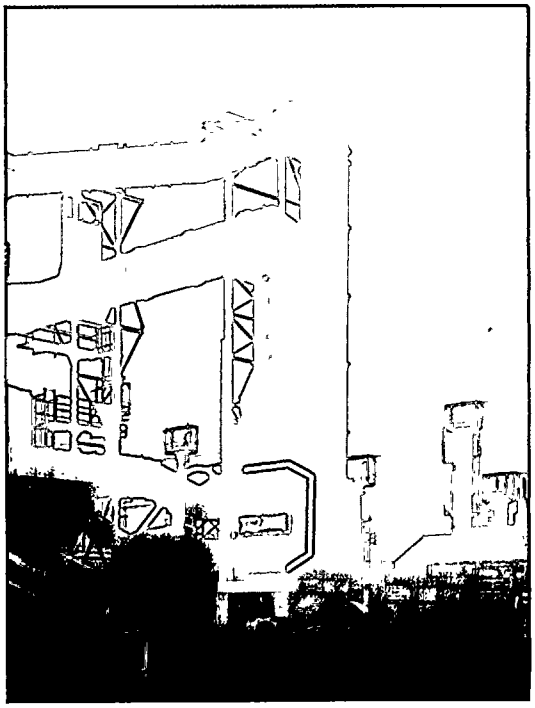


1988 Annual Report

On the cover: El Paso Refining Company, Ltd., one of El Paso Electric's major customers, is planning extensive future expansion. The items produced are gasoline, diesel, aviation fuel and other petroleum fuels.

ANNUAL MEETING OF SHAREHOLDERS

All shareholders are invited to attend the Annual Meeting of Shareholders on Monday, May 15, 1989, at 10 a.m. El Paso time in the Westin Paso del Norte, 101 South El Paso Street in El Paso, Texas.

Proxies for the meeting will be solicited by the board of directors in a communication to be mailed in early April. This Annual Report is not a part of such proxy solicitation and is not intended to be used as such.

Photography by Vallarie & Arturo Enriquez,
Vantage Point 1989

A MESSAGE FROM THE CHAIRMAN

March 1, 1989

Dear Shareholder:

El Paso Electric achieved two very important accomplishments in 1988. Palo Verde Unit 3, the third and final unit at the Palo Verde Nuclear Generating Station, successfully completed the transition from the construction stage to the commercial operation stage. And in the regulatory area, the Company received an order from the Public Utility Commission of Texas that implemented a rate moderation plan for Texas customers similar to the New Mexico rate moderation plan ordered in 1987.

Pictured here are Evern R. Wall, chairman of the board (left), and David H. Wiggs, Jr., president and chief executive officer.

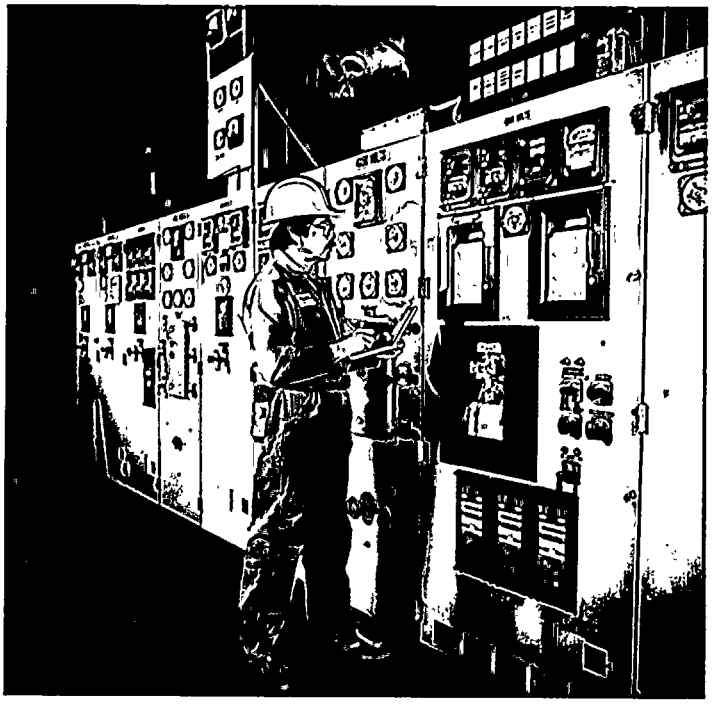
On January 11, 1988, Palo Verde Unit 3 started commercial operation. This important date marks a major milestone in the history of El Paso Electric and the other Southwestern utilities participating in the Arizona Nuclear Power Project. Fifteen years ago, El Paso Electric faced two critical needs, one being the need to diversify its fuel mix thereby reducing its dependence on natural gas, and the other being a need to provide additional electricity to a growing service area. Palo Verde now has enabled El Paso Electric to meet those needs.

During the past 15 years, the Company and its shareholders have experienced difficult periods of inconsistent and negative rate regulation. During this time, the Company has taken a number of innovative steps to supply the needed energy to the service area and to lessen the impact on customers of placing Palo Verde into the rate base and yet protect the investment of our shareholders.

After a series of negative rate orders, the Public Utility Commission of Texas in March 1988 issued an order which settled most of the prudence issues related to Palo Verde. The Commission also established a 10-year phase-in of rate increases to recover most of the Company's investment in Palo Verde Units 1 and 2. The Commission's order, along with the New Mexico plan, allows the Company to recover over time most of its investment in the units without the "rate spike," which would have occurred if the units had been placed totally into the rate base. The plans provide EPE and its customers with long-term rate continuity. The Company currently expects to seek Texas rate treatment of Palo Verde Unit 3 in 1990.

In 1988, I was pleased to announce the election of

David H. Wiggs, Jr., as the Company's president and chief operating officer. This announcement was made with the understanding that David would be my eventual successor. This year the second step in that transition was completed, when the board of directors accepted my recommendation that David be named the Company's chief executive officer effective March 1, 1989.



Powerhouse supervisor Frank Ortega at ASARCO Incorporated monitors the control panel at the copper smelter which used more than 88 million kilowatt-hours of electricity in 1988.

Although I am retiring from my duties as CEO, I will remain as the chairman of the board of directors and active as an adviser to David and the board.

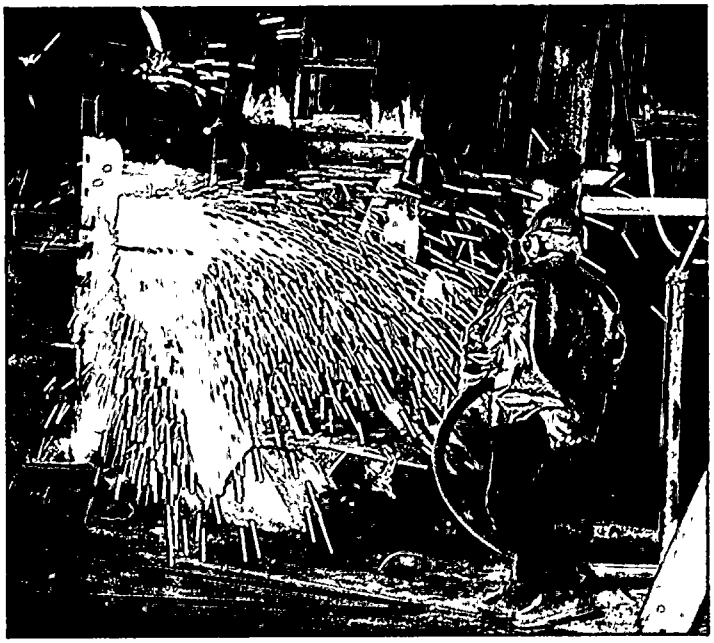
The board of directors and I have been very pleased with David's performance as president and believe that under his leadership the Company will continue to progress. Before his election as president last year, David was the Company's chief regulatory attorney from 1976 to 1987, a position which allowed him to acquire a great deal of knowledge and expertise concerning the Company and the electric utility industry as a whole.

I want to emphasize that I am proud of the active role EPE has had in supporting our service territory. Largely because of our diversification program, other public and private money is being used to fund redevelopment projects in downtown El Paso, and the Company has been successful in bringing many jobs to the El Paso/Las Cruces region. Through its subsidiary activities, El Paso Electric has helped to stimulate the regional economy, including electric sales, and remains an active participant in the growth and life of the communities which we serve.

The Company is featuring photos of some of the largest customers in its service territory in this report. The future success of these and other customers is very important to the economic development of the region. The Company also will continue to do everything it can to assist in economic development efforts in the communities it serves including offering the most competitive electric rates feasible.

There have been many exciting changes at El Paso Electric since I started with the Company in 1954 as a part-time night service clerk while completing my engineering degree at New Mexico State University. Then, El Paso Electric served less than 90,000 customers and had only a single gas-fired power station located near El Paso. Now, our fuel mix includes coal and nuclear which are needed to serve more than 230,000 customers.

At the start of my career, the Company's total system peak load was less than 200 megawatts. In 1988, for the first time ever, the Company recorded a total system peak load over 1,000 megawatts. In 1954, total kilowatt-hour sales were less than 1 billion. In 1988, the Company sold more than 5.5 billion kilowatt-hours of electricity. And I expect our region will continue to grow and prosper.



A 115-KV transmission line from Anthony Substation was completed in December to serve the two arc furnaces at Border Steel Mills, Inc. A 20-MVA electric arc furnace is pictured here.

I am grateful for the support I have received over the past 35 years from our directors, employees and shareholders. We have been through both good and challenging times, and I am confident that with your continued support for the board of directors of the Company, and David Wiggs and his management team, El Paso Electric's future will be positive.

Sincerely,

Evern R. Wall
Chairman of the Board

A MESSAGE FROM THE PRESIDENT

March 31, 1989

Dear Shareholder:

El Paso Electric is in a transition period. Having completed a 12-year, $1.6 billion construction program related to Palo Verde, the Company has begun a long-term period of phasing that investment into rates. Our objective has been and will continue to be to work with regulators and other parties to recover our investment in Palo Verde and a return on that investment while avoiding the adverse consequences of a "rate spike" on our customer base, all within the parameters of maintaining the financial integrity of the Company. One significant consequence of this phase-in period is that the Company is converting from a construction financing program to a financing program designed to meet the cash requirements created by phasing our Palo Verde investment into rates.

This transition period involves complex issues, the solutions to which will require both time and effective long-term planning. We are reviewing all aspects of our financial planning operations. This review will include, among other things, an analysis of the rate moderation plans, allocation methods, rate design and wholesale contracts, as well as our budgeting and forecasting methods and computer systems. Outside consultants are assisting in this review. Our goal is to improve our financial planning systems to more closely correlate with the complex environment in which El Paso Electric operates today.

1988 saw the successful completion and commercial operation of Palo Verde Unit 3 and the adoption of a rate moderation plan in our Texas service area for Palo Verde Units 1 and 2. In addition, the Company continued to experience good growth in electric sales and new customers in its service area. Notwithstanding these positives, financial results for the year were not good.

Income from continuing operations, after preferred stock dividend requirements, was $1.64 per share. Comparable results for 1987 were $2.03 per share. Increases in our utility operating revenues, resulting primarily from increased kilowatt-hour sales and rate increases in our Texas and New Mexico service areas, were offset by increases in operating and maintenance expenses due to increased expensing, as compared to deferring, of Palo Verde costs.

As our Palo Verde units have come on-line, that portion of our income represented by non-cash AFUDC earnings has decreased accordingly. The regulatory environment in which we have operated over the last several years has made it impossible to translate the full amount of accrued non-cash AFUDC earnings into cash immediately.

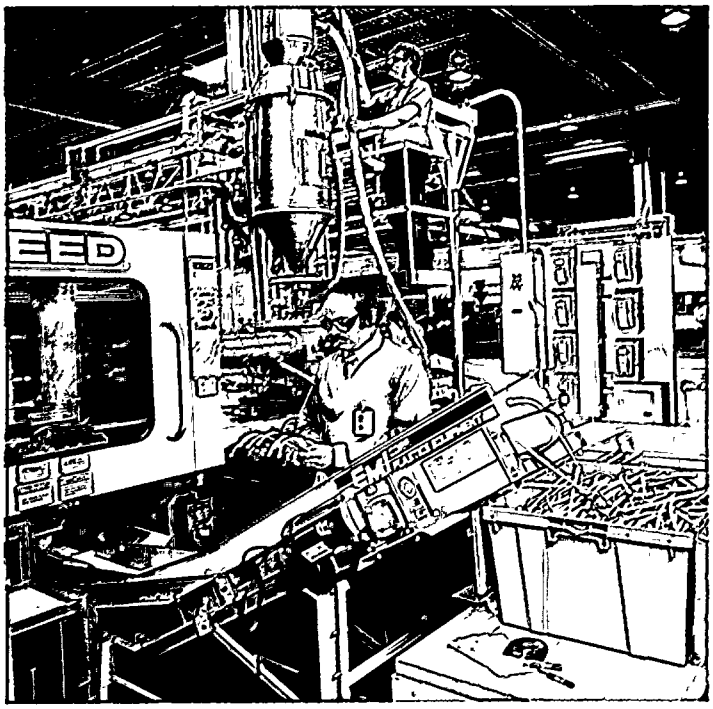
Rate moderation was at the time the various Palo Verde units came on-line and continues today to be the most realistic form of rate relief available to electric utilities which have been engaged in major construction programs. Rate moderation has involved, as far as El Paso Electric is concerned, a relatively small disallowance of our Palo Verde investment, but, unfortunately, rate moderation does not provide the same level of cash relief as traditional ratemaking would have provided.

Our 1988 results were also affected by the one-time after-tax provision for loss of approximately $36 million, recorded in the fourth quarter, which reflects our decision to discontinue the real estate operations of our Franklin Land & Resources, Inc., subsidiary. The provision for loss includes expected losses on the sale of the Westin Paso del Norte hotel and The Cortez office building, both in downtown El Paso, as well as a provision of approximately $7.6 million, net of tax, for expected operating losses during the phase-out period of those properties.

The Westin and The Cortez have accomplished their primary objective, which was to promote revitalization of downtown El Paso and stimulate economic and industrial development and electric power consumption in our service area. Although we believe that these properties have good long-term potential, they operate at a loss and have a detrimental effect on earnings and cash flow.

Additionally, the Company, through its PasoTex Corporation subsidiary, has completed the acquisition phase of our non-utility diversification program. PasoTex will now concentrate primarily on managing the existing portfolio of investments, with the objective being to enhance the value of and return on those investments. We are presently reviewing our non-utility operations and may, to improve cash flow or realize the value of our investment, determine to sell certain of those operations or their related assets.

Sales to other utilities increased from 1,087,444 megawatt-hours in 1987 to 1,271,366 megawatt-hours in 1988 or 16.9 percent. Sales in the Company's service territory also increased. Native system sales increased from 3,992,310 megawatt-hours of electricity in 1987 to 4,249,990 megawatt-hours of electricity in 1988. Total system sales increased 8.7 percent in 1988 compared with 1987, and native system sales increased 6.5 percent from 1987 levels.



One of El Paso's newest manufacturers, The Hoover Company, came on-line in November of 1988 to make items such as injection plastic molding for vacuum cleaners. Manuel Delgado, shift foreman (foreground), and Kenny Hoskins, setup man, oversee production on the injection plastic molding machine.

Customers were added to the system at an annual rate of approximately 3 percent in both 1987 and 1988. The Company also continues to achieve record peak demands. For the first time in our history, we recorded a total system peak above 1,000 megawatts. On August 22, 1988, the Company's total system peak was 1,002 megawatts, a 2.8 percent increase over 1987's record peak of 975 megawatts. The Company's 1988 native system peak demand of 840 megawatts was a 2.4 percent increase from the previous record of 820 megawatts set in 1987.

Palo Verde continues to perform well. Unit 3 completed its transition from the construction phase to the full-operation stage in 1988 and went on to set many American and world nuclear power plant records. More details about the operations of Palo Verde are provided elsewhere in this report.

In declaring our first quarter 1989 dividend of $.38 per share, we cautioned that the level of future dividend payment was uncertain and would depend on earnings, cash flow and other factors. Our present expectations are that 1989 income from continuing operations will be significantly lower than that reported in 1988, primarily due to anticipated reductions in investment income resulting from the use of invested cash and additional interest expense anticipated from short-term borrowing requirements. In general, we anticipate that future results of operations will be significantly affected by the timing and method of inclusion in our Texas rates of our investment in Palo Verde Unit 3 and that such results may continue to be significantly affected by reductions in regulatory earning assets, resulting from the sale of plant in our Palo Verde sales and leasebacks; the regulatory treatment afforded to those lease payments; the Texas jurisdictional disallowance which we recorded in 1987 as part of the adoption of the rate moderation plan for Units 1 and 2; and the deregulation of our New Mexico jurisdictional investment in Unit 3, which

formed the basis for our New Mexico rate moderation plan.

We are currently re-evaluating our dividend policy, including consideration of the possible reduction or omission of the dividend, in light of the anticipated lower income for 1989, our assessment of future results of operations, the Company's existing liquidity needs and restrictions on financing, and regulatory uncertainties surrounding Texas rate treatment of our investment in Unit 3. The decision we ultimately reach on the dividend will not be made in isolation or in the context of any one particular fact or condition. Rather, the decision will be made as an integral part of a comprehensive program to assure the financial integrity of El Paso Electric.

As the factors affecting future earnings and cash flow develop, and we incorporate the results of our financial review currently underway, we will formulate and implement plans and strategies designed to address the economic realities of this complex and demanding transition period with the least adverse impact on our shareholders, ratepayers and employees. In the long-term, the way in which we manage this transition period will provide the basis for our Company to achieve its primary goal – to provide safe, reliable, efficient electric service to our customers at a price which results in a fair return on shareholder investment.

Further details concerning our financial results are provided in the "Management's Discussion and Analysis of Financial Condition and Results of Operations" section of the Form 10-K, attached to this report.

In closing, I want to express our Company's deep gratitude to Evern Wall for his 35 years of service. As CEO, Evern guided the Company through a very difficult period – a period during which the Company successfully financed and constructed one of the best nuclear power projects in the country. The Company also began its diversification program which has provided jobs and stimulated economic development and electrical sales in the service territory. In 1986 and 1987, the Company completed the sale and leaseback of almost half of its interest in Palo Verde, which enabled the Company to levelize its capital costs associated with this portion of the plant and to provide for cash requirements during the final stages of the Palo Verde construction program. Finally, under Evern's leadership, the Company negotiated rate moderation plans for its Texas, New Mexico and Federal Energy Regulatory Commission jurisdictions.

We face complex and demanding challenges in this transition period. I am confident that through the dedication of all of us at El Paso Electric, we will successfully meet these challenges. I am committed to the future of our Company and look forward to working on your behalf.

Sincerely,

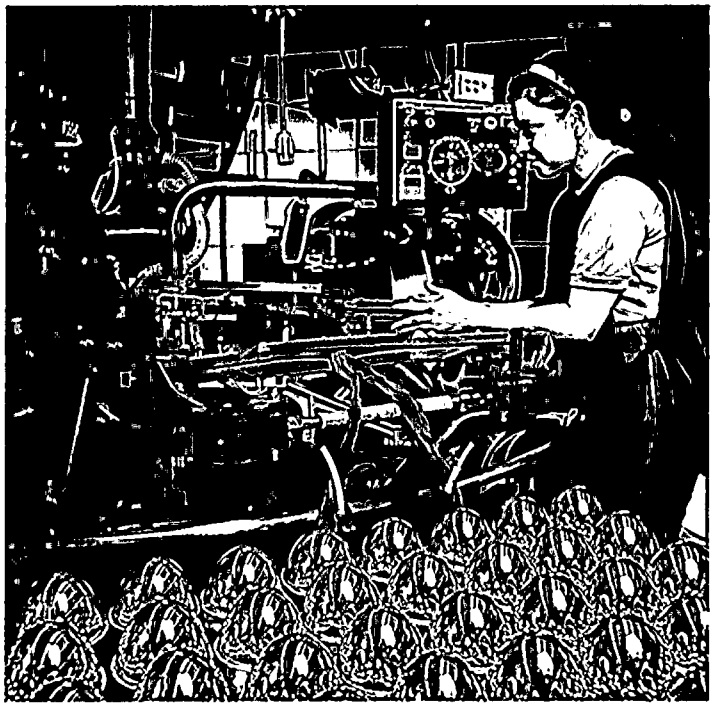
David H. Wiggs, Jr.

David H. Wiggs, Jr.
President and
Chief Executive Officer

RATE AND REGULATORY MATTERS

Texas

The Public Utility Commission of Texas' March 1988 order provided for a phased-in increase in Texas retail base revenues of approximately $46 million, and allowed the Company to recover expenses related to Palo Verde Units 1 and 2. The order resolved most issues related to the prudence of the decision by the Company to participate in Palo Verde and to the prudence of the construction process. In order to settle those issues, the Company agreed to an after-tax regulatory disallowance of approximately $24.4 million of its investment in Palo Verde (which is less than 2 percent of that investment). Only prudence issues related to the Company's continued investment in Unit 3 after 1979 remain open.



L'eggs, Inc., is the number one private employer in Southern New Mexico where employees make the nationally known brand of pantyhose. Pauline Lopez, AGT operator, loads stockings onto the automatic gussett/toe machine which sews the two legs together and closes the toes on the pantyhose.

The Company received a cash increase of approximately $21 million ($8.6 million after consideration of lower fuel costs), for the first 12 months of the rate moderation plan. The Company also will receive annual cash increases for the next three 12-month periods of the plan. After the fourth increase, the plan contemplates that base rates related to the Company's investments in Palo Verde Units 1 and 2 will remain constant while allowing the Company to recoup all expenses previously deferred under the terms of the plan. However, after the fourth year, additional base rate increases will be requested, if necessary, to fully recover all deferrals.

Although the plan establishes a rate path, the Company still has to file traditional rate increase requests each year in order to establish the cost necessary to serve its customers. In October, the Company filed a $39.2 million rate increase request, the second case under the Texas rate moderation plan. The Commission is expected to order a $7.3 million base revenue increase, effective May 1989, and also order expenses approved for recovery above the increase to be deferred. The Company plans to file its third rate case under the terms of the plan in the third or fourth quarter of 1989.

New Mexico

The New Mexico Public Service Commission approved a rate moderation plan for the Company's New Mexico customers in 1987. The order allowed the Company inclusion into rate base of the costs of Palo Verde Units 1 and 2. In negotiating the plan, the Company agreed not to seek any

costs associated with Palo Verde Unit 3 for inclusion into rate base in New Mexico.

The Company received its second base rate increase under the New Mexico rate moderation plan in November 1988. The New Mexico Commission ordered a base rate increase of $1.5 million. Plans are to file for the third increase under the New Mexico plan early in 1989.

One of the Company's goals is to keep its rates as competitive as feasible, and management believes its rates under the rate moderation plans will remain competitive with other utilities in the region.

PALO VERDE

Upon completion of regulatory-mandated testing, Palo Verde Unit 3 was declared by EPE to be in commercial service as of January 11, 1988. The unit went on to set the following U.S. and world nuclear power records:

January 1988 – After receiving its full power license in 1987, Unit 3 completed all required systems testing in 43 days, a new U.S. nuclear power record.

March 1988 – Unit 3 led the nation in generation by a single nuclear unit in a one-month period, producing 995,400 gross megawatt-hours of electricity.

July 1988 – Unit 3 set a world record for the continuous run of a nuclear unit in its first year of operation – 214 days. The record surpassed both the previous world record of 181 days and the U.S. record of 151 days.

December 1988 – Unit 3 generated approximately 10.8 million gross megawatt-hours of electricity, more than any other nuclear unit in the world in 1988.

The standardization of the units was recognized as the main reason behind Unit 3's remarkable performance. Because all three units are identical, procedures and processes used in one can be applied to the other two. With Unit 3, Palo Verde is now the largest nuclear power plant in the United States, and produces enough electricity to serve more than 4 million people.

For several reasons, Americans are taking a second look at the advantages of the nuclear power option. The record hot and dry summer of 1988 caused heightened concerns about the "Greenhouse Effect" and the possible harm to the environment caused by the burning of fossil fuels. Acid rain also continues to be a problem, and many expect the federal government to issue strict new regulations on the use of coal to generate electricity.

Americans are concerned about these issues and see the need for nuclear energy. A 1988 *Cambridge Reports* survey showed that more than 80 percent of Americans agree that nuclear energy is going to be important in meeting the future electrical needs of the country.

El Paso Electric is secure in the fact that its investment in Palo Verde will allow it to continue to provide for the electrical needs of its service area.

ECONOMIC DEVELOPMENT AND ENERGY MARKETING

El Paso and Las Cruces remain among the fastest growing communities in the country. Southern New Mexico led the state in growth in 1988. Population estimates from Texas A&M University show that El Paso was one of only four metropolitan areas in Texas whose population grew by more than 10,000 in 1986-87. While for the first time since the 1960s, more than half of the counties in Texas lost population in 1986-87, El Paso County's population grew by 13,400. The Texas A&M study cited three factors for the increase: El Paso's diverse economy, proximity to the border and mild climate.

Quality control is a necessary part of the 24-hour operation at Continental Sprayers, Inc., where the final product is plastic trigger sprayers. Yong Miller inspects for quality assurance before the parts enter the automated assembly equipment.

The maquila or "twin plant" industry continues to prosper and is an important part of the regional economy. Maquilas take advantage of U.S. customs law provisions which limit the customs duty on Mexican twin plant products to the "value added" to such products before importation. Typically, Mexican plants are involved in assembly, with the less labor intensive operations of the maquila located on the U.S. side. There are now about 230 plants in the Juarez area that employ more than 100,000 workers.

El Paso recently has lost many of the labor intensive jobs in the garment industry which were an important part of the local economy, but it has more than made up for those lost jobs in other areas. Occupations such as plastic injection molders, robotics operators and computerized machine operators are replacing those lost in the garment industry. Plastic injection molding itself has grown from two plants with 150 employees in 1981 to 13 plants that employ over 1,200 people in 1988. In 1988, over 1,000 new jobs were created in El Paso as a result of the maquila industry, and that figure is expected to continue to grow.

The El Paso/Juarez area is now home to several foreign companies which have joined their American counterparts in taking advantage of the maquila concept. Eight Japanese-owned maquilas, two German maquilas, and one each from Sweden, France, Finland and Great Britain currently are operating in the area.

The defense industry which includes two of the Company's largest customers, the Fort Bliss U.S. Army Air Defense Center and the White Sands Missile Range, also continues to be a major economic contributor to the region. Operations at both facilities continue to expand.

Construction has begun on a ground-based electron-laser project at Orogrande, New Mexico, near White Sands. The project is part of the Strategic Defense Initiative (SDI) program and could be a major new electrical customer.

Because of the SDI project, White Sands is a possible candidate for an experimental electrical storage facility project planned by the U.S. Defense Nuclear Agency. The facility will use new superconductivity technology to see if large amounts of electricity can be stored, similar to a large battery. If successful, the storage facility may be used to service the SDI project, which is anticipated to need huge, intermittent amounts of electricity. A site will be selected next year and construction could begin in 1991. El Paso Electric is working with the Rio Grande Council of Governments in funding site studies and providing information to bring the project to White Sands. Estimates are that $75 million could be spent in the regional economy as a result of the project being located at White Sands. The storage facility could also attract more high-tech projects to the region.

A Border Steel Mills, Inc., employee checks metal balls for defects.

The Company wants to take advantage of and encourage continuation of this growth in its service area.

The Company expects to help promote local economic development and growth, primarily by strengthening ties with commercial and industrial customers. El Paso Electric will be able to provide more information about a variety of energy matters for customers to help them use energy efficiently. The Company also will work closely through its Rate and Regulation Department in designing rates that will benefit both the Company and its customers. The Company hopes to further promote off-peak sales through the possible use of incentive rates. Off-peak sales not only increase the Company's total kilowatt-hour sales, but also shave peak demands, allowing the Company to delay the building of future power plants.

CORPORATE INFORMATION

Figures appearing in this report are presented as general information and not in connection with any sales or offer to sell or solicitation of any offer to buy any securities nor, are they intended as a representation by the Company of the value of its securities.

PasoTex Corporation, a subsidiary of El Paso Electric, has brought new industry to the area, such as Westwood Lighting Group, Inc., — a twin plant facility which employs workers on both sides of the U.S.-Mexico border. Employee Alfred Diaz inspects one of the factory's beautiful lamps.

Shareholder Organization

El Paso Electric shareholders are eligible to join Utility Shareholders of Texas, an organization which has been chartered to represent Texas utility shareholders' interest before state and federal agencies and administrative bodies, to inform shareholders of issues affecting their investments and to help maintain good relations between its members and utility management. All persons who hold securities in a Texas utility are eligible for membership, regardless of whether or not they live in Texas. For more information contact Floyd R. Smith, 21 Cheska Drive, Beaumont, Texas 77706.

Common Stock Shareholders

The Common Stock of the Company is held in every state and the District of Columbia, some U.S. territories and many foreign countries. The number of shareholders on December 31, 1988, was 43,836. Our records indicate that about 55 percent of the Company's shareholders own fewer than 500 shares each.

Toll-Free Telephone

The Company maintains a toll-free telephone system for the convenience of shareholders who may have questions or inquiries concerning their accounts. If you are calling from within Texas, the number is 1-800-592-1634. Elsewhere in the U.S., the number is 1-800-351-1621.

Transfer Agent

The Bank of New York, 90 Washington St., New York, N.Y. 10015 (Common and Preferred Stock).

MTrust Corp., N.A., Post Office Box 1072, El Paso, Texas 79958 (Common Stock Only).

OFFICERS OF THE COMPANY

David H. Wiggs, Jr., President and Chief Executive Officer (1)

Charles Mais, Senior Vice President (34)

Ignacio R. Troncoso, Senior Vice President (19)

William J. Johnson, Senior Vice President (11)

Gordon M. Heggem, Controller (9)

Eduardo A. Rodriguez, Secretary and General Counsel (7)

George A. Clifford, Assistant Vice President (31)

Robert W. Waugh, Assistant Vice President (21)

Frederic E. Mattson, Assistant Vice President (19)

Robert N. Hackett, Assistant Vice President (17)

J. Frank Bates, Assistant Vice President (16)

John T. Wacker, Assistant Vice President

C. R. Becker, Assistant Treasurer (11)

Bright orange bottle caps for trigger sprayers are produced at a rate of 5,000 per hour on each of the three machines that make this particular item at Continental Sprayers, Inc.

Years of Service ( )

William W. Royer, Senior Vice President (8)

Joseph E. Wasiak, Senior Vice President (11)

Lawrence M. Downum, Jr., Vice President (28)

James P. Maloney, Vice President (3)

Gary R. Hedrick, Treasurer and Assistant Secretary (11)

DIRECTORS OF THE COMPANY

Evern R. Wall, Chairman of the Board (14)

David H. Wiggs, Jr., President and Chief Executive Officer (1)

Wilfred E. Binns, Contractor, Binns Construction and Realty (6)

Robert H. Cutler, Chairman of the Board, Cutler Corporation (19)

H. M. Daugherty, Jr., Chairman of the Board and Chief Executive Officer, MBank El Paso, N.A., (6)

Leonard A. Goodman, Jr., Chartered Life Underwriter/General Agent, John Hancock Financial Services (10)

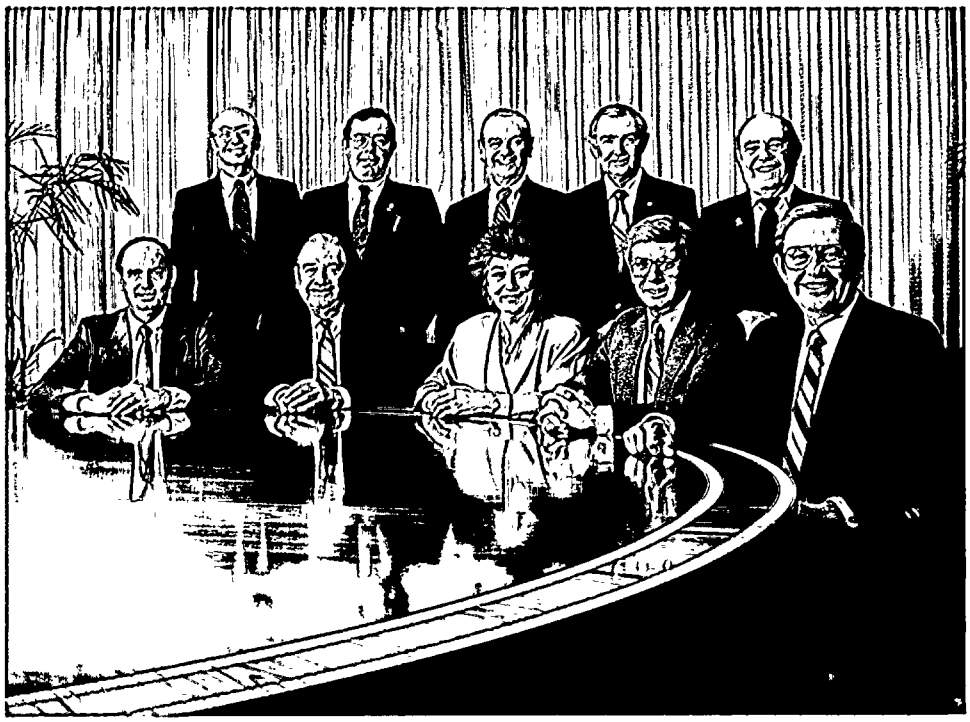
Ben L. Ivey, Farming (19)

Josefina A. Salas-Porras, Secretary-Treasurer, Sunland Motor Sports, Inc. (10)

Tom C. Simpson, President, Simpson Farms, Inc.; President, Simpson Cattle and Feed Company (6)

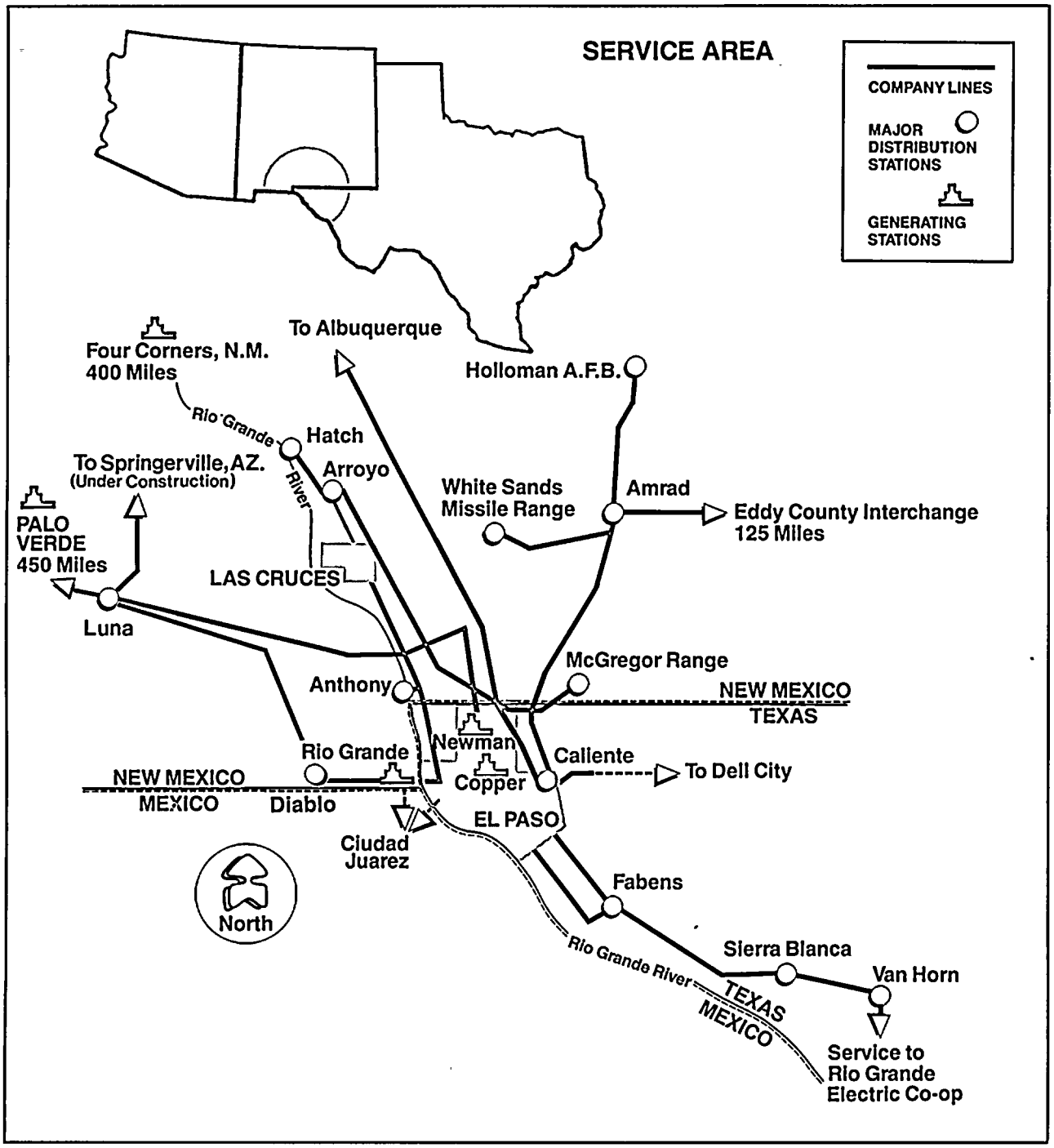
Tad R. Smith, Vice Chairman of the Board; Attorney, Kemp, Smith, Duncan and Hammond; Counsel for the Company (28)

Years Of Service ( )



El Paso Electric Company's board of directors. Seated left to right: Tom C. Simpson, Robert H. Cutler, Josefina A. Salas-Porras, David H. Wiggs, Jr., Chairman Evern R. Wall. Standing: Vice Chairman Tad R. Smith, H.M. Daugherty, Jr., Leonard A. Goodman, Jr., Wilfred E. Binns, Ben L. Ivey.

A complete copy of the Company's 1988 Form 10-K report, filed with the Securities and Exchange Commission, including Financial Statements and Financial Statement schedules, will be provided to shareholders without charge upon written request to: Eduardo A. Rodriguez, Secretary, El Paso Electric Company, Post Office Box 982, El Paso, Texas 79960.


SERVICE AREA
COMPANY LINES
MAJOR DISTRIBUTION STATIONS
GENERATING STATIONS
To Albuquerque
Four Corners, N.M.
400 Miles
Holloman A.F.B.
Rio Grande
Hatch
To Springerville, AZ.
(Under Construction)
Arroyo
River
White Sands
Missile Range
Amrad
Eddy County Interchange
125 Miles
PALO
VERDE
450 Miles
LAS CRUCES
Luna
McGregor Range
Anthony
NEW MEXICO
TEXAS
Newman
Rio Grande
Caliente
To Dell City
NEW MEXICO
MEXICO
Diablo
Copper
EL PASO
Ciudad
Juarez
North
Fabens
Rio Grande River
Sierra Blanca
Van Horn
TEXAS
MEXICO
Service to
Rio Grande
Electric Co-op

Current projections place the population of Los Angeles at around 3.7 million by the year 2000, a scant 12 years from now. Eight years into the 21st Century, 20 years hence, the population will be over 4 million—an increase of 15 percent above today.

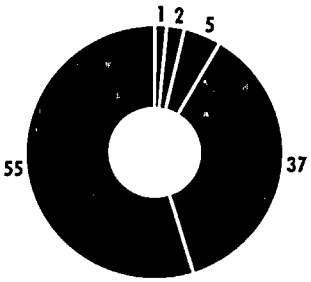
These new arrivals will differ in many ways—culturally, economically and socially—but they will all have one thing in common. They will need safe, reliable supplies of water and electricity at prices they can afford. And the Department of Water and Power must be ready to serve them.

We must do this in a way that responds to our customers' concerns about growth and the quality of life in our community, while dealing with the dollar-and-cents realities that face the utility industry today.

This year's DWP Annual Report provides an insight into the current thinking of DWP management as it faces the future. Taken together, it provides a roadmap for this, the nation's largest publicly owned utility, as it prepares for the next century.

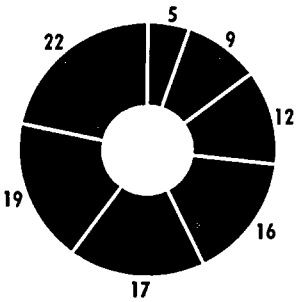
Water Revenue Dollar in Cents

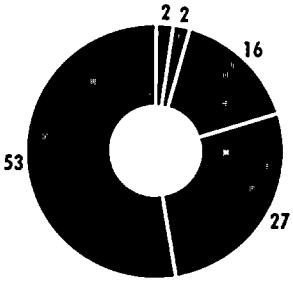
1 Other
2 Fire hydrant rentals
5 Governmental
37 Residental
55 Commercial and Industrial



Water Expenditure Dollar in Cents

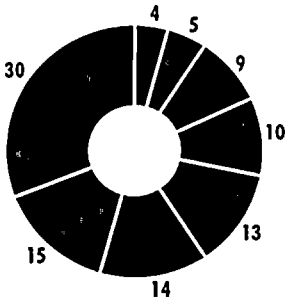
5 Payments to the City
9 Retirement Plan costs related to operations
12 Capital improvements
16 Debt service costs
17 Purchased water and energy
19 Other operating expenses
22 Operating salaries and wages





Power Revenue Dollar in Cents

2 Street lighting
2 Other
16 Industrial
27 Residential
53 Commercial



Power Expenditure Dollar in Cents

4 Payments to the City
5 Retirement Plan costs related to operations
9 Capital improvements
10 Debt service costs
13 Operating salaries and wages
14 Other operating expenses
15 Fuel
30 Purchased energy

Comparative Highlights

Year ended June 30	Water 1988	Water 1987	Water % Increase (Decrease)	Power 1988	Power 1987	Power % Increase (Decrease)
Service	Gallons in billions			Kilowatt hours in billions		
Sales	203.6	210.1	(3.1%)	21.1	20.5	2.9%
Customers—average number (thousands)	637.8	632.3	0.9%	1,304.6	1,275.9	2.3%
Financial	In millions			In millions		
Revenue*	$ 259.7	$ 252.9	2.7%	$1,588.1	$1,423.2	11.6%
Operating costs**	172.4	151.9	13.5%	1,191.7	1,031.6	15.5%
Net income	34.4	44.6	(22.9%)	175.6	186.8	(6.0%)
Payments to City of Los Angeles	12.4	11.3	9.7%	70.2	67.9	3.4%
Capital expenditures	104.8	99.1	5.8%	334.5	321.2	4.1%
Net utility plant	1,114.7	1,046.1	6.6%	3,324.9	3,133.5	6.1%
Capitalization—equity and long-term debt	1,172.5	1,054.1	11.2%	3,444.7	3,180.6	8.3%

**Includes other income—net*

***Excluding depreciation expense*

Approximately 3.4 million residents in the nation's second largest city receive water and electricity from the Los Angeles Department of Water and Power. As the largest municipally-owned utility in the nation, DWP has more than 11,000 employees serving the needs of residents, businesses and industry in a 465-square mile area. The City of Los Angeles began municipal distribution of water in 1902 and electricity in 1916.

The DWP, as a proprietary agency of the Los Angeles City government, receives no tax support. Its operations are financed entirely by the sale of water and electricity. Revenue bonds are the main source of external financing.

The DWP is administered by the Board of Water and Power Commissioners, whose five members are appointed by the Mayor and confirmed by the City Council for terms of five years. The Board establishes water and electric rates, subject to approval by the City Council.

Board of Water and Power Commissioners

General Manager and Chief Engineer

Assistant General Manager-Water
Divisions of the Water System:
Aqueduct
Water Operating
Water Engineering Design
Water Quality
General Services

Assistant General Manager-Power
Divisions of the Power System:
Power Operating and Maintenance
Power Design and Construction
System Development
Power System Services
Power Distribution
Real Estate

Assistant General Manager-External and Organizational Services
Divisions of External and Organizational Services:
Commercial
Customer Services
Government Affairs
Human Resources
Management Services
Public Affairs

Chief Financial Officer
Divisions of Finance and Accounting:
Accounting
Internal Audit
Financial Planning

Chief Assistant City Attorney for Water and Power

It is with great pleasure that we present the 87th annual report which reviews the accomplishments of the Department of Water and Power during the 1987–88 fiscal year.

We are continuing to meet the challenge of providing water and electric service to a dynamic metropolis while planning for expansion as the city grows into the next century. This is being accomplished in conjunction with our programs for water conservation and energy efficiency.

As the second largest city in the nation with 3.4 million people, Los Angeles is dependent on water and electricity for its vitality and growth. It is the Department's responsibility to ensure that these vital resources are available to residents, business and industry. We live up to this responsibility every day and are committed to doing so in the future.

Our success as a utility could not have been achieved without the help of the Mayor and the City Council. We also appreciate the efforts of other elected city officials and city departments.

It would be impossible to attain our goals without our greatest resource—management and personnel whose continued dedication and service have made this utility efficient and responsive to its customers.

Rick J. Caruso

President

Board of Water and Power Commissioners

Rick J. Caruso
President

Jack W. Leeney
Vice President

Angel M. Echevarria

Carol Wheeler

Walter A. Zelman

Rick J. Caruso

President
Board of Water and Power Commissioners

Since formation of the City's first public utility nearly 90 years ago, the Department of Water and Power's primary responsibility has been to serve the public's interest. This is carried out through service to our customers, maintaining the financial strength of the Department, protecting current supplies of water and power and securing future supplies to meet the needs of our City.

The Board of Water and Power Commissioners holds lead responsibility for seeing that this mandate is carried out. With my fellow commissioners, we represent the interests of over 3,400,000 residents of the City through their elected representatives, the City Council and Mayor.

Our judgment must always be guided by the fact that DWP provides not a luxury, but vital necessities: electricity that serves our homes and drives our economy and water that sustains life.

As the nation's largest publicly owned utility, DWP accepts responsibility for leading the way in shaping the future of this industry—which means finding innovative yet practical ways to deal with changing economic, social and regulatory conditions. This requires us to be more businesslike, more adaptable, more sensitive to external concerns and more proactive in meeting challenges.

For this we look to our partners in public service, the men and women who run the water and power systems. Their dedication will continue to meet the challenges facing us.

On this 75th anniversary of the Los Angeles Aqueduct, the Board thanks everyone associated with the DWP. Our special thanks to General Manager Paul H. Lane, who is retiring after 40 years of dedicated service to the Department.

Paul H. Lane

General Manager and Chief Engineer

The growth of Los Angeles from a tiny pueblo to the premier city of the Pacific Rim makes a great story. Development of the water and power systems to supply this growth is even more fascinating.

It all started quite simply during the early years, with the challenges being technical, engineering, physical and financial. When you needed more water or electricity you designed and constructed the most reliable and lowest-cost systems.

Today's public utilities are faced with new challenges requiring new skills in addition to the traditional ones of engineering design and construction. This new environment involves increased interaction with public officials, legislative and regulative bodies and the media; negotiating labor contracts; and responding more effectively to consumer concerns.

Colleges are becoming more aware of the need for people with human relations skills, and have responded by developing new courses. At the Department, we have a constant need for these skills and are preparing our employees to deal with the complex people issues that confront us today. This process includes internal training classes, university graduate programs, an employee speakers bureau, and more effective interaction with consumer and environmental groups, the media and elected officials.

The importance of the products we serve to our customers puts us directly and irrevocably into the people business in addition to the utility business. We will continue to solve the complex technical and engineering problems involved in maintaining adequate supplies of water and electricity to our City while meeting the increasing number of new demands in the arena of human relations.

Duane L. Georgeson
Assistant General Manager – Water

Delivering high-quality drinking water to a thirsty city has been a commitment of the Department of Water and Power over all 86 years of our history. Today, even as water quality standards become more stringent, your DWP remains on top of the situation, consistently providing a product that meets or exceeds all requirements.

Yet public concerns remain, fueled by reports of proliferating contaminants in our environment. A significant percentage of our customers—reacting to such reports—have turned to alternate drinking water supplies, paying a high price for a margin of safety that is largely illusory. How can we, as stewards of the public trust, respond constructively to such concerns?

First of all, we must recognize that maintaining high quality drinking water in a megalopolis like Los Angeles *is* a tough job. The system—from underground water mains to above-ground reservoirs—requires constant attention. We must continue to pursue new technologies, such as those at our new Aqueduct Filtration Plant, to give us an edge in the battle against water degradation. The public, our customers, deserve to know these facts.

They also need to know that we are winning. By measures both objective and personal, today's Los Angeles tap water is purer, better tasting than ever. And thanks to ongoing efforts of the Department's employees, it continues to improve.

Making these facts clear to a discerning public is also one of our most important jobs. It is our responsibility not only to safeguard but to accurately inform the public we serve.

Coping with the second consecutive dry year in the Eastern Sierra Nevada was a major priority of the Water System during 1987-88. This region, 300 miles north of Los Angeles, is normally the source of 75 percent of the city's water supply, but last year its share fell to only 60 percent.

As a result, conservation efforts were intensified, including activation of Phase I of the city's Water Conservation ordinance, calling for voluntary 10 percent cuts in water use by consumers. In addition, the DWP extended its conservation advertising and promotional campaign, which featured 12 Los Angeles TV weathercasters. Offers of free low-flow shower heads and water saving kits were also mailed to customers along with their bills as part of a mandatory retrofit ordinance approved by the City Council.

The drought has also forced the Department to sharply increase water purchases from the Metropolitan Water District, at a significant cost premium over DWP sources. In normal periods, MWD supplies around 10 percent of the city's water needs, but this year purchases will be around 30 percent.

Improvement of water quality remains a major activity of the Water System. Work continued on a $2.5 million aeration tower in North Hollywood for treatment of a portion of San Fernando Valley groundwater. Completion is scheduled in late 1988.

As a leader in water quality, the DWP is involved in innovative

Twelve Los Angeles television weathercasters helped the DWP carry its conservation message to the public last year. Front row, from left: Judy Jurnudd, KCOP; Maclovio Perez, KCBS; Cristina Aceves, KMEX; Johnny Mountain, KABC; middle row: Kirstie Wilde, KTTV; Andrew Amador, KHJ; Maria Laria, KVEA; Dr. George Fischbeck, KABC; Jann Carl, KTLA; top row: Steve Rambo, KCBS; Dallas Raines, KABC; Kevin O'Connell, KCBS.

Research and planning were completed in 1988 on a 2,000-gallon-per-minute groundwater treatment demonstration plant involving new ozone/hydrogen peroxide technology developed jointly by UCLA and the DWP. The $1 million facility, which will remove volatile organic chemicals (VOC's), will be built in North Hollywood under contract with a private engineering firm. Completion is scheduled in late 1989.

In order to help customers comply with Los Angeles' Emergency Water Conservation Ordinance, the DWP distributed to requesting residential customers free water conservation kits. The kits include a low-flow showerhead as well as other devices to help save water in the home.

research on an advanced oxidation process in partnership with UCLA. One groundwater treatment effort that looks promising utilizes ozone and hydrogen peroxide.

The Los Angeles Aqueduct Filtration Plant completed its first full year of operations with a high degree of reliability, producing exceptionally high water quality.

Efforts were pressed to upgrade the water distribution system through replacement and cement lining of older mains and covering of small reservoirs.

Mono Basin litigation continued, with the Department defending challenges to its long-held water rights in that area. A 16-month extension of the Los Angeles-Inyo Agreement was approved, allowing for completion of a cooperative environmental impact report and groundwater management plan for the Owens Valley groundwater basin.

Water System Facts in Brief

Year ended June 30	1988	1987
Use of Water		
Average Los Angeles population served	3,388,000	3,338,000
Average daily use per capita (gallons)	180.8	188.6
Water sales for fiscal year, (billion gallons)	203.6	210.1
Maximum daily demand, (million gallons)	841.0	873.0
Water Supply (in cu. ft. per second—c.f.s.)		
Local supply	166.9	137.0
DWP Aqueduct	573.6	661.4
Metropolitan Water District (California Aqueduct and Colorado River Aqueduct)	207.7	177.1
Gross supply	948.2	975.5
Diversion from (to) local storage	(0.3)	(1.7)
Net supply to distribution systems	947.9	973.8

Norman E. Nichols
Assistant General Manager–Power

Like other segments of American industry, the electric utility business is experiencing drastic changes. The prospect of deregulation, increased competition, changes in the tax laws and constantly evolving world economic conditions provide us with many new challenges.

Unlike the monopolistic environment of the past, competition in the electric utility industry today is very real. Other energy forms now compete with electricity. Some customers generate their own power, selling off what they don't need. Entrepreneurs are willing to build power plants and sell the output to electric utilities or to groups of former utility customers.

Legal and regulatory uncertainty and the prospect of changes in tax policies make planning for the future difficult. To assist us, the Power System has developed a Strategic Plan that addresses 11 important areas of our electric business, ranging from financial responsibility to employee relations.

To keep our competitive edge, we have chosen two areas for special emphasis: price and service to our customers. We plan to maintain rates at 1985 levels, adjusted only for inflation. This means future electric rate increases must not exceed this region's Consumer Price Index—an ambitious goal, but one we must meet to stay competitive. Increased emphasis on customer service will also help us compete in the new environment.

We build upon a record of success and innovation, a tradition we must carry on as we move into the future. The Strategic Plan points the way into the 21st Century.

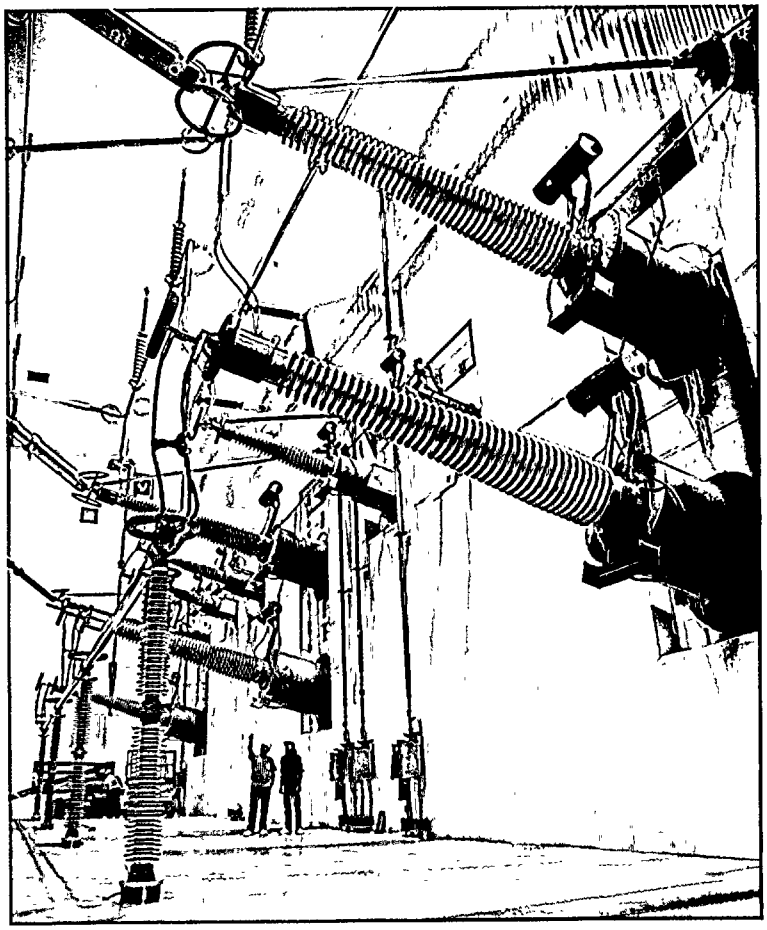
The Power System took a major stride forward in 1988 with completion of its first Strategic Plan, designed to guide management through the uncertain environment facing electric utilities over the rest of the century. The plan, reflecting the ideas and energies of hundreds of DWP employees and several outside experts, will be a valuable tool in helping the system remain financially and operationally strong and responsive to its approximately 1,300,000 customers.

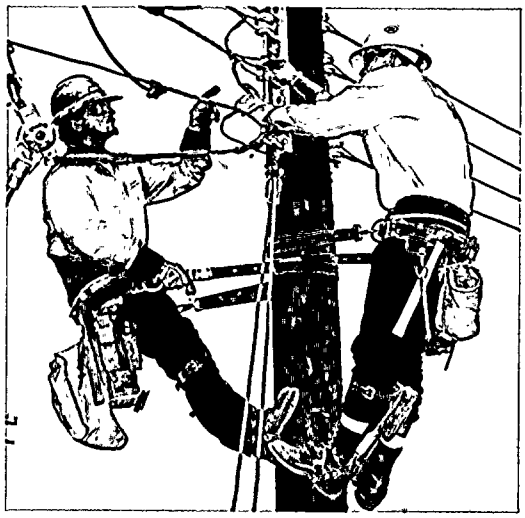
The third and final unit of the Palo Verde Nuclear Generating Station in Arizona, in which the DWP holds a 9.7 percent interest, went on line early in 1988, raising the station's output to its design capacity of 3,810 megawatts. Los Angeles' share of this output (around 368 megawatts) represents approximately 7 percent of the city's current electrical needs.

Drought conditions across the west have reduced water volumes in the Colorado, Columbia and Owens Rivers by as much as 40 percent this year, curtailing production at all hydroelectric stations supplying the DWP. As a result, the Power System has made greater use of power from the Intermountain Power Project in Utah and the Palo Verde station in Arizona, as well as generating more electricity in its Los Angeles Basin steam generating stations during 1987-88.

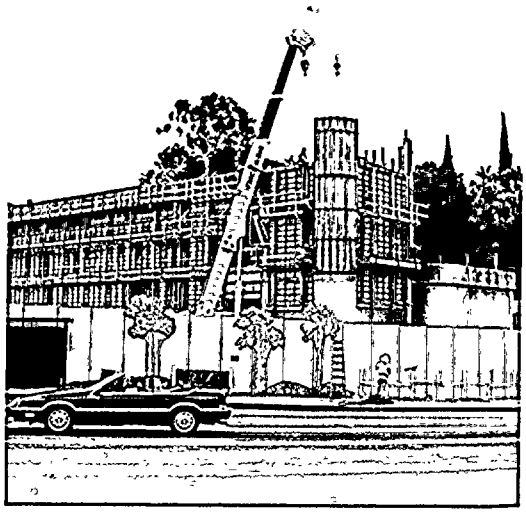
To help its customers use electricity more wisely, the DWP has expanded its energy efficiency program, which includes offering free energy audits, incentives for retrofitting more efficient equipment, including rebates to

The DWP will be prepared to accept 50 percent more power from the Pacific Northwest starting next year, when work is completed on this $171 million expansion of its Pacific Intertie converter station in Sylmar. Shown is the valve hall of the new facility, where power is converted from DC (direct current), used for long-distance transmission, to AC (alternating current), the form in which the power reaches customers of the DWP.





Safety remains a high priority for the DWP, which has reduced total on-the-job injuries by 32 percent among all employees in the last three years, and by 40 percent since 1980 among employees in hazardous jobs. Here, a Power System instructor gives safety pointers to a trainee.



Aesthetics and function will blend in this DWP electrical distributing station, one of about 120 such facilities in the City of Los Angeles. In designing new stations and reconditioning old ones, the Power System has emphasized compatibility with the surrounding environment.

customers who install low-energy lighting systems.

Meanwhile, the Power System continues to improve plant efficiencies through its ongoing reliability/availability improvement program. In 1988 the DWP spent more than $9 million in retubing boilers and reconditioning generators and turbines at its steam plants in the Los Angeles basin. These facilities, which are used with the objective of minimizing air quality impacts, continue to provide an important increment of power for Los Angeles.

With gasoline engines accounting for most of the basin's air pollution, the DWP has stepped up efforts to encourage development and use of electric vehicles in this area. One DWP test vehicle began operating in the last 12 months, and contracts have been let for six more electric vans in the next two years.

Power System Facts in Brief

Year ended June 30	1988	1987
Power Use		
Domestic customers	1,116,806	1,092,912
Commercial customers	165,229	160,239
Industrial customers	19,740	20,006
All others	2,828	2,763
Total customers—all classes	1,304,603	1,275,920
Sales to ultimate consumers—kilowatt-hours	20,936,158,000	20,162,537,000
Sales to other utilities—kilowatt-hours	169,800,000	377,876,000
Average annual kilowatt-hours per domestic customer	5,029	5,004
Status of System		
Utility plant (less accumulated provision for depreciation)	$3,324,924,000	$3,133,454,000
Generating Stations		
Net dependable capability, kilowatts	7,280,000**	7,584,000**

***Included purchased capacity; does not deduct short-term sales of excess capacity.*

Daniel W. Waters

Assistant General Manager–External and Organizational Services

Service is the new challenge for the American marketplace, and nowhere are the demands more evident than in the public utility field, which has undergone significant change in recent years. Delivery of a product—in our case high quality water and reliable, affordable electric power—is only the starting point in our service responsibilities toward our customers.

Both large industrial users and individual homeowners, as well as all the customer classes in between, now look to us for such support—from conservation tips to large-scale analysis of cost and reliability factors. To meet these new demands, thousands of our employees are being made more aware that the customer owns the company, and becoming more sensitized to customer needs. Involving employees in this way is critical to our success in a newly competitive environment, so management must cultivate a spirit of participation and commitment throughout the ranks that makes service second nature.

But while the breadth of service expands, accessibility must become more focused. It is no longer acceptable for customers to make several phone calls, or abide endless delays while the right service person is sought.

Single contact problem solving must be a characteristic of utility service. Today's customers want and deserve more access to the Department and more control over their consumption of water and electricity. Our job, now and in the future, is to respond successfully.

External and Organizational Services (EOS) is responsible for DWP's human resources, public affairs, management systems, customer and commercial services and government relations.

Major improvement was achieved in customer service, with a new phone system that has sharply reduced response times on incoming calls. The People Difference and Investment in Excellence Programs for service employees has helped them in dealing with customer problems, and new uniforms and vehicle markings have increased DWP's image in the community. Greater emphasis on risk and account management has resulted in major reductions in write-offs and service disconnects.

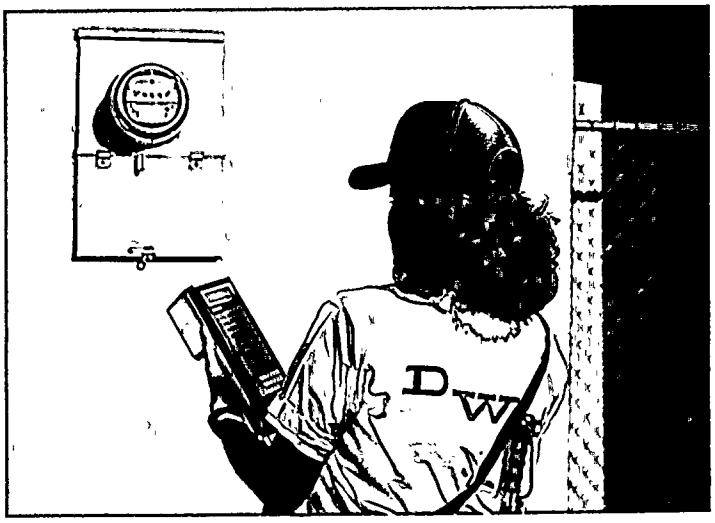
The DWP passed an affirmative action milestone when minorities exceeded 50 percent of the employee population. DWP's professional work force is also 50 percent minorities and women. Hispanics in the service maintenance area achieved population parity.

A strategic study of information systems was launched last year, aimed at focusing computer technology on the important business needs of the Department, particularly productivity and efficiency, resource management and customer service.

Public Affairs played an important role in broadening awareness on a number of DWP issues and concerns last year, including the Power System's strategic plan. A second year of drought spurred new efforts to drive home the conservation message for water customers, and several innovative media and community outreach efforts signaled a more proactive posture for the Department.

Responding to increasing numbers of working parents in its ranks, the DWP has led the way among Los Angeles city agencies providing care for employees' children. The Department also established a Parent's Resource Center and sponsors classes on various aspects of rearing children.

The DWP in 1988 introduced bright new uniforms for its service employees and more eye-catching vehicle identifications designed to heighten its visibility in the community. In the photo, a meter reader uses a new hand-held computer that makes customer billing more accurate and timely.



Norman J. Powers
Chief Financial Officer

To do its job most effectively, the Department of Water and Power must maintain a sound footing that provides the financial resources for current operations and future expansion. To help assure this, the Department must plan carefully, remain efficient and structure its rates and borrowing to support its financial objectives.

Borrowing through the issuance of tax-exempt revenue bonds is one way the DWP provides for future growth. To date, the Department has borrowed more than $2 billion. Investors are willing to purchase these bonds because (1) the DWP has a strong credit rating, (2) the bonds pay an attractive rate of interest and (3) there is currently no federal income tax on the interest they earn.

But there is great uncertainty today over the future status of tax-exempt bonds. Certain federal legislators have called for an end to the exemption, as well as for other changes that raise significant issues for the DWP. Without the exemption, for example, rates on future bonds would have to be increased to make them competitive on a taxable basis, and that would mean higher costs to the DWP and its customers. This could have far-reaching effects on the future financial health of all publicly owned utilities.

There are a number of other uncertainties rippling through the public utility industry today—from the long-term effects of deregulation to the impacts of more stringent environmental regulation—but nothing is more critical to our future than maintaining a solid financial position. This is a top priority for all of us at the DWP.

Operations for fiscal year 1987–88 resulted in an increase of 2.9 percent in sales of electric energy and a 3.1 percent decrease in water sales.

Operating revenues of the Department's Water and Power Systems totaled more than $1.83 billion, a gain of $175 million over the previous fiscal year. The Power System accounted for $166 million of the increase, primarily due to higher energy costs billed to customers and the increase in sales mentioned above. The Water System added $9 million to the total, mostly from higher energy and purchased water costs billed to customers and the effect of the November 1987 revenue increase of 5.3 percent.

Higher Water System operating revenues, offset by increases in operating and debt expenses, resulted in net income of $34 million, down 23 percent from 1986–87's total of $44.6 million.

A total of $105 million was spent by the Water System on capital construction, most of which went towards the improvement of the water distribution and supply system, as well as water quality programs.

The operating revenue of the Power System increased by 11.9 percent from 1986–87, to a total of $1.57 billion. Net income amounted to $176 million, or 6 percent below the $186.8 million in the previous fiscal year, due to higher operating expenses.

The Power System invested $335 million in capital construction for the year. Major expenditures were additions and modifications to the electrical distribution and transmission facilities.

Total assets of the Department at June 30, 1988, were approximately $5.21 billion. Of this amount, $3.90 billion was recorded in the Power System and the remainder in the Water System.

Financing Activities

During the year, the Power System sold $200 million in revenue bonds consisting of two issues of $100 million each, at interest rates averaging 7.67 percent. The Water System sold $85 million in revenue bonds, consisting of two issues for $35 million and $50 million, at the same average interest rate.

Outstanding bonds, notes and revenue certificates at June 30, 1988, totaled $1.70 billion for the Power System and $373 million for the Water System. Both systems met their maturing payments on bonds and notes.

Costs and Transfers

In accordance with its basic fiscal policy, the Department pays all costs of operation, debt service and part of the cost of capital improvements from current revenues. The remainder of the cost of capital improvements is met through sales of revenue bonds or notes and from contributions in aid of construction.

Besides meeting all costs of operation from current revenues, the Department paid more than $82 million into the Reserve Fund of the city in support of general city government.

Approximately 85 percent of that amount came from the Power Revenue Fund. Operations of the Water and Power Systems are entirely self-supporting and no financial obligation or tax burden is placed on the citizens of Los Angeles.

Water System Statement of Income

(In Thousands) Year ended June 30	1988	1987	1986
Operating Revenues			
Residential	$ 94,525	$ 92,436	$ 84,147
Commercial and industrial	142,456	135,163	122,917
Other	20,051	20,775	18,955
Total operating revenues	257,032	248,374	226,019
Operating Expenses			
Purchased water	31,072	26,765	17,192
Purchased energy	11,613	8,806	8,050
Purchased water and energy costs	42,685	35,571	25,242
Other operation	92,709	84,843	78,715
Maintenance	34,243	28,691	27,145
Depreciation	30,584	26,586	22,983
Taxes on property outside the City	2,734	2,791	2,572
Total operating expenses	202,955	178,482	156,657
Operating Income	54,077	69,892	69,362
Other income—net	2,685	4,524	8,176
Loss on Abandonment of Chatsworth Reservoir	—	(10,675)	—
Income before debt expenses	56,762	63,741	77,538
Debt Expenses			
Interest on debt	23,749	22,039	23,239
Allowance for borrowed funds used during construction	(1,380)	(2,939)	(7,545)
Total debt expenses	22,369	19,100	15,694
Net Income	$ 34,393	$ 44,641	$ 61,844

Statement of Retained Income Reinvested in the Business

(In Thousands) Year ended June 30	1988	1987	1986
Balance at beginning of year	$442,526	$409,186	$357,757
Net income for the year	34,393	44,641	61,844
	476,919	453,827	419,601
Less—Payments to the reserve fund of the City	12,419	11,301	10,415
Balance at end of year	$464,500	$442,526	$409,186

The accompanying notes are an integral part of these financial statements.

(In Thousands) June 30	1988	1987
Assets		
Utility Plant, at original cost		
Source of water supply	$ 236,592	$ 230,343
Pumping	48,969	48,203
Purification	132,699	129,874
Distribution	1,022,138	964,205
General	110,029	94,309
	1,550,427	1,466,934
Less—Accumulated depreciation	510,225	480,483
	1,040,202	986,451
Construction work in progress	74,526	59,697
Net utility plant	1,114,728	1,046,148
Current Assets		
Deposits with City Treasurer	84,329	37,136
Customer and other accounts receivable, less $400 and $600 allowance for losses	54,772	45,520
Accrued unbilled revenue	21,671	25,654
Materials and supplies, at average cost	15,489	14,490
Prepayments and other current assets	14,906	14,841
Total current assets	191,167	137,641
Total assets	$1,305,895	$1,183,789
Capitalization and Liabilities		
Capitalization		
Equity		
Retained income reinvested in the business	$ 464,500	$ 442,526
Contributions in aid of construction	357,829	325,951
	822,329	768,477
Long-term debt	350,188	285,599
Total capitalization	1,172,517	1,054,076
Current Liabilities		
Long-term debt due within one year	20,270	19,560
Accrued interest	7,752	6,465
Accounts payable and accrued expenses	69,544	69,447
Customer deposits	35,812	34,241
Total current liabilities	133,378	129,713
Commitments and Contingencies		
Total capitalization and liabilities	$1,305,895	$1,183,789

The accompanying notes are an integral part of these financial statements.

(In Thousands) Year ended June 30	1988	1987	1986
Cash Flows from Operating Activities:			
Net income	$ 34,393	$ 44,641	$ 61,844
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation	36,188	31,112	26,291
Loss on Abandonment of Chatsworth Reservoir	—	10,675	—
Allowance for borrowed funds used during construction	(1,380)	(2,939)	(7,545)
Changes in current assets and liabilities:			
Customer and other accounts receivable	(9,252)	(10,511)	(2,778)
Accrued unbilled revenue	3,983	(7,764)	(2,073)
Materials and supplies	(999)	(1,067)	(119)
Prepayments and other current assets	(65)	1,026	(10,910)
Accrued interest	1,287	(281)	520
Accounts payable and accrued expenses	97	2,574	5,592
Customer deposits	1,571	6,414	3,111
Net cash provided by operating activities	65,823	73,880	73,933
Cash Flows from Financing Activities:			
Sale of revenue bonds	84,626	—	—
Sale of advance refunding bonds	—	—	65,928
Amount received from escrow account	—	—	13,025
Contributions in aid of construction	31,878	23,005	18,062
Reduction of long-term debt	(19,327)	(19,248)	(19,636)
Amount deposited in escrow account and offset against advance refunding bonds	—	—	(65,928)
Long-term debt redeemed, including call premium	—	—	(13,025)
Payments to the reserve fund of the City	(12,419)	(11,301)	(10,415)
Net cash provided by (used in) financing activities	84,758	(7,544)	(11,989)
Cash Flows from Investing Activities:			
Expenditures for plant and equipment	(103,388)	(96,199)	(105,296)
Deposits with City Treasurer:			
Net increase (decrease)	47,193	(29,863)	(43,352)
Beginning of year	37,136	66,999	110,351
End of year	$ 84,329	$ 37,136	$ 66,999
Supplemental disclosure of cash flow information:			
Cash paid during the year for interest	$ 28,820	$ 28,233	$ 26,011

The accompanying notes are an integral part of these financial statements.

Note A—Summary of Significant Accounting Policies

The Department—The Department of Water and Power of the City of Los Angeles exists under and by virtue of the City Charter enacted in 1925 as a separate proprietary agency of the City. The Water System is responsible for the quality and distribution of water for sale in the City.

Financial statement presentation—The financial statements of the Water System are presented in conformity with generally accepted accounting principles, and substantially in conformity with accounting principles prescribed by the California Public Utilities Commission except for the method of accounting for contributions in aid of construction described below. The Department is not subject to regulations of such commission.

Utility plant—The costs of additions to utility plant and replacements of retired units of property are capitalized. Costs include labor, materials and allocated indirect charges such as engineering, supervision, transportation and construction equipment, retirement plan contributions, and certain administrative and general expenses. Repairs and minor replacements are charged to maintenance expense. The original cost of property retired, plus removal cost, less salvage, is charged to accumulated depreciation.

Allowance for funds used during construction (AFUDC)—AFUDC represents the cost of borrowed funds used for the construction of new facilities. AFUDC is capitalized as part of the cost of utility plant and is credited to income as a reduction of debt expenses, but does not represent cash earnings. The average AFUDC rates were 8.4%, 9.4% and 9.4% for fiscal years 1988, 1987 and 1986, respectively.

Depreciation—Depreciation expense is computed by the straight-line method based on estimated service lives. Depreciation provision as a percentage of average depreciable plant was 2.4%, 2.4% and 2.3% for fiscal years 1988, 1987 and 1986, respectively.

Deposits with City Treasurer—Deposits with the City Treasurer included $83 million and $31 million at June 30, 1988 and 1987 which were invested in short-term securities under the City Treasurer's pooled investment program, whereby available funds of the City and its independent operating departments are invested on a combined basis. These investments are valued at cost, which approximates market.

Contributions in aid of construction—Under the provisions of the City Charter, amounts received from customers and others for constructing utility plant are combined with retained income reinvested in the business to represent equity for purposes of computing the Water System's borrowing limits. Accordingly, contributions in aid of construction are shown in the accompanying balance sheet as an equity account and are not offset against utility plant. Depreciation for the related utility plant is expensed.

Revenues—Revenues consist of billings to customers for water consumption and include amounts resulting from a purchased water and energy cost adjustment formula designed to permit the full recovery of purchased water and energy costs. The Department projects these costs to establish the cost recovery component of customer billings and any difference between billed and actual costs, resulting in over- or under-recovery of purchased water and energy costs, is adjusted in subsequent billings.

The Water System recognizes purchased water and energy costs in the period incurred and accrues for estimated unbilled revenues for water sold but not billed at the end of a fiscal year.

The Water System's rates are established by rate ordinance approved by the City Council. The Water System sells water to other Departments of the City at regular rates provided in the ordinance.

Shared operating expenses—The Water System shares certain administrative functions with the Department's Power System. Generally, the costs of these functions are allocated on the basis of benefits provided to the Systems.

Debt expenses—Debt premium, discount and issue expenses are deferred and amortized to income over the lives of the related issues.

Statement of Cash Flows—During the year ended June 30, 1988, the Department implemented Statement of Financial Accounting Standards No. 95, "Statement of Cash Flows." Accordingly, fiscal years 1987 and 1986 amounts have been restated to conform with the fiscal year 1988 presentation.

Note B—Loss on Abandonment of Chatsworth Reservoir

From 1969 to 1972, the Water System incurred costs totalling $10.7 million to enlarge and improve the Chatsworth Reservoir. Following the 1971 earthquake in the Los Angeles area, the State of California

enacted more stringent safety standards for earth filled dams which would have required the replacement of the Chatsworth Reservoir Dams at significant additional costs prior to refilling. During 1987, the Water System completed various studies and concluded that the additional costs of upgrading the dams and complying with increased water quality standards precluded refilling the reservoir. Therefore, the project was formally abandoned, resulting in a utility plant write off of $10.7 million as of June 30, 1987.

Note C—Long-term Debt

Long-term debt outstanding at June 30, 1988, consisted of revenue bonds and notes due serially in varying annual amounts through 2028. Interest rates, which vary among individual maturities, averaged approximately 7.4% and 7.2% at June 30, 1988 and 1987. The revenue bonds generally are callable ten years after issuance. Scheduled annual principal maturities during the five years succeeding June 30, 1988 are $20 million, $20 million, $12 million, $12 million and $12 million, respectively.

In fiscal years 1986 and 1985, the Water System sold advance refunding bonds totaling $85 million. Until the bonds to be refunded are called, interest on the advance refunding bonds is payable from interest earned on securities of the United States government purchased out of the proceeds of the sales and held in escrow accounts with Citibank, N.A., New York. At June 30, 1988, $85 million of these escrow accounts have been offset against the advance refunding bonds in the accompanying balance sheet (during fiscal year 1988 there were no refunded bonds redeemed). After the monies in the escrow accounts are applied to redeem the bonds to be called, principally through 1994, interest on the advance refunding bonds will be payable from Water System revenues.

Note D—Shared Operating Expenses

Operating expenses shared with the Power System were $256 million, $235 million and $216 million for fiscal years 1988, 1987 and 1986, of which $89 million, $82 million and $74 million were allocated to the Water System.

Note E—Employee Benefits

The Department has a funded contributory retirement, disability and death benefit insurance plan covering substantially all of its employees. Plan benefits are generally based on years of service, age at retirement and the employees' highest 12 consecutive months of salary before retirement. The Department funds retirement plan costs on a level premium actuarial method as determined by the plan's independent actuary. For funding purposes, prior service costs relating to the plan are amortized generally over a 30-year period ending June 30, 2003.

The Water System was allocated approximately 24% of the plan's total costs for fiscal year 1987, and 26% for fiscal year 1986 amounting to $33 million and $32 million, respectively. As of June 30, 1987, the actuarially computed present value of accumulated retirement plan benefits attributable to the Water System aggregated $494 million, discounted at 8%, of which substantially all were vested.

In fiscal year 1988, the Department adopted the provisions of Statement of Financial Accounting Standards No. 87, "Employers' Accounting for Pensions." The adoption of this statement did not materially affect the Department's results of operations. As required by the new standard, retirement cost is determined using the projected unit credit actuarial cost method. Total benefit plan costs for fiscal year 1988 for the Water System include the following (amounts in millions):

Service cost	$ 11
Interest cost on projected benefit obligation	38
Actual return on plan assets	(10)
Net amortization and deferral	(11)
Net retirement plan cost	28
Disability and death benefit plan costs and administrative expenses	4
Total Benefit Plan Costs	$ 32

The plan's funded status at June 30, 1988 allocated to the Water System is as follows (amounts in millions):

Actuarial present value of benefit obligations:	
Vested benefits	$ 411
Non-vested benefits	2
Accumulated benefit obligation	413
Projected future compensation levels	72
Projected benefit obligation	485
Plan assets at fair value	367
Projected benefit obligation in excess of plan assets	118
Unrecognized net gain and effects of changes in assumptions	8
Unamortized net obligation at adoption of FAS 87	(101)
Accrued pension liability	$ 25

The projected benefit obligation at June 30, 1988 was determined using a discount rate of 8.25% and an assumed rate of increase in future compensation of 6%. The 1988 pension cost was determined using a long-term rate of return on plan assets of 8%. Plan assets consist primarily of corporate and government bonds, common stocks, mortgage-backed securities and short-term investments.

In addition to the retirement plan, the Department provides certain health care benefits to active and retired employees. Health care costs are expensed as paid under a self-insured plan. The cost of providing such benefits to retired employees, net of employee contributions, amounted to $3 million, $2 million and $2 million for fiscal years 1988, 1987 and 1986, respectively.

Note F—Commitments and Contingencies

Payments to the reserve fund of the City— Under the provisions of the City Charter, the Water System transfers funds at its discretion to the reserve fund of the City. Such payments are not in lieu of taxes and are recorded as distributions of retained income. The Department expects to make payments of $13 million in fiscal year 1989 from the Water System to the reserve fund of the City.

Litigation— A number of claims and suits are pending against the Department for alleged damages to persons and property and for other alleged liabilities arising out of its operations. In the opinion of management, the uninsured liability under these actions would not materially affect the Water System's financial position as of June 30, 1988.

Report of Independent Accountants

August 31, 1988

To the Board of Water and Power Commissioners
Department of Water and Power
City of Los Angeles

In our opinion, the accompanying balance sheet and the related statements of income and retained income reinvested in the business and of cash flows present fairly, in all material respects, the financial position of the Water System of the Department of Water and Power of the City of Los Angeles at June 30, 1988 and 1987, and the results of its operations and its cash flows for each of the three years in the period ended June 30, 1988, in conformity with generally accepted accounting principles. These financial statements are the responsibility of the Department's management; our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with generally accepted auditing standards which require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for the opinion expressed above.

Price Waterhouse
Simpson & Simpson

Power System Statement of Income

(In Thousands) Year ended June 30	1988	1987	1986
Operating Revenues			
Residential	$ 430,696	$ 388,730	$ 379,488
Commercial and industrial	1,085,557	963,151	932,187
Other	53,775	51,560	46,459
Total operating revenues	1,570,028	1,403,441	1,358,134
Operating Expenses			
Fuel for generation	228,499	219,944	348,069
Purchased power	470,957	355,975	203,116
Energy costs	699,456	575,919	551,185
Other operation	326,876	299,408	288,954
Maintenance	153,062	147,673	142,461
Depreciation	124,004	115,629	107,419
Taxes on property outside the City	12,343	8,552	8,660
Total operating expenses	1,315,741	1,147,181	1,098,679
Operating Income	254,287	256,260	259,455
Other income—net	18,037	19,754	27,984
Income before debt expenses	272,324	276,014	287,439
Debt Expenses			
Interest on debt	102,437	96,926	97,464
Allowance for borrowed funds used during construction	(5,674)	(7,759)	(3,610)
Total debt expenses	96,763	89,167	93,854
Net Income	$ 175,561	$ 186,847	$ 193,585

Statement of Retained Income Reinvested in the Business

(In Thousands) Year ended June 30	1988	1987	1986
Balance at beginning of year	$1,680,322	$1,561,388	$1,432,156
Net income for the year	175,561	186,847	193,585
	1,855,883	1,748,235	1,625,741
Less—Payments to the reserve fund of the City	70,182	67,913	64,353
Balance at end of year	$1,785,701	$1,680,322	$1,561,388

The accompanying notes are an integral part of these financial statements.

(In Thousands) June 30	1988	1987
Assets		
Utility Plant, at original cost		
Production	$1,749,777	$1,539,610
Transmission	561,178	545,821
Distribution	1,845,703	1,704,800
General	284,625	256,124
	4,441,283	4,046,355
Less—Accumulated depreciation	1,356,344	1,252,336
	3,084,939	2,794,019
Construction work in progress	215,435	311,640
Nuclear fuel, at amortized cost	24,550	27,795
Net utility plant	3,324,924	3,133,454
Current Assets		
Deposits with City Treasurer	179,170	174,430
Customer and other accounts receivable, less $2,500 and $3,900 allowance for losses	143,310	140,287
Accrued unbilled revenue	88,782	84,535
Materials and supplies, at average cost	74,663	63,009
Fuel for generation	56,123	65,897
Deferred energy costs	—	8,928
Prepayments and other current assets	37,776	30,267
Total current assets	579,824	567,353
Total assets	$3,904,748	$3,700,807
Capitalization and Liabilities		
Capitalization		
Equity		
Retained income reinvested in the business	$1,785,701	$1,680,322
Contributions in aid of construction	104,825	91,352
	1,890,526	1,771,674
Long-term debt	1,554,170	1,408,914
Total capitalization	3,444,696	3,180,588
Current Liabilities		
Long-term debt due within one year	53,545	67,916
Revenue certificates payable.	90,000	90,000
Accrued interest	30,648	26,457
Accounts payable and accrued expenses	212,380	242,973
Over-recovered energy costs	57,552	73,196
Extension and other deposits	15,927	19,677
Total current liabilities	460,052	520,219
Commitments and Contingencies		
Total capitalization and liabilities	$3,904,748	$3,700,807

The accompanying notes are an integral part of these financial statements.

(In Thousands) Year ended June 30	1988	1987	1986
Cash Flows from Operating Activities:			
Net income	$ 175,561	$ 186,847	$ 193,585
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation	135,558	125,734	115,599
Amortization of nuclear fuel	7,516	5,936	925
Allowance for borrowed funds used during construction	(5,674)	(7,759)	(3,610)
Changes in current assets and liabilities:			
Customer and other accounts receivable	(3,023)	(244)	8,709
Accrued unbilled revenue	(4,247)	(806)	(26,246)
Materials and supplies	(11,654)	(1,189)	(4,671)
Fuel for generation	9,774	(4,078)	22,032
Deferred energy costs	8,928	17,856	13,753
Prepayments and other current assets	(7,509)	(18,659)	1,301
Accrued interest	4,191	(47)	2,758
Accounts payable and accrued expenses	(30,593)	(72,546)	105,585
Over-recovered energy costs	(15,644)	3,935	56,159
Extension and other deposits	(3,750)	2,228	10,485
Net cash provided by operating activities	259,434	237,208	496,364
Cash Flows from Financing Activities:			
Sale of revenue bonds	198,108	—	98,566
Sale of advance refunding bonds	—	47,312	—
Amount received from escrow account	—	—	72,920
Contributions in aid of construction	13,473	6,644	5,083
Reduction of long-term debt	(67,223)	(60,835)	(86,101)
Amount deposited in escrow account and offset against advance refunding bonds	—	(47,312)	—
Long-term debt redeemed, including call premium	—	—	(72,920)
Payments to the reserve fund of the City	(70,182)	(67,913)	(64,353)
Net cash provided by (used in) financing activities	74,176	(122,104)	(46,805)
Cash Flows from Investing Activities:			
Expenditures for plant and equipment	(328,870)	(313,465)	(400,758)
Deposits with City Treasurer:			
Net increase (decrease)	4,740	(198,361)	48,801
Beginning of year	174,430	372,791	323,990
End of year	$ 179,170	$ 174,430	$ 372,791
Supplemental disclosure of cash flow information:			
Cash paid during the year for interest	$ 100,435	$ 98,358	$ 103,533

The accompanying notes are an integral part of these financial statements.

Note A—Summary of Significant Accounting Policies

The Department—The Department of Water and Power of the City of Los Angeles exists under and by virtue of the City Charter enacted in 1925 as a separate proprietary agency of the City. The Power System is responsible for the generation, transmission and distribution of electric power for sale in the City.

Financial statement presentation—The financial statements of the Power System are presented in conformity with generally accepted accounting principles, and substantially in conformity with accounting principles prescribed by the Federal Energy Regulatory Commission and the California Public Utilities Commission except for the method of accounting for contributions in aid of construction described below. The Department is not subject to regulations of such commissions.

Utility plant—The costs of additions to utility plant and replacements of retired units of property are capitalized. Costs include labor, materials and allocated indirect charges such as engineering, supervision, transportation and construction equipment, retirement plan contributions, and certain administrative and general expenses. Repairs and minor replacements are charged to maintenance expense. The original cost of property retired, plus removal cost, less salvage, is charged to accumulated depreciation.

Allowance for funds used during construction (AFUDC)—AFUDC represents the cost of borrowed funds used for the construction of new facilities. AFUDC is capitalized as part of the cost of utility plant and is credited to income as a reduction of debt expenses, but does not represent cash earnings. The average AFUDC rates were 7.9%, 8.8% and 9.1% for fiscal years 1988, 1987 and 1986, respectively.

Depreciation—Depreciation expense is computed by the straight-line method for all major projects completed after July 1, 1973 and for all office and shop structures, related furniture and equipment, and transportation and construction equipment. Depreciation for facilities completed prior to this date is provided by the 5% sinking fund method based on estimated service lives. Depreciation provision as a percentage of average depreciable plant was 3.2%, 3.2% and 3.3% for fiscal years 1988, 1987 and 1986, respectively.

Nuclear fuel—Nuclear fuel is amortized and charged to Fuel for Generation in the Statement of Income on the basis of actual thermal energy produced relative to total thermal energy expected to be produced over the life of the fuel. Under the provisions of the Nuclear Waste Policy Act of 1982, the Department is charged one mill per kilowatt-hour on its share of electricity produced by the Palo Verde Nuclear Generating Station. The Department records this charge as a current year expense.

Nuclear decommissioning—Decommissioning of the Palo Verde Nuclear Generating Station, in which the Power System has an ownership interest, is projected to start sometime after 2027. The Power System is providing for its share of the estimated future decommissioning costs over the life of the nuclear power plant through annual charges to expense.

A Nuclear Decommissioning Fund has been established. The semi-annual deposits to the fund plus the interest earnings on the fund balance are expected to be sufficient to pay the Department's share of decommissioning costs.

Deposits with City Treasurer—Deposits with the City Treasurer included $167 million and $150 million at June 30, 1988 and 1987 which were invested in short-term securities under the City Treasurer's pooled investment program, whereby available funds of the City and its independent operating departments are invested on a combined basis. These investments are valued at cost, which approximates market.

Fuel for generation—Coal inventories are stated at average cost. Fuel oil inventories are stated at cost, using the last-in, first-out method.

Contributions in aid of construction—Under the provisions of the City Charter, amounts received from customers and others for constructing utility plant are combined with retained income reinvested in the business to represent equity for purposes of computing the Power System's borrowing limits. Accordingly, contributions in aid of construction are shown in the accompanying balance sheet as an equity account and are not offset against utility plant. Depreciation for the related utility plant is expensed.

Revenues — Revenues consist of billings to customers for consumption of electric energy and include amounts resulting from an energy cost adjustment formula designed to permit the full recovery of energy costs. The Department projects these costs to establish the energy cost recovery component of customer billings and any difference between billed and actual energy costs, resulting in over- or under-recovery of energy costs, is adjusted in subsequent billings.

The Power System recognizes energy costs in the period incurred and accrues for estimated unbilled revenues for energy sold but not billed at the end of a fiscal year.

The Power System's rates are established by rate ordinance approved by the City Council. The Power System sells electric energy to other Departments of the City at regular rates provided in the ordinance.

Shared operating expenses — The Power System shares certain administrative functions with the Department's Water System. Generally, the costs of these functions are allocated on the basis of benefits provided to the Systems.

Debt expenses — Debt premium, discount and issue expenses are deferred and amortized to income over the lives of the related issues.

Statement of Cash Flows — During the year ended June 30, 1988, the Department implemented Statement of Financial Accounting Standards No. 95, "Statement of Cash Flows." Accordingly, fiscal years 1987 and 1986 amounts have been restated to conform with the fiscal year 1988 presentation.

Note B — Revenue Certificates

At June 30, 1988 and 1987, the average interest rate of revenue certificates payable was 4.9% and 4.6% with various maturities of up to 242 and 152 days, respectively. The Department has an unsecured standby line of credit of $90 million which may be used if the certificates cannot be refinanced as they mature.

Note C — Jointly-owned Utility Plant

The Power System has an undivided interest in several electrical generating stations and transmission systems which are jointly-owned with other utilities. Each project participant has provided its portion of the total construction financing. The Power System's proportionate share of construction and improvement costs is included in its balance sheet at June 30, 1988 as follows (dollar amounts in millions):

Projects	*Department Ownership Interest*	*Department Share of Capacity (megawatts)*	*Plant In Service Cost*	*Accumulated Depreciation*	*Construction Work In Progress*
Palo Verde Nuclear Generating Station (Note G)	5.7%	209	$490	$ 19	
Navajo Steam Generating Station	21.2%	477	179	66	$ 3
Mohave Coal Generating Station	20.0%	316	75	21	8
			744	106	11
Pacific Intertie DC Transmission System	40.0%	800	99	12	34
Other transmission systems	Various	—	69	14	1
			168	26	35
			$912	$132	$46

The Power System will incur certain minimum operating costs on the jointly-owned facilities, regardless of the amount of energy generated or the ability to take delivery of its share of energy generated. The proportionate share of these expenses is included in the appropriate categories of operating expenses.

Note D—Long-term Debt

Long-term debt outstanding at June 30, 1988, consisted of revenue bonds and notes due serially in varying annual amounts through 2028. Interest rates, which vary among individual maturities, averaged approximately 6.7% and 6.5% at June 30, 1988 and 1987. The revenue bonds generally are callable ten years after issuance. Scheduled annual principal maturities during the five years succeeding June 30, 1988 are $54 million, $52 million, $53 million, $55 million and $56 million, respectively.

In fiscal year 1987 the Power System sold advance refunding bonds totaling $48 million. Until the bonds to be refunded are called, interest on the advance refunding bonds is payable from interest earned on securities of the United States government purchased out of the proceeds of the sales and held in escrow accounts with Citibank, N.A., New York. At June 30, 1988, $48 million of these escrow accounts have been offset against the advance refunding bonds in the accompanying balance sheet (during fiscal year 1988 there were no refunded bonds redeemed). After the monies in the escrow accounts are applied to redeem the bonds to be called, principally through 1994, interest on the advance refunding bonds will be payable from Power System revenues.

Note E—Shared Operating Expenses

Operating expenses shared with the Water System were $256 million, $235 million and $216 million for fiscal years 1988, 1987 and 1986, of which $167 million, $153 million and $142 million were allocated to the Power System.

Note F—Employee Benefits

The Department has a funded contributory retirement, disability and death benefit insurance plan covering substantially all of its employees. Plan benefits are generally based on years of service, age at retirement and the employees' highest 12 consecutive months of salary before retirement. The Department funds retirement plan costs on a level premium actuarial method as determined by the plan's independent actuary. For funding purposes, prior service costs relating to the plan are amortized generally over a 30-year period ending June 30, 2003.

The Power System was allocated approximately 76% of the plan's total costs for fiscal year 1987, and 74% for fiscal year 1986 amounting to $102 million and $91 million, respectively. As of June 30, 1987, the actuarially computed present value of accumulated retirement plan benefits attributable to the Power System aggregated $1,233 million, discounted at 8%, of which substantially all were vested.

In fiscal year 1988, The Department adopted the provisions of Statement of Financial Accounting Standards No. 87, "Employers' Accounting for Pensions." The adoption of this statement did not materially affect the Department's results of operations. As required by the new standard, retirement cost is determined using the projected unit credit actuarial cost method. Total benefit plan costs for fiscal year 1988 for the Power System include the following (amounts in millions):

Service cost	$ 35
Interest cost on projected benefit obligation	120
Actual return on plan assets	(31)
Net amortization and deferral	(37)
Net retirement plan cost	87
Disability and death benefit plan costs and administrative expenses	12
Total Benefit Plan Costs	$ 99

The plan's funded status at June 30, 1988 allocated to the Power System is as follows (amounts in millions):

Actuarial present value of benefit obligations:	
Vested benefits	$1,300
Non-vested benefits	5
Accumulated benefit obligation	1,305
Projected future compensation levels	227
Projected benefit obligation	1,532
Plan assets at fair value	1,163
Projected benefit obligation in excess of plan assets	369
Unrecognized net gain and effects of changes in assumptions	25
Unamortized net obligation at adoption of FAS 87	(322)
Accrued pension liability	$ 72

The projected benefit obligation at June 30, 1988 was determined using a discount rate of 8.25% and an assumed rate of increase in future compensation of 6%. The 1988 pension cost was determined using a long-term rate of return on plan assets of 8%. Plan assets consist primarily of corporate and government bonds, common stocks, mortgage-backed securities and short-term investments.

In addition to the retirement plan, the Department provides certain health care benefits to active and retired employees. Health care costs are expensed as paid under a self-insured plan. The cost of providing such benefits to retired employees, net of employee contributions, amounted to $9 million, $7 million and $6 million for fiscal years 1988, 1987 and 1986, respectively.

Note G—Commitments and Contingencies

Payments to the reserve fund of the City—Under the provisions of the City Charter, the Power System transfers funds at its discretion to the reserve fund of the City. Such payments are not in lieu of taxes and are recorded as distributions of retained income. The Department expects to make payments of $78 million in fiscal year 1989 from the Power System to the reserve fund of the City.

Long-term purchased power and transmission contracts—The Department has entered into a number of energy and transmission service contracts which involve substantial commitments. These include an agreement with the Intermountain Power Agency, a Utah State Agency, for purchase of energy from the Intermountain Power Project (IPP) for which the Power System has served as the project manager and operating agent. The Department's total interest in IPP includes a 44.6% "take or pay" obligation and an excess power contract for 18.2% for a total of 62.8%. The Department also has two agreements with the Southern California Public Power Authority (SCPPA), a California Joint Powers Agency, for 67% of SCPPA's 5.9% entitlement (representing a net 4% participation) to the energy generated at Palo Verde Nuclear Generating Station and for 59.5% in the capacity of the Southern Transmission System, which transmits energy from IPP in Utah to Southern California. Significant data related to these agreements, which are scheduled to expire from 2022 to 2027, at June 30, 1988 are as follows:

	Total Bonds Outstanding (millions)	*Department Share of Capacity (megawatts)*
Palo Verde Nuclear Generating Station (through SCPPA)	$1,042	145
Intermountain Power Project	4,926	1,004
Southern Transmission System (for IPP power through SCPPA)	1,000	1,142

All these agreements require the Power System to make certain minimum payments, which are based upon debt service requirements. While these payments are fixed charges (of approximately $330 million in each of the next five years), the Department is also required to pay additional amounts (of approximately $120 million in each of the next five years) for operating and maintenance costs related to actual deliveries of energy under these agreements. Total payments under these contracts were approximately $320 million, $260 million and $20 million in fiscal years 1988, 1987 and 1986, respectively. These aggregate purchased power costs are recovered through the energy cost recovery component of customer billings.

The Department also has a contract through 2017 with the U.S. Department of Energy for the purchase of available energy generated at the Hoover Power Plant. The Department's share of capacity at Hoover approximates 500 megawatts.

Nuclear insurance—As a participant in the Palo Verde Nuclear Generating Station, the Department could be subject to assessment of retrospective insurance premium adjustments in the event of a nuclear incident at Palo Verde or at any other licensed reactor in the United States.

Litigation—A number of claims and suits are pending against the Department for alleged damages to persons and property and for other alleged liabilities arising out of its operations. In the opinion of management, the uninsured liability under these actions would not materially affect the Power System's financial position as of June 30, 1988.

Note H—Subsequent Event

As of July 1, 1988, an amendment to an Intermountain Power Agency bond resolution provides for the use of surplus construction funds from the Intermountain Power Project. As a member participant of this project, the Department expects to receive $110 million during the next three to four years representing its share of such surplus funds. The funds will be used to reduce the Department's future purchased power expense.

Report of Independent Accountants

August 31, 1988

To the Board of Water and Power Commissioners
Department of Water and Power
City of Los Angeles

In our opinion, the accompanying balance sheet and the related statements of income and retained income reinvested in the business and of cash flows present fairly, in all material respects, the financial position of the Power System of the Department of Water and Power of the City of Los Angeles at June 30, 1988 and 1987, and the results of its operations and its cash flows for each of the three years in the period ended June 30, 1988, in conformity with generally accepted accounting principles. These financial statements are the responsibility of the Department's management; our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with generally accepted auditing standards which require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for the opinion expressed above.

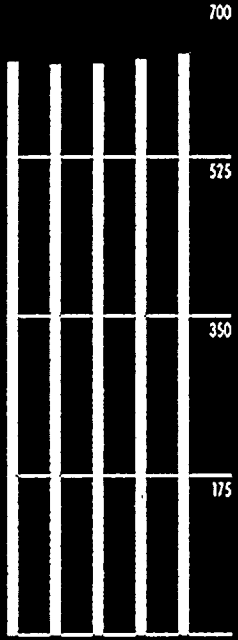
Price Waterhouse
Simpson & Simpson

($ Millions)	1988	1987	1986	1985	1984
Statement of Income					
Operating revenues					
Residential	$ 94.5	$ 92.4	$ 84.2	$ 79.0	$ 72.8
Commerical and industrial	142.4	135.2	122.9	111.1	96.9
Governmental and other	14.3	14.8	13.4	13.0	11.1
Fire hydrants	4.1	4.1	4.0	4.0	3.9
Miscellaneous	1.7	1.9	1.5	1.2	1.0
Total revenues	$ 257.0	$ 248.4	$ 226.0	$ 208.3	$ 185.7
Operating income	54.1	69.9	69.4	67.8	54.6
As % of revenues	21.1%	28.1%	30.7%	32.6%	29.4%
Net income	$ 34.4	$ 44.6	$ 61.8	$ 63.3	$ 58.4
Balance Sheet					
Net utility plant	$1,114.7	$1,046.1	$ 988.8	$ 902.2	$ 826.6
Capital expenditures	104.8	99.1	112.8	101.5	90.8
Capitalization					
Equity	822.3	768.5	712.1	642.6	570.3
Long-term debt	350.2	285.6	305.0	324.6	309.1
	1,172.5	1,054.1	1,017.1	967.2	879.4
Debt as % of net utility plant*	30.2%	25.3%	28.0%	32.1%	37.4%
Interest on debt	23.7	22.0	23.2	23.3	18.3
Payments to City of L.A.	12.4	11.3	10.4	9.9	7.8
Operations					
Gallons sold (billions)	203.6	210.1	204.3	203.4	190.0
Customers—average number (thousands)	637.8	632.3	630.1	630.4	631.4
Average revenue per hundred cu. ft. sold (in cents)					
Residential	92.8	87.2	81.8	75.7	72.0
Commercial and industrial	93.6	87.5	81.7	75.8	72.4
Water supply (in cu. ft. per second—c.f.s.)					
Local supply	166.9	137.0	144.5	164.8	159.5
DWP Aqueduct	573.6	661.4	671.8	709.3	732.5
Metropolitan Water District	207.7	177.1	123.9	64.8	39.5
Gross supply	948.2	975.5	940.2	938.9	931.5
Diversion from (to) local storage	(0.3)	(1.7)	(6.6)	(6.4)	(33.0)
Net supply to distribution systems	947.9	973.8	933.6	932.5	898.5

Excludes revenue notes and advance refunding revenue bonds.

Average Number of Customers

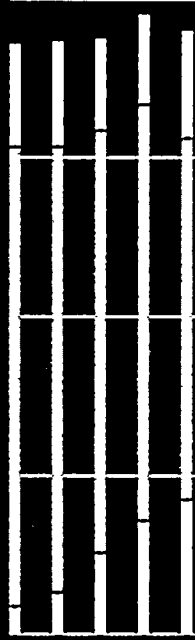
In Thousands



Water Supply

In Cu. ft. per Second

- Local supply
- DWP Aqueduct
- Metropolitan Water District



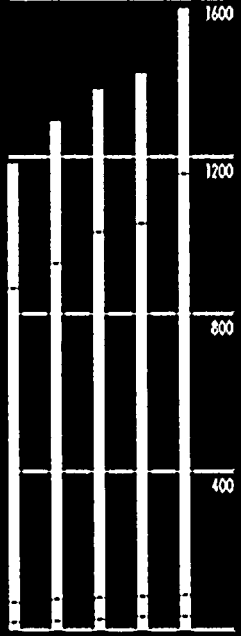
($ Millions)	1988	1987	1986	1985	1984
Statement of Income					
Operating revenues					
Residential	$ 430.7	$ 388.7	$ 379.5	$ 373.0	$ 331.7
Commerical and industrial	1,085.5	963.1	932.2	859.2	797.7
Street lighting and other	39.7	38.2	37.9	48.5	41.6
Miscellaneous	14.1	13.4	8.5	7.3	6.5
Total revenues	$1,570.0	$1,403.4	$1,358.1	$1,288.0	$1,177.5
Operating income	254.3	256.3	259.5	274.5	241.4
As % of revenues	16.2%	18.3%	19.1%	21.3%	20.5%
Net income	$ 175.6	$ 186.8	$ 193.6	$ 213.6	$ 165.5
Balance Sheet					
Net utility plant	$3,324.9	$3,133.5	$2,943.9	$2,656.1	$2,591.7
Capital expenditures	334.5	321.2	404.4	177.7	150.9
Capitalization					
Equity	1,890.5	1,771.7	1,646.1	1,511.8	1,341.5
Long-term debt	1,554.2	1,408.9	1,476.1	1,440.2	1,476.1
	3,444.7	3,180.6	3,122.2	2,952.0	2,817.6
Debt as % of net utility plant*	46.7%	44.5%	49.3%	52.0%	53.5%
Interest on debt	102.4	96.9	97.5	96.1	98.5
Payments to City of L.A.	70.2	67.9	64.4	58.9	55.3
Operations					
Kilowatt hours sold (billions)	21.1	20.5	20.3	19.9	20.2
Customers—average number (thousands)	1,304.6	1,275.9	1,262.0	1,251.2	1,243.1
Average revenue per kwh sold (in cents)					
Residential	7.7	7.1	6.9	6.7	6.0
Commercial and industrial	7.3	6.8	6.6	6.3	5.7
Energy production (billion kwh)					
Hydro	1.8	2.9	3.8	4.9	6.2
Thermal	20.1	15.9	13.3	12.3	10.3
Total generation	21.9	18.8	17.1	17.2	16.5
Purchases	2.6	4.3	5.8	6.5	7.1
Total production	24.5	23.1	22.9	23.7	23.6
Net system capability (thousand megawatts)					
Hydro	1.9	1.9	1.9	1.9	1.9
Oil and gas owned	3.1	3.3	3.3	3.2	3.2
	5.0	5.2	5.2	5.1	5.1
Jointly owned	1.1	1.1	1.0	1.1	1.1
Firm purchases	1.2	1.3	1.1	0.3	0.5
	7.3	7.6	7.3	6.5	6.7

**Excludes revenue notes and advance refunding revenue bonds.*

Operating Revenues:

$ In Millions

- Residential
- Commercial and Industrial
- Street Lighting and Other
- Miscellaneous



Kilowatt Hours Sold

In Billions

Water

There are 105 tanks and reservoirs in the DWP's Water System. They range from a capacity of 10,000 gallons to 60 billion gallons.

Crowley Lake, 300 miles north of Los Angeles, is the largest reservoir in the DWP system. It holds 60 billion gallons of water.

The Los Angeles Owens River Aqeduct is about 338 miles long and has been in service for 75 years.

The Second Los Angeles Aqueduct was completed in 1970 and is about 177 miles long.

Los Angeles has more than 7,000 miles of water pipeline.

The average per capita consumption of water in Los Angeles is 181 gallons per day.

The annual precipitation in the Los Angeles basin is 15.05 inches.

A drip from a water faucet can waste 1,500 gallons of water every month.

There are more than 53,000 fire hydrants in Los Angeles.

Power

The DWP receives firm power from generating stations located in California, Arizona, Nevada, and Utah.

DWP customers received about 30 percent of their electricity from the Intermountain Power Project in Utah during the fiscal year.

The DWP's Pacific Intertie is the longest DC transmission line in the world.

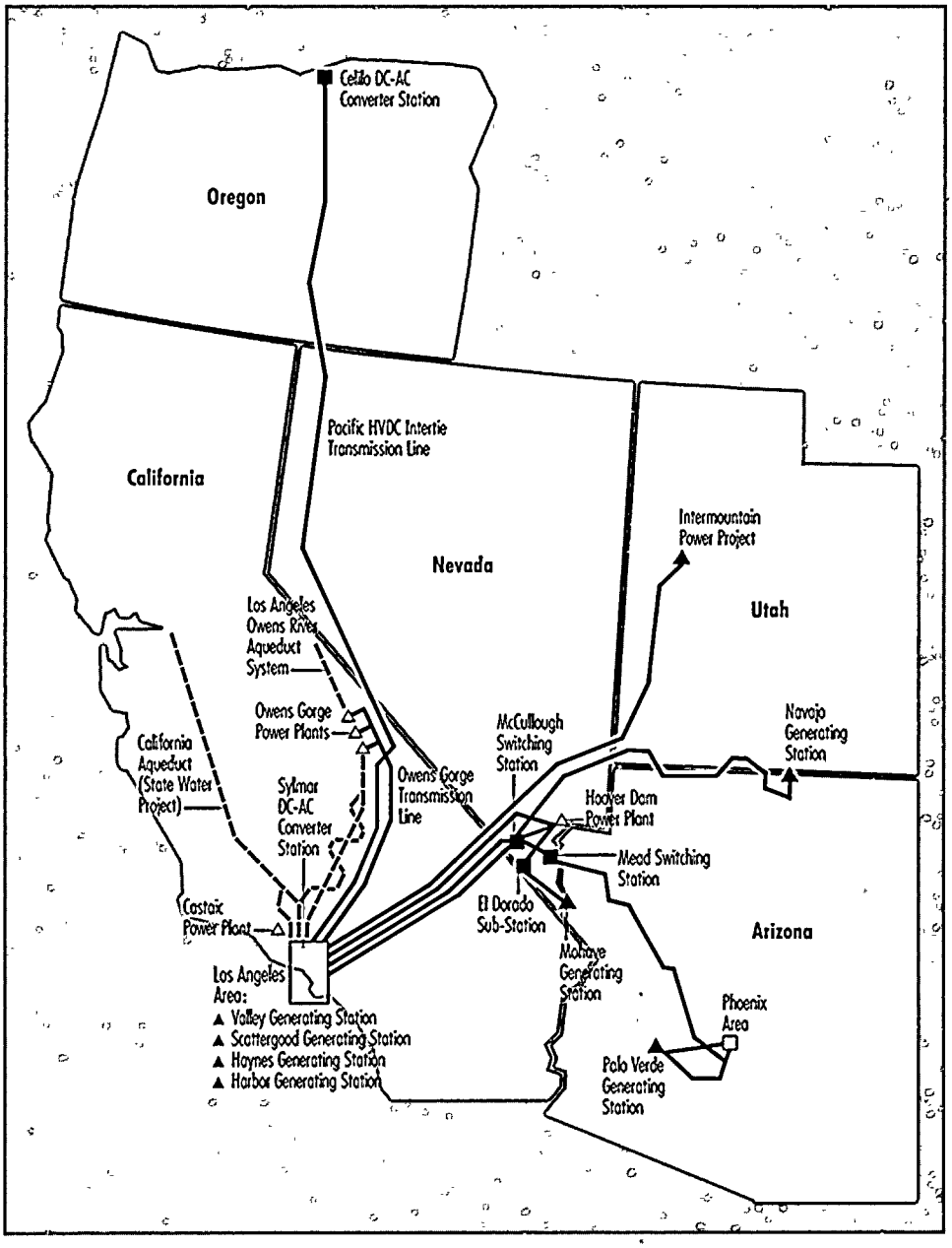
There are more than 289,000 wooden power poles either owned or jointly owned by the DWP.

Los Angeles has more than 2,200 miles of underground distribution cable.

Over the last 50 years the cost of living has gone up more than three times as much as the rates for electricity in Los Angeles.

Generating facilities in other western states are playing larger roles in the city's power supply. Water, also imported from hundreds of miles away, is brought to L.A. by aqueduct to serve the needs of the 3.4 million population.

--- Water System
—— Power Supply



City of Los Angeles Board of Water and Power Commissioners

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