

LOS ANGELES DEPARTMENT OF WATER AND POWER



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Technical assistance from the Los Angeles Department of Water and Power played a meaningful role in rebuilding two communities struck by natural disaster in the summer of 1999.

A team of 18 distribution workers and two superintendents flew to Puerto Rico on September 27 to help with repairs on that island's power system in the wake of devastation from Hurricane Hugo. The crews worked for two weeks under the direction of the Puerto Rico Electric Power Authority.

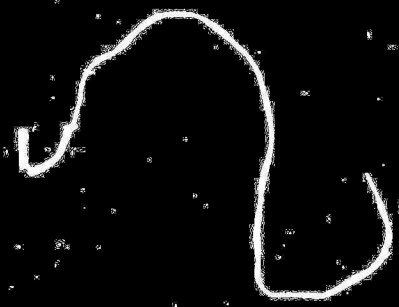
Three weeks later, the DWP dispatched two giant circuit breakers via truck to Santa Cruz, near the epicenter of the 7.1 magnitude earthquake that shook much of the San Francisco Bay area on Oct. 17, helping to restore power to beleaguered residents.

At the same time, a crew of water utility workers and an engineer-advisor were sent to a rural system outside of Santa Cruz to assist in getting that community's water system back into operation.

Both the Puerto Rico and Santa Cruz assistance efforts were carried out under cooperative agreements with utility industry councils.

DOS ANGELES DEPARTMENT OF WATER AND POWER

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## INTRODUCTION

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*"Accommodating our customers, large and small, will be the measure of our success in the 1990s," says Norman E. Nichols, General Manager and Chief Engineer of the Department of Water and Power. "We view the next decade as a dress rehearsal for the 21st Century."*

These words capture the essence of the utility sector's New Age, an era in which deregulation and competition will forge profound changes in an industry long known for its predictability. Three strategic concepts underpin the DWP's response to the new era:

- Increased efficiency and cost containment.
- Realistic rate structures.
- Commitment to excellent service.

On the next several pages, this Annual Report reviews some of the ways the Department of Water and Power is preparing for the challenges ahead. These examples symbolize the new spirit of service shared by the DWP's more than 11,000 employees.

**COMPARATIVE HIGHLIGHTS**

Year ended June 30	Water			Power		
	1989	1988	% Increase (Decrease)	1989	1988	% Increase (Decrease)
<b>Service</b>	Gallons in billions			Kilowatt hours in billions		
Sales	208.1	203.6	2.2%	21.9	21.1	3.8%
Customers — average number (thousands)	640.6	637.8	0.4%	1,325.3	1,304.6	1.6%
<b>Financial</b>	In millions			In millions		
Revenue <sup>(A)</sup>	\$ 306.7	\$ 259.7	18.1%	\$1,734.6	\$1,588.1	9.2%
Operating costs <sup>(B)</sup>	206.0	172.4	19.5%	1,301.2	1,191.7	9.2%
Net income	42.3	34.4	23.0%	193.4	175.6	10.1%
Payments to City of Los Angeles	12.9	12.4	4.0%	78.5	70.2	11.8%
Capital expenditures	118.1	97.8 <sup>(C)</sup>	20.8%	336.2	317.3 <sup>(C)</sup>	6.0%
Net utility plant	1,202.0	1,114.7	7.8%	3,523.9	3,324.9	6.0%
Capitalization — equity and long-term debt	1,250.3	1,172.5	6.6%	3,626.1	3,444.7	5.3%

<sup>(A)</sup>Includes other income — net

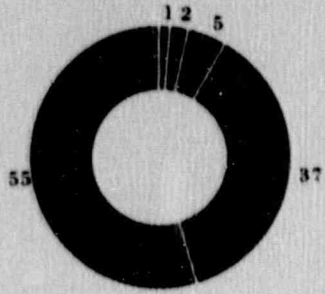
<sup>(B)</sup>Excluding depreciation expense

<sup>(C)</sup>Restated due to change in accounting method

**WATER AND POWER DOLLAR**

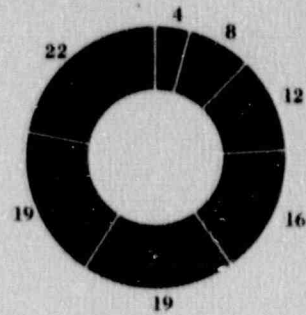
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**WATER REVENUE DOLLAR IN CENTS**



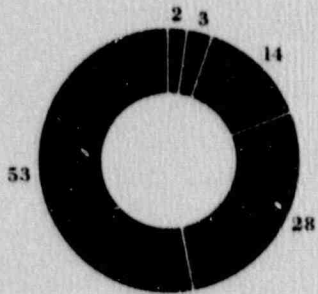
- 1 Other
- 2 Fire Hydrant rentals
- 5 Governmental
- 37 Residential
- 55 Commercial and industrial

**WATER EXPENDITURE DOLLAR IN CENTS**



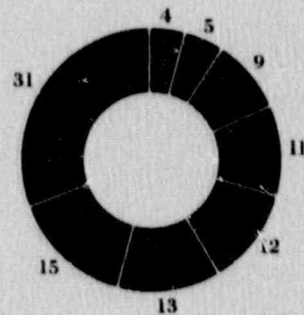
- 4 Payments to the City
- 8 Retirement Plan costs related to operations
- 12 Capital improvements
- 16 Debt service costs
- 19 Purchased water and energy
- 19 Other operating expenses
- 22 Operating salaries and wages

**POWER REVENUE DOLLAR IN CENTS**



- 2 Street lighting
- 3 Other
- 14 Industrial
- 28 Residential
- 53 Commercial

**POWER EXPENDITURE DOLLAR IN CENTS**



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

*"Accommodating our customers, large and small, will be the measure of our success in the 1990s," says Norman E. Nichols, General Manager and Chief Engineer of the Department of Water and Power. "We view the next decade as a dress rehearsal for the 21st Century."*

These words capture the essence of the utility sector's New Age, an era in which deregulation and competition will forge profound changes in an industry long known for its predictability. Three strategic concepts underpin the DWP's response to the new era:

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On the next several pages, this Annual Report reviews some of the ways the Department of Water and Power is preparing for the challenges ahead. These examples symbolize the new spirit of service shared by the DWP's more than 11,000 employees.





**Rick J. Caruso**  
President



**Jack W. Evans**  
Vice President



**Angel M. Schmaris**



**Carol Wheeler**



**Walter A. Zelman**



Mr. J. M. [unclear]



Mr. [unclear]



Mr. [unclear]



Miss [unclear]



Mr. [unclear]

The Los Angeles Department of Water and Power supplies water and electricity to the approximately 3.4 million residents of the nation's second largest city. As the largest municipally owned utility in the nation, DWP has more than 11,000 employees serving a 465-square-mile area ranging from the San Gabriel Mountains to the Pacific Ocean. It began municipal distribution of water in 1902 and electricity in 1916.

As a proprietary agency of the Los Angeles City government, the DWP receives no tax support. Its operations are financed entirely by the sale of water and electricity. Revenue bonds are its 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.

**DEPARTMENT OF WATER AND POWER**

Norman E. Nichols  
General Manager and Chief Engineer

Eldon A. Cotton  
Assistant General Manager — Power

Duane L. Georgeson  
Assistant General Manager — Water

Daniel W. Waters  
Assistant General Manager — External and Organizational Services

Norman J. Powers  
Chief Financial Officer

Business's most successful activities will be those that provide the highest quality service. To remain a leader in its industry, the DWP is putting new emphasis on this element of its business.

On the next several pages are four examples. As these case studies show, however, they are but only a few of the many ways in which the DWP is providing the highest quality service to its customers. In at the least of a good service-oriented operation — finding new ways to do the job better...

● In Northridge, a DWP account executive provides the way for a major customer's future expansion.

● In Eastern Los Angeles, another DWP representative helps a large central market keep its customers happy.

● Large customers near CalState Park consider a switch to reclaimed water.

● Home builders everywhere learn the advantages of lost pumps.

In these and a thousand other ways, the DWP is building a new service culture to greet the 21st Century.

Intentional investment in essential utilities will be those that provide the highest quality service. In remaining leader in its industry, the DWP is putting new emphasis on this element of its business.

On the next several pages, we describe some of the ways in which we are investing in our infrastructure. As the case studies show, we are investing in the capabilities for the future of a number of our core operations. Our strategy is to invest in the right places.

- In Northridge, a DWP investment in water treatment technology has improved the quality of water for a significant portion of the city.
- In the San Gabriel Valley, a DWP investment in water treatment technology has improved the quality of water for a significant portion of the city.
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In the next and a third section, we describe the DWP's investment in new services and how to protect the DWP's interests.

With the emergence of the Pacific Rim as a major economic and cultural arena, Los Angeles has become a gateway for hundreds of thousands of new arrivals — making it the most internationalized of all U.S. cities.

As the community has become multilingual and cross-cultural, Department of Water and Power services have adapted accordingly — with bilingual phone and field personnel, with customer materials now printed in several languages and training programs designed to accommodate a variety of ethnic and cultural backgrounds.

The influx of newcomers to Los Angeles has been accompanied by a rapid growth in ethnic enterprise, with special utility service needs that can be complicated by language barriers. A four-person bilingual team within the DWP's Major Accounts Group works with managers of Hispanic businesses like El Mercado, the bustling Hispanic marketplace in Eastern Los Angeles. With more than 60 vendors doing a total annual business of over \$10 million, it is a major consumer of electricity and water, and as such warrants its own account executive from the DWP's Major Accounts Group.

"Any establishment this big needs special attention," says Fred Herrera, the account executive for El Mercado. "Power reliability is critical for merchants who must keep their products refrigerated. Water quality is essential for vendors serving the public. But there are hundreds of other needs." Herrera's command of Spanish is an important adjunct to his technical expertise. Although the general manager of El Mercado, Pedro Rosado, is also bilingual, many of the employees there are proficient only in Spanish.

"Having someone available to us who knows our situation, knows the utility business and is fluent in Spanish is a real benefit," says Rosado, who has managed El Mercado for 12 years. "In this case, I guess you could say the DWP speaks our language in more ways than one."

Philip Hengler  
Line Patrol Mechanic  
DWP



Rudolph Harris  
Electrical Distribution  
Mechanic/DWP



**Evel Herrera**  
Account Executive  
Major Accounts Group  
DWP

**Dylan Rosado**  
General Manager  
El Mercado



*Incorporating ethnic diversity is one of the challenges the DWP must meet in the 1990s. At El Mercado, Los Angeles' largest Hispanic marketplace, Herrera helps solve problems and serve the needs of the 60 El Mercado vendors for whom Rosado is responsible.*

*Overleaf — A mariachi band cultivates the atmosphere in Olvera Street, symbolic of the community's new social heterogeneity.*



OUR CUSTOMERS







For me it was a relief to have a wife and  
 the school to help. The D.W. K. in the  
 on the 1950s. April 1950, when I was  
 A couple of days of the 1950s, people  
 judge it. He was a judge, a doctor, a  
 long ago, and the night of the 1950  
 of 1950, when I was a doctor, a  
 the 1950s, a great club.

That's all. A man can be a doctor, a  
 can be a doctor, a doctor, a  
 Since I was a doctor, a doctor, a  
 his name, a doctor, a doctor.









A growing Los Angeles has traditionally solved its water needs through "supply-side" measures — by importing from water-rich areas to the north and east. As environmental concerns intensify, however, the emphasis has shifted to "demand side" solutions.

Today, the DWP is looking toward the newest horizon in water resource management — reclaiming and recycling "used" water for irrigation and for recharging the underground water table.

Under joint programs of the City's Department of Recreation and Parks and the Department of Public Works, reclaimed water is already used to irrigate two Griffith Park golf courses, and it will soon be watering 1,400 recreational acres in the Sepulveda Dam Basin. Now the DWP hopes to find customers for this water in the private sector.

"Large water users are very interested in this opportunity," says Steve Ott, an engineer/planner for the Greenbelt Project of the DWP. "As supplies of fresh water get tighter, they know deliveries of reclaimed water won't be cut off."

A DWP marketing team under Saturo Matsuda has approached four closely clustered companies with heavy irrigation needs (Forest Lawn and Mt. Sinai Memorial Parks, Lakeside Country Club and Universal City) as prospects for the Greenbelt Reclamation Project.

"We're under a lot of pressure during drought periods," says Jack Clough, Vice President of Architecture and Engineering for the Forest Lawn Company, which has more than 100 acres of lawn to irrigate at its Hollywood Hills Memorial Park. "The Greenbelt Project may be our answer."

Matsuda's marketing team has been working with Clough and his counterparts at the other prospect firms for about six months. They hope to have an agreement by early 1990, and reclaimed Greenbelt water could start flowing as early as the summer of 1990.

Matsuda sees this as a good start, but adds: "We're just scratching the surface."

Richard Zubiate  
Senior Water Utility  
Worker/DWP



Rebecca Rosenfeld  
Assistant District Clerk  
DWP



Steve Chan  
Water Reclamation  
Coordinator  
DWP

Kathleen Chan  
Project Manager  
Department of  
Recreation and Parks



Teamwork among the DWP, the Department of Recreation and Parks, and the Department of Public Works has helped save millions of gallons of water for the City. Chan and Chan played key roles in coordinating the project.

*Overleaf*—Two Griffith Park golf courses already irrigate with reclaimed water, and the DWP is now seeking other nearby customers.







to network among the JWP and  
 Department of Recreation and  
 Parks and the Department of Public  
 Works. He is also in charge  
 of all the water for the City and  
 will be replaced by a new person  
 to start the project.

He is also in charge of the  
 water supply and the JWP's  
 water supply and the JWP's  
 water supply and the JWP's











While no two DWP customers are exactly alike, all share one thing in common: When they turn on an electrical switch or water faucet, they expect something good to happen.

This expectation prompted the Department of Water and Power early in 1988 to institute its Major Accounts Group (MAG), to serve the special needs of the DWP's 1,500 largest customers, for whom reliability of service is critical. These customers account for around 33 percent of DWP's total power demand.

Burgeoning California State University in Northridge, with a student population of 30,000 and growing, is an example of a major DWP account. And in a couple of years CSUN will be even bigger, thanks to an ambitious expansion program now under way.

New buildings inevitably mean new demands for water and power, and Susan Smith, a 17-year DWP employee and the executive in charge of the CSUN account, is responsible for seeing that these needs are met. Though she handles many other major accounts (including L.A. International Airport), CSUN has been getting the lion's share of her time lately.

"Right now, their needs are pretty great," says Smith, whose optimism is a major asset in her work, "so this is where my priorities belong. These problems can't wait."

Among the needs CSUN has put before Smith are three new industrial stations, box car-size units that DWP has been asked to install on the campus in the next 18 months. These units lower the voltage of incoming power to make it compatible with the university's system.

It's her responsibility to put the CSUN development team in touch with the right people at DWP to get this done, then to follow through and make sure everything comes together.

"We're moving our project along generally on schedule," says CSUN Director of Facilities Planning, Steven C. Lohr. "Sue Smith is one of the people helping us keep it there."

Richard Ito  
Electrical Conduit  
Handler/DWP



Regina Cato  
Electric Meter Sener  
DWP



Dr. James W. Cleary  
President  
California State  
University - Northridge

Richard Smith  
Executive Director  
Major Accounts Group  
DWP



Rapid growth is nothing new at California State University in Northridge, but today Dr. Cleary oversees possibly the largest expansion in California educational history, and the DWP's Smith is playing a signal role in this ambitious project.

*Overleaf*— Under its expansion plan, the campus will add several new academic buildings and develop new commercial facilities.















Part of the new environment facing public utilities in the 1990s is a stronger emphasis on marketing the products and services they provide. The DWP has moved boldly into this arena with its new Heat Pump Group.

Heat pumps, first introduced in the early 1950s, work on the same principle as room air conditioners, which transfer warmth from the interior to the outdoors. But heat pumps work both directions, extracting warmth from outside air (even when it seems cold) to heat inside spaces in winter, and reversing the process during hot weather.

Heat pumps have become more efficient in recent years, and their costs have gone down. As a result, the DWP in 1987 began promoting their use as a substitute for conventional heating and cooling units, especially for small spaces. The program provides financial incentives for builders and homeowners who equip new buildings, or retrofit old ones. Again, service is the key.

"We have to make the builder or homeowner aware of the advantages over conventional heating and air conditioning," says Steve Matsuda, Director of the DWP Heat Pump Group. "People like their flexibility, convenience and clean operation." So far, the DWP has paid out more than \$4 million in incentives to contractors for installing some 25,000 units in the DWP service area.

"The program has done wonders for DWP in the marketplace," says Dan S. Palmer, a partner in G.H. Palmer Associates, a Brentwood development company that installed heat pumps in a 760-unit project completed in 1989. "The DWP really pulled with us. We're very pleased."

So, evidently, are other people. The program has been steadily accelerating since its inception, to the extent that sales during the second quarter of 1989 exceeded sales for the entire first year of the program.

Barry Jones  
Electrical/Conduit  
Mechanic/DWP



Linda Sawlesville  
Senior Clerk Typist  
DWP



Don Palmer, Jr.  
Partner  
C. B. Palmer Associates

Elton B. Schneider  
Energy Consultant  
EBC

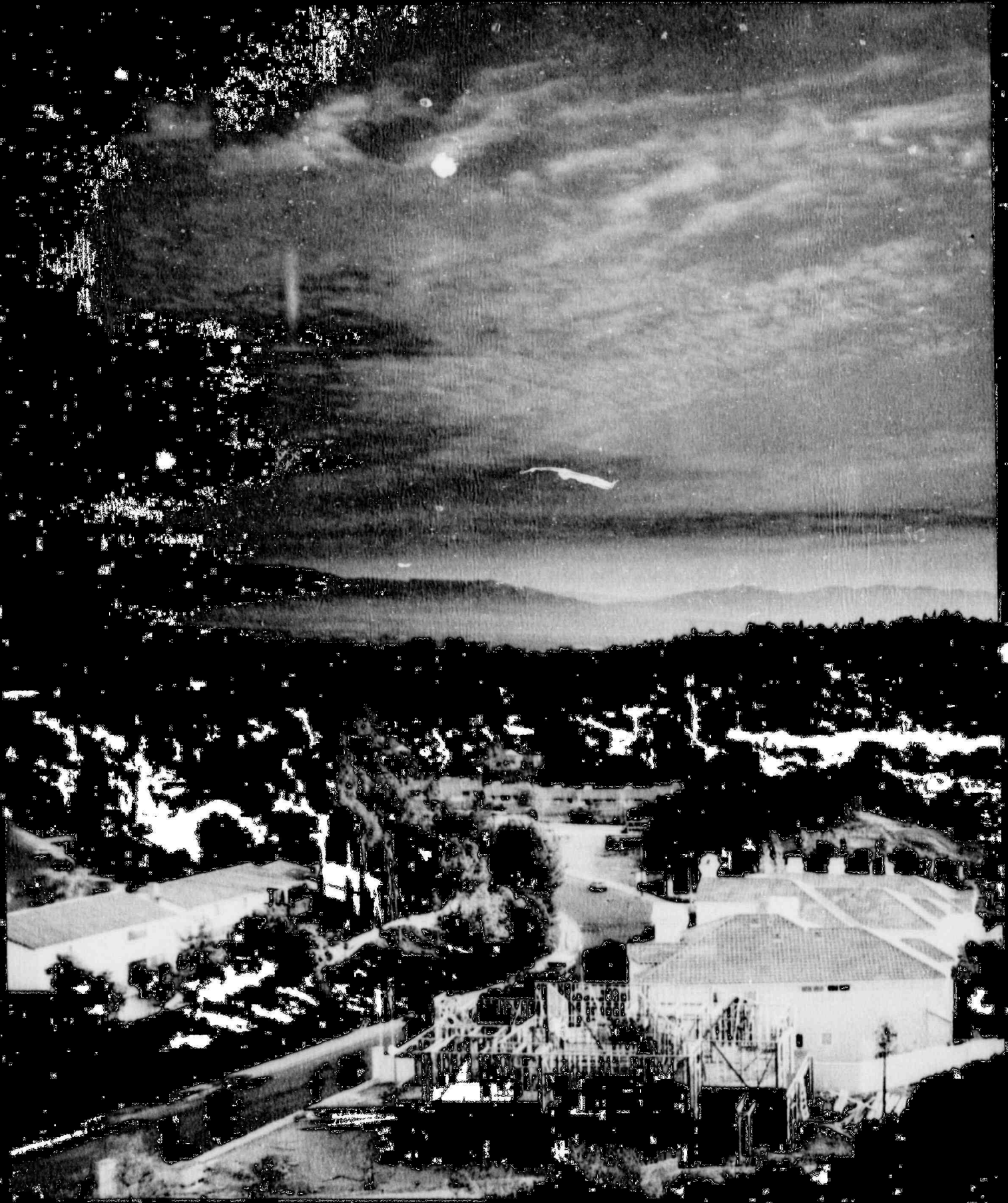


State-of-the-art convolvers at affordable prices is a major concern of builder Don Palmer. Elton Schneider of the DWP's Heat Pump Unit helped sell him on the value of heat pumps which are clean and economical for heating and cooling.

Outlet—Framed units of Palmer's 700-square-foot apartment complex, The Summit, take shape near Western Center, Woodland Hills.



DWT CUSTOMERS





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through the project...  
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Another year of below-average precipitation in Southern California, the watersheds of the Colorado and Sacramento Rivers and Eastern Sierra Nevada gave new urgency to conservation efforts by the Department of Water and Power in 1988-89.

The third shortfall in Sierra snowmelt in as many years lowered water deliveries from the Los Angeles Aqueduct to 70 percent of the 20-year average. Electrical production from the Aqueduct was down 21 percent from the previous year. Colorado River water and power production were also lower.

These reductions were made up through additional purchases of water from the Metropolitan Water District and of electrical power from out-of-state generating facilities. These purchases resulted in higher costs that had to be passed on to DWP customers.

In all, the DWP Water System supplied approximately 208.1 billion gallons to some 640,572 customers in 1988-89, compared with 203.6 billion gallons and 637,793 customers in the previous year. The record year for water use was 1986-87, when the DWP sold more than 210 billion gallons.

The Power System in fiscal 1988-89 sold 21.9 thousand gigawatt-hours of electricity to around 1,325,300 customers (both new highs), compared with 21.1 thousand gigawatt-hours and 1,305,000 customers in 1987-88.

In February 1989, Norman E. Nichols was confirmed as General Manager and Chief Engineer, replacing Paul H. Lane, who retired after 40 years' service. Mr. Nichols' replacement as Assistant General Manager—Power is Eldon A. Cotton.

#### WATER SYSTEM HIGHLIGHTS

Major developments occurred this year in two long-standing legal issues surrounding DWP water rights in the Owens Valley and at Mono Lake. The Inyo County Board of Supervisors and the DWP Board have given preliminary approval to an environmental protection plan that clears the way for implementing a long-term Owens Valley underground water management plan.

An El Dorado County superior court granted a petition for a preliminary injunction sought by the National Audubon Society and Mono Lake Committee. The injunction granted through March 3, 1990, halts DWP diversions of water from the Mono Basin until the water level at Mono Lake rises to 6,377 feet.

Replacing the water the City will lose from this injunction, along with lost electricity generated by Mono Basin runoff, will require increased water imports from the Sacramento Delta and will cost Los Angeles consumers around \$15 million annually.

Improvements in water quality continued last year, with the new Los Angeles Aqueduct Filtration Plant discharging water with average turbidity more than 500 percent better than state standards. More than two-thirds of the City's total water demand goes through this plant. Levels of trichloroethylene in San Fernando Valley groundwater also showed improvement in 1988-89, falling to a level nearly five times better than regulatory requirement.



Vintage cars and costumes highlight the gala camp at  
 night, under the stars and moonlight, for the members of  
 the Los Angeles Aqueduct. The celebration, Diamond  
 Jubilee of the Aqueduct's opening in 1913.



Vintage cars and costumes highlighted the gathering of notables, media and DWP officials at the terminus of the Los Angeles Aqueduct to celebrate the Diamond Jubilee of the Aqueduct's opening in 1913.

Work has begun on environmental impact studies in connection with improving water quality at ten open reservoirs in the City to help meet expected tighter federal and state standards. Planned improvements at several of the reservoirs have met with local community resistance, and legislation to restrict such an action was passed by the state legislature but vetoed by the Governor.

More than \$30 million was invested last year in improvements to some 95 miles of the DWP's vast underground water delivery system (infrastructure). This work consisted of cement-lining 65 miles of small distribution mains and replacing over 30 miles of deteriorated mains to improve water quality and public fire protection.

Design of the Greenbelt Project, which will distribute reclaimed water for irrigation by large private customers around Griffith Park, moved toward completion in 1989-90 (see page 12).

Over a million low-flow shower heads and toilet tank water bags have been distributed free to homeowners in the DWP's continuing efforts at encouraging water conservation.

Meanwhile, Phase I of the City's water conservation ordinance, which restricts use of water for such purposes as driveway and sidewalk cleaning, remains in effect. Beginning July 1989 a 10 percent surcharge will apply to commercial and industrial customers who fail to comply with the City's sewer flow reduction ordinance.

A new \$2 million aeration tower for treating ground water from DWP wells in the San Fernando Valley was completed in March 1989. The facility employs new technology developed jointly by the DWP and UCLA.

The average water bill in Los Angeles increased around \$2.35 per month in 1988-89 because of higher costs of purchased water and a 9.2 percent revenue increase that became effective in October 1988.

**WATER SYSTEM FACTS IN BRIEF**

Year ended June 30	1989	1988
<b>Use of Water</b>		
Average Los Angeles population served	3,427,000	3,388,000
Average daily use per capita (gallons)	181.2	180.8
Water sales for fiscal year (billion gallons)	208.1	203.6
Maximum daily demand (million gallons)	833.1	841.0
<b>Water Supply</b> (in cubic feet per second)		
Local supply	188.3	166.9
DWP Aqueduct	451.9	573.6
Metropolitan Water District (California Aqueduct and Colorado River Aqueduct)	319.2	207.7
Gross supply	959.4	948.2
Diversion from (to) local storage	1.5	(0.3)
Net supply to distribution systems	<u>960.9</u>	<u>947.9</u>

## POWER SYSTEM HIGHLIGHTS

The Power System completed several steps in 1988-89 to improve service and increase the reliability of electrical supplies to its customers.

The Scattergood Generating Station in Playa del Rey received approval from the South Coast Air Quality Management District (SCAQMD) to operate its Unit 3 at the full 460-megawatt capacity, a 24-percent increase from its original permit limit. Until testing is completed, however, the unit will continue to operate at 358 megawatts. DWP overall power capability was 7,093 megawatts on June 30, 1989, 0.71 percent above the prior year.

A \$171 million expansion of the Sylmar converter station, the Southern California "gateway" for power from the Pacific Intertie system, was completed in 1989. This allows the DWP and its partners in the Intertie to increase the amount of electricity they can receive from the Pacific Northwest by more than 50 percent.

Major electrical customers of the DWP are the focus of a new Major Accounts Group formed within the Power System last year as an outgrowth of the System's long-range plan completed in 1988. The new unit will provide a wide range of customized services to nearly 1,500 accounts responsible for about a third of the City's power revenues. (See page 7.)

Release of the SCAQMD's plan and new rules affecting boiler emissions for cleaning up Southern California air pollution held significant implications for the DWP. The plan calls for major changes in the way power is produced and used in the Los Angeles Basin, including widespread use of electric vehicles by the year 2000.

The plan also calls for major nitrogen oxides (NOx) emission reductions from power plants, while facilitating the repowering of existing facilities. The 240-megawatt Harbor Repowering Project was an outgrowth of this plan.

Because the Southern California Gas Company demands exceeded supply, natural gas for electrical generation in the Los Angeles Basin was curtailed during three periods totalling 165 days in 1988-89. It was the first year in which curtailments occurred during summer months. Because of the cutbacks, the DWP burned an extra 1,725,000 barrels of low-sulfur fuel oil to meet demand.

The Power System continues to emphasize conservation and efficient energy use with programs such as the City's mandatory curtailment ordinance, which saved an estimated 1,475 gigawatt-hours (six percent of demand) in 1988-89. The DWP also offers financial incentives to encourage customers' use of efficient appliances and lighting systems, heat pumps (page 20) and thermal energy storage units.



Cleaning operation occurs at the new North Hollywood Aeration Plant treat groundwater from the DWP's San Fernando Valley wells, assuring high levels of purity while maintaining more natural taste.



A DWP employee demonstrates a safety procedure for a student during one of the Department's school safety programs. More than 100,000 young people have participated in the program since 1984.



Fire damage in a school building in Atlanta, Georgia. North Atlanta and  
Atlanta on Plans for a comprehensive study of the DW-P - State  
to (mand - Kobb - on the - assessing high levels of protection  
which means critical levels in 2000 and 2001



A DW-P employee demonstrates a safety procedure for  
a study of shooting rate of the Department's school safety  
programs. More than 100,000 young people have  
participated in the program since 1991



**OPERATIONS OVERVIEW**

Meanwhile, the DWP's record on air quality continued to improve, with NOx emissions averaging 83 percent below levels recorded 20 years ago. DWP power plants now account for only approximately one tenth of one percent of total air emissions in the Basin. Emissions from employee vehicles have also been reduced through an active ride-sharing effort at the DWP.

Development of safe, efficient electric vehicles remains a DWP priority. Six preproduction copies of the electric "G-Van," developed by General Motors and two other companies, will join the DWP vehicle fleet sometime this year. And, in cooperation with the Mayor and City Council, the DWP issued a request for proposal for 10,000 electric vehicles as a stimulus to commercial introduction, with deliveries beginning in 1990. Currently, 19 proposals have been received and are being evaluated.

To meet higher costs of purchased fuel and electric power, electric revenue increases of 4.4 percent (about \$1.42 per month per average residential customer) were approved by the City Council and became effective in October 1988.

**POWER SYSTEM FACTS IN BRIEF**

Year ended June 30	1989	1988
<b>Power Use</b>		
Domestic customers	1,135,017	1,116,806
Commercial customers	168,031	165,229
Industrial customers	19,370	19,740
All others	2,864	2,828
 Total customers -- all classes	 1,325,282	 1,304,603
 Sales to ultimate consumers -- kilowatt-hours	 21,460,324,000	 20,936,158,000
Sales to other utilities -- kilowatt-hours	437,311,000	169,800,000
Average annual kilowatt-hours per domestic customer	5,181	5,029
 <b>Status of System</b>		
Utility plant (less accumulated provision for depreciation)	\$ 3,523,937,000	\$ 3,324,924,000
<b>Generating Stations</b>		
Net dependable capability, kilowatts	<u>7,280,000*</u>	<u>7,280,000*</u>

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



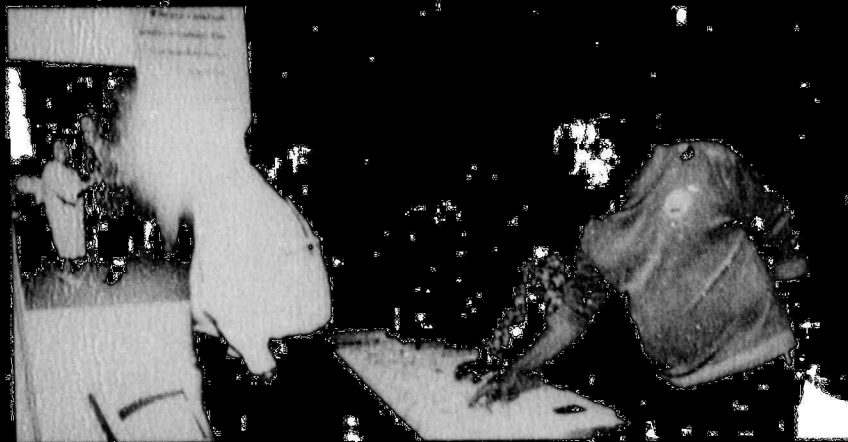
Capacity of the Sylmar Converter Station, gateway for power from the Pacific Inter-tie System into the Los Angeles basin, was expanded by more than 50 percent in 1989.



Members of a Los Angeles senior center pick up information on the DWP's new "Serving Our Seniors" program, in which Department personnel monitor the well-being of elderly customers.



University of the South California Statewide graduate program from the Pacific Time zone systems into the Los Angeles basin was expanded by more than 100% in 1989.



Members of the Los Angeles sewer center pack up into material on the DWP's new Sewerage Unit Station program in which Department purchased virtually all the well performing vehicles and assets.

EXTERNAL AND ORGANIZATIONAL SERVICES

EOS became a focal point in 1988-89 for the DWP's new accent on customer services, with new programs and systems to increase customer convenience and access to information.

A major objective has been to reduce response time on incoming calls to the DWP, which averaged about 193,000 per month last year, up nearly a third from 1987-88. Despite this increase, the response time was below 20 seconds on 62 percent of the calls.

Delinquent accounts are being reduced under programs introduced or expanded in 1988-89. An Essential Public Utility Ordinance and Lien Assessment Program are two tools the DWP uses in this effort. The former program continues service where property owners, not tenants, are delinquent on utility bills. More than \$10 million has been collected to date under the Lien Assessment Program, where unpaid balances are added to delinquent customers' property tax bills. Bills considered uncollectible were cut \$450,000 last year.

Recognizing the special vulnerability of older customers, the DWP instituted its "Serving Our Seniors" (SOS) program last year. Under the program, DWP personnel watch for signs of seniors in distress. When a problem is found, DWP personnel report it to the City's Department of Aging for follow-up.

Other community involvement activities in 1988-89 included an audio and video production on earthquake preparedness, along with a bilingual earthquake pamphlet, that were distributed to homeowners and organizations throughout the area.

The DWP's school safety program has reached more than 100,000 students since 1984 with information on electric safety. It was furthered last year with on-site demonstrations to more than 2,000 pupils a month in the Los Angeles Unified School District, private and parochial schools.

The 75th anniversary of the opening of the Los Angeles Aqueduct was marked with an event recreating the original opening ceremonies in 1913. Attended by civic leaders and well covered by the press, the event used period costumes and vintage autos to recapture the spirit of the original.

Significant strides were made during 1988-89 in the area of affirmative action. Minorities and/or women now occupy one third of all "officials and administrators" positions and half of all professional positions in the DWP. Programs to build minority representation throughout the organization are continuing.

A four-year decline in lost-workday injuries continued last year, with a 6.8-percent reduction. This represents a 36-percent reduction over the last four years. Extensive training of field personnel on handling encounters with customers' pets resulted in a 40-percent decline in dog bites suffered by DWP personnel.

The second phase of a computerized management support system has just been completed, giving one-third of DWP management access to a wide range of computer services, including electronic mail and numerous data bases. This instant access to information improves DWP efficiency and productivity.

**1988-1989 FINANCIAL STATEMENTS**

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**THE WATER SYSTEM**

Statement of Income  
Statement of Retained Income Revenues  
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**THE POWER SYSTEM**

Statement of Income  
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FORM 1940 FINANCIAL STATEMENTS

Statement of Income  
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Statement of Income  
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**FINANCIAL REVIEW**

Operations for fiscal year 1988-89 resulted in an increase of 3.8 percent in sales of electric energy and a 2.2 percent increase in water sales.

Operating revenues of the Department's Water and Power Systems totaled more than \$2.0 billion, a gain of \$189 million over the previous fiscal year. The Power System accounted for \$146 million of the increase, primarily due to higher energy costs billed to customers, the increase in sales mentioned above and the effect of the October 1988 revenue increase of 4.0 percent. The Water System added \$43 million to the total, mostly from higher purchased water and energy costs billed to customers, the increase in sales mentioned above and the effect of the October 1988 revenue increase of 9.2 percent.

Higher Water System operating revenues resulted in net income of \$42 million, up 24 percent from 1987-88's total of \$34 million.

A total of \$118 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 9.3 percent from 1987-88, to a total of \$1.7 billion. Net income amounted to \$193 million, or 10 percent above the \$176 million in the previous fiscal year.

The Power System invested \$336 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, 1989, were approximately \$5.6 billion. Of this amount, \$4.2 billion was recorded in the Power System and the remainder in the Water System.

**FINANCING ACTIVITIES**

During the year, the Power System sold one issue of \$100 million revenue bonds at the interest rate of 7.36 percent. The Water System sold one issue of \$50 million revenue bonds at the interest rate of 7.22 percent.

Outstanding bonds, notes and revenue certificates at June 30, 1989, totaled \$1.74 billion for the Power System and \$400 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 \$91 million into the Reserve Fund of the City in support of general City government.

Approximately 86 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.

**REPORT OF MANAGEMENT**

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The management of the Department of Water and Power of the City of Los Angeles is responsible for the integrity of the financial statements and the other related financial data contained in this Annual Report. The financial statements and accompanying footnotes which follow were prepared by the Department in accordance with generally accepted accounting principles applied on a consistent basis. Where necessary, the financial information provided in this report include amounts based on the best estimates and judgments of management.

The Department maintains a system of internal accounting control that is delineated to provide reasonable assurance that assets are safeguarded from loss or unauthorized use and that the pecuniary records properly reflect the authorized transactions of the Department. This system is supported by written policies and procedures, organization structures that assign appropriate division of responsibility, the selection and training of qualified personnel and is augmented by programs of internal audits. Management recognizes that there are inherent limitations in the effectiveness of any internal control system based upon the recognition that the cost of such systems should not exceed the benefits to be derived. The Department believes that its system of internal accounting control appropriately balances this cost-benefit relationship.

The Department's financial statements have been audited by Price Waterhouse and Simpson & Simpson, Certified Public Accountants, in accordance with generally accepted auditing standards. Their audit included 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 preparation. Additionally, the independent accountants review the Department's quarterly financial information. A review is substantially less in scope than an audit in accordance with generally accepted auditing standards and, accordingly, the independent accountants do not express an opinion on the quarterly financial information. The independent accountants meet regularly with management to discuss their audit and their findings as to the integrity of the financial statements and the adequacy of the internal controls.

The Board of Water and Power Commissioners is responsible for reviewing the Department's financial reports and monitoring accounting practices. The Board, composed of commissioners who are not officers or employees of the Department, receives and reviews the reports submitted by the independent accountants.



**WATER SYSTEM STATEMENT OF INCOME**

(In Thousands)	Year ended June 30	1989	1988	1987
<b>Operating Revenues</b>				
Residential		\$110,069	\$ 94,525	\$ 92,436
Commercial and industrial		166,558	142,456	135,163
Other		23,621	20,051	20,775
Total operating revenues		<u>300,248</u>	<u>257,032</u>	<u>248,374</u>
<b>Operating Expenses</b>				
Purchased water		44,988	31,072	26,765
Purchased energy		12,991	11,613	8,806
Other operating expenses		109,627	95,443	87,634
Maintenance		38,424	34,243	28,691
Depreciation		32,814	30,584	26,586
Total operating expenses		<u>238,844</u>	<u>202,955</u>	<u>178,482</u>
<b>Operating Income</b>		61,404	54,077	69,892
<b>Loss on Abandonment of Chatsworth Reservoir</b>		—	—	(10,675)
<b>Other Income and Expenses, Net</b>		6,477	2,685	4,524
Income before debt expenses		<u>67,881</u>	<u>56,762</u>	<u>63,741</u>
<b>Debt Expenses</b>				
Interest on debt		27,556	23,749	22,039
Allowance for borrowed funds used during construction		(2,006)	(1,380)	(2,939)
Total debt expenses		<u>25,550</u>	<u>22,369</u>	<u>19,100</u>
<b>Net Income</b>		<u>\$ 42,331</u>	<u>\$ 34,393</u>	<u>\$ 44,641</u>

**STATEMENT OF RETAINED INCOME REINVESTED IN THE BUSINESS**

(In Thousands)	Year ended June 30	1989	1988	1987
Balance at beginning of year		\$464,500	\$442,526	\$409,186
Net income for the year		42,331	34,393	44,641
		<u>506,831</u>	<u>476,919</u>	<u>453,827</u>
Less — Payments to the reserve fund of the City		12,852	12,419	11,301
Balance at end of year		<u>\$493,979</u>	<u>\$464,500</u>	<u>\$442,526</u>

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

## WATER SYSTEM BALANCE SHEET

(In Thousands)	June 30	1989	1988
<b>Assets</b>			
<b>Utility Plant, at original cost</b>			
Source of water supply	\$ 243,355	\$ 236,592	
Pumping	53,499	48,969	
Purification	139,947	132,699	
Distribution	1,105,323	1,022,138	
General	122,252	110,029	
	<u>1,664,376</u>	<u>1,550,427</u>	
Less — Accumulated depreciation	542,259	510,225	
	<u>1,122,117</u>	<u>1,040,202</u>	
Construction work in progress	79,947	74,526	
Net utility plant	<u>1,202,064</u>	<u>1,114,728</u>	
<b>Current Assets</b>			
Cash and investments	89,091	84,329	
Customer and other accounts receivable	54,166	54,772	
Accrued unbilled revenue	29,056	21,671	
Materials and supplies, at average cost	16,112	15,489	
Prepayments and other current assets	11,539	14,906	
Total current assets	<u>199,964</u>	<u>191,167</u>	
Total utility plant and assets	<u>\$1,402,028</u>	<u>\$1,305,895</u>	
<b>Capitalization and Liabilities</b>			
<b>Capitalization</b>			
Equity			
Retained income reinvested in the business	\$ 493,979	\$ 464,500	
Contributions in aid of construction	376,599	357,829	
	<u>870,578</u>	<u>822,329</u>	
Long-term debt	379,724	350,188	
Total capitalization	<u>1,250,302</u>	<u>1,172,517</u>	
<b>Current Liabilities</b>			
Long-term debt due within one year	20,180	20,270	
Accrued interest	9,432	7,752	
Accounts payable and accrued expenses	83,472	69,544	
Customer deposits	38,642	35,812	
Total current liabilities	<u>151,726</u>	<u>133,378</u>	
<b>Commitments and Contingencies</b>			
Total capitalization and liabilities	<u>\$1,402,028</u>	<u>\$1,305,895</u>	

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

## WATER SYSTEM STATEMENT OF CASH FLOWS

(In Thousands)	Year ended June 30	1989	1988	1987
<b>Cash Flows From Operating Activities:</b>				
Net income		\$ 42,331	\$ 34,393	\$ 44,641
Adjustments to reconcile net income to net cash provided by:				
operating activities:				
Depreciation		32,814	30,584	26,586
Loss on Abandonment of Chatsworth Reservoir		—	—	10,675
Allowance for borrowed funds used during construction		(2,006)	(1,380)	(2,939)
Changes in current assets and liabilities:				
Customer and other accounts receivable		606	(9,252)	(10,511)
Accrued unbilled revenue		(7,385)	3,983	(7,764)
Materials and supplies		(623)	(999)	(1,067)
Prepayments and other current assets		3,367	(65)	1,026
Accrued interest		1,680	1,287	(281)
Accounts payable and accrued expenses		13,928	97	2,574
Customer deposits		2,830	1,571	6,414
Net cash provided by operating activities		<u>87,542</u>	<u>60,219</u>	<u>69,354</u>
<b>Cash Flows From Financing Activities:</b>				
Sale of revenue bonds		49,500	84,626	—
Contributions in aid of construction		18,770	31,878	23,005
Reduction of long-term debt		(20,054)	(19,327)	(19,248)
Payments to the reserve fund of the City		(12,852)	(12,419)	(11,301)
Net cash provided by (used in) financing activities		<u>35,364</u>	<u>84,758</u>	<u>(7,544)</u>
<b>Cash Flows From Investing Activities:</b>				
Expenditures for plant and equipment		(118,144)	(97,784)	(91,673)
<b>Cash and Investments:</b>				
Net increase (decrease)		4,762	47,193	(29,863)
Beginning of year		<u>84,329</u>	<u>37,136</u>	<u>66,999</u>
End of year		<u>\$ 89,091</u>	<u>\$ 94,329</u>	<u>\$ 37,136</u>
<b>Supplemental disclosure of cash flow information:</b>				
Cash paid during the year for interest		<u>\$ 32,223</u>	<u>\$ 28,820</u>	<u>\$ 28,233</u>

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

## WATER SYSTEM NOTES TO 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 the uniform system of accounts 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 cost 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. The cost of repairs and minor replacements are charged to appropriate maintenance accounts. The original cost of property retired, plus removal cost, less salvage, is charged to accumulated depreciation.

**Cash and investments** — The Department's cash is deposited with the City Treasurer who invests the funds 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. At June 30, 1989 and 1988, cash and investments include \$6 million and \$4 million, respectively, of restricted balances related to bond redemption and interest funds and self-insurance fund.

**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.

**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 a rate ordinance which is approved by the City Council. The Water System sells water to other Departments of the City at regular rates provided in the ordinance.

**Depreciation** — Depreciation expense is computed by the straight-line method based on estimated service lives. Depreciation provision as a percentage of average depreciable utility plant in service was 2.5%, 2.4% and 2.4% for fiscal years 1989, 1988 and 1987, respectively.

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

**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 8.1%, 8.4% and 9.4% for fiscal years 1989, 1988 and 1987, respectively.

**Note B—Loss on Abandonment of Chatsworth Reservoir**

From 1969 to 1972, the Water System incurred costs totaling \$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, 1989, 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% at June 30, 1989 and 1988. The revenue bonds generally are callable ten years after issuance. Scheduled annual principal maturities during the five years succeeding June 30, 1989 are \$20 million, \$12 million, \$12 million, \$13 million and \$13 million, respectively.

**Note D—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.

Operating expenses shared with the Power System were \$251 million, \$256 million and \$235 million for fiscal years 1989, 1988 and 1987, respectively, of which \$85 million, \$89 million and \$82 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.

In fiscal year 1988, the Department adopted the provisions of Statement of Financial Accounting Standards No. 87, "Employers' Account 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 years 1989 and 1988 for the Water System include the following (amounts in millions):

	1989	1988
Service cost	\$ 10	\$ 11
Interest cost	41	38
Actual return on plan assets	(61)	(10)
Net amortization and deferral	39	(11)
Net retirement plan cost	29	28
Disability and death benefit plan costs and administrative expenses	5	4
Total benefit plan costs	<u>\$ 34</u>	<u>\$ 32</u>

## WATER SYSTEM NOTES TO FINANCIAL STATEMENTS

The Water System was allocated 24% of the plan's total costs for fiscal year 1987 amounting to \$33 million.

The following schedule reconciles the funded status of the plan with amounts reported in the financial statements (amounts in millions):

	June 30, 1989	June 30, 1988
Actuarial present value of benefit obligations:		
Vested benefits	\$481	\$ 411
Non-vested benefits	1	2
Accumulated benefit obligation	482	413
Projected future compensation level	95	72
Projected benefit obligation	577	485
Plan assets at fair value	432	367
Projected benefit obligation in excess of plan assets	145	118
Unrecognized net gain and effects of changes in assumptions	(26)	8
Unrecognized net obligation at July 1, 1987 being recognized over 15 years	(94)	(101)
Accrued pension liability	<u>\$ 25</u>	<u>\$ 25</u>

The increase in the projected benefit obligation was primarily attributable to a decrease in the discount rate from 8.25% in fiscal year 1988 to 7.75% in fiscal year 1989. The assumed rate of increase in future compensation levels was 6.0% in both years. The long-term rate of return on plan assets was 8.0% in both 1989 and 1988. 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 amounted to \$2 million, \$3 million and \$2 million for fiscal years 1989, 1988 and 1987, 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 \$15 million in fiscal year 1990 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, any ultimate liability which may arise from these actions will not materially affect the Water System's financial position as of June 30, 1989.

**REPORT OF INDEPENDENT ACCOUNTANTS**

August 28, 1989

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, retained income reinvested in the business and 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, 1989 and 1988, and the results of its operations and its cash flows for each of the three years in the period ended June 30, 1989, 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.

*Eric Waterhouse*  
*Simpson (Simpson)*

## POWER SYSTEM STATEMENT OF INCOME

(In Thousands)	Year ended June 30	1989	1988	1987
<b>Operating Revenues</b>				
Residential		\$ 484,591	\$ 430,696	\$ 388,730
Commercial and industrial		1,162,027	1,085,557	963,151
Other		69,703	53,775	51,560
Total operating revenues		<u>1,716,321</u>	<u>1,570,028</u>	<u>1,403,441</u>
<b>Operating Expenses</b>				
Fuel for generation		253,576	228,499	219,944
Purchased power		534,462	470,957	355,975
Other operating expenses		364,394	339,219	307,960
Maintenance		148,742	153,062	147,673
Depreciation		136,954	124,004	115,629
Total operating expenses		<u>1,438,128</u>	<u>1,315,741</u>	<u>1,147,181</u>
<b>Operating Income</b>		278,193	254,287	256,260
<b>Other Income and Expenses, Net</b>		18,257	18,037	19,754
Income before debt expenses		<u>296,450</u>	<u>272,324</u>	<u>276,014</u>
<b>Debt Expenses</b>				
Interest on debt		110,289	102,437	96,926
Allowance for borrowed funds used during construction		(7,268)	(5,674)	(7,759)
Total debt expenses		<u>103,021</u>	<u>96,763</u>	<u>89,167</u>
<b>Net Income</b>		<u>\$ 193,429</u>	<u>\$ 175,561</u>	<u>\$ 186,847</u>

## STATEMENT OF RETAINED INCOME REINVESTED IN THE BUSINESS

(In Thousands)	Year ended June 30	1989	1988	1987
Balance at beginning of year		\$1,785,701	\$1,680,322	\$1,561,388
Net income for the year		193,429	175,561	186,847
		<u>1,979,130</u>	<u>1,855,883</u>	<u>1,748,235</u>
Less — Payments to the reserve fund of the City		78,502	70,182	67,913
Balance at end of year		<u>\$1,900,628</u>	<u>\$1,785,701</u>	<u>\$1,680,322</u>

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



## POWER SYSTEM BALANCE SHEET

(In Thousands)	June 30	1989	1988
<b>Assets</b>			
<b>Utility Plant, at original cost</b>			
Production	\$1,756,070	\$1,749,777	
Transmission	641,473	561,178	
Distribution	2,005,735	1,845,703	
General	320,030	284,625	
	4,723,308	4,441,283	
Less -- Accumulated depreciation	1,458,485	1,356,344	
	3,264,823	3,084,939	
Construction work in progress	241,729	215,435	
Nuclear fuel, at amortized cost	17,385	24,550	
Net utility plant	3,523,937	3,324,924	
<b>Current Assets</b>			
Cash and investments	143,183	179,170	
Customer and other accounts receivable, less \$2,400 and \$2,500 allowance for losses	169,084	143,310	
Receivable from Intermountain Power Agency	49,573	--	
Accrued unbilled revenue	94,576	88,782	
Materials and supplies, at average cost	85,061	74,663	
Fuel inventory	60,721	56,123	
Prepayments and other current assets	27,663	37,776	
Total current assets	629,861	579,824	
Total utility plant and assets	<u>\$4,153,798</u>	<u>\$3,904,748</u>	
<b>Capitalization and Liabilities</b>			
<b>Capitalization</b>			
Equity			
Retained income reinvested in the business	\$1,900,628	\$1,785,701	
Contributions in aid of construction	123,041	104,825	
	2,023,669	1,890,526	
Long-term debt	1,602,469	1,554,170	
Total capitalization	<u>3,626,138</u>	<u>3,444,696</u>	
<b>Current Liabilities</b>			
Long-term debt due within one year	51,930	53,545	
Revenue certificates	90,000	90,000	
Accrued interest	36,526	30,648	
Accounts payable and accrued expenses	238,056	212,380	
Over-recovered energy costs	47,687	57,552	
Extension and other deposits	13,908	15,927	
Deferred credit -- Intermountain Power Agency	49,573	--	
Total current liabilities	<u>527,660</u>	<u>460,052</u>	
Commitments and Contingencies			
Total capitalization and liabilities	<u>\$4,153,798</u>	<u>\$3,904,748</u>	

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

## POWER SYSTEM STATEMENT OF CASH FLOWS

(In Thousands)	Year ended June 30	1989	1988	1987
<b>Cash Flows From Operating Activities:</b>				
Net income		\$ 193,429	\$ 175,561	\$ 186,847
Adjustments to reconcile net income to net cash provided by operating activities:				
Depreciation		136,954	124,004	115,629
Amortization of nuclear fuel		7,527	7,516	5,936
Allowance for borrowed fund used during construction		(7,268)	(5,674)	(7,759)
Changes in current assets and liabilities:				
Customer and other accounts receivable		(25,774)	(3,023)	(244)
Receivable from Intermountain Power Agency		(49,573)	—	—
Accrued unbilled revenue		(5,794)	(4,247)	(806)
Materials and supplies		(10,398)	(11,654)	(1,189)
Fuel inventory		(4,598)	9,774	(4,078)
Deferred energy costs		—	8,928	17,856
Prepayments and other current assets		10,113	(7,509)	(18,659)
Accrued interest		5,878	4,191	(47)
Accounts payable and accrued expenses		25,656	(30,593)	(72,546)
Over-recovered energy costs		(9,865)	(15,644)	3,935
Extension and other deposits		(2,019)	(3,750)	2,228
Deferred credit—Intermountain Power Agency		49,573	—	—
Net cash provided by operating activities		<u>313,841</u>	<u>247,880</u>	<u>227,103</u>
<b>Cash Flows From Financing Activities:</b>				
Sale of revenue bonds		99,527	198,108	—
Sale of advance refunding bonds		—	—	47,312
Contributions in aid of construction		18,216	13,473	6,644
Redaction of long-term debt		(52,843)	(67,223)	(60,835)
Amount deposited in escrow account and offset against advance refunding bonds		—	—	(47,312)
Payments to the reserve fund of the City		(72,502)	(70,182)	(67,913)
Net cash provided by (used in) financing activities		<u>(13,602)</u>	<u>74,176</u>	<u>(122,104)</u>
<b>Cash Flows From Investing Activities:</b>				
Expenditures for plant and equipment		(336,226)	(317,316)	(303,360)
<b>Cash and Investments:</b>				
Net increase (decrease)		(35,987)	4,740	(198,361)
Beginning of year		179,170	174,430	372,791
End of year		<u>\$ 143,183</u>	<u>\$ 179,170</u>	<u>\$ 174,430</u>
<b>Supplemental disclosure of cash flow information:</b>				
Cash paid during the year for interest		<u>\$ 105,602</u>	<u>\$ 100,435</u>	<u>\$ 98,358</u>

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

## POWER SYSTEM NOTES TO 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 the uniform system of accounts 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 cost 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. The cost of repairs and minor replacements are charged to appropriate maintenance accounts. The original cost of property retired, plus removal cost, less salvage, is charged to accumulated depreciation.

**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 federal government assumed responsibility for the future disposal of spent nuclear fuel.

**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 2022. Based upon a study performed by an independent engineering firm, the Department's share of the estimated decommissioning costs is \$35 million in 1986 dollars. Decommissioning costs are charged as part of depreciation expense over the life of the nuclear power plant.

A Nuclear Decommissioning Fund has been established and the Power System is setting aside funds for its share of the estimated future decommissioning costs.

**Cash and investments** — The Department's cash is deposited with the City Treasurer who invests the funds 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. At June 30, 1989 and 1988, cash and investments include \$18 million and \$12 million, respectively, of restricted balances relating to bond redemption and interest funds, self-insurance fund and nuclear decommissioning fund.

**Fuel inventory** — 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.

**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

## POWER SYSTEM NOTES TO FINANCIAL STATEMENTS

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 a rate ordinance which is approved by the City Council. The Power System sells electric energy to other Departments of the City at regular rates provided in the ordinance.

**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 computed by the 5% sinking fund method based on estimated service lives. Depreciation provision as a percentage of average depreciable utility plant in service was 3.2% for each of the 1989, 1988 and 1987 fiscal years.

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

**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 7.6%, 7.9% and 8.8% for fiscal years 1989, 1988 and 1987, respectively.

**Note B — Receivable and Deferred Credit — Intermountain Power Agency**

As of July 1, 1988, an amendment to an Intermountain Power Agency (IPA) bond resolution provided for the use of surplus construction funds from the Intermountain Power Project. As a member participant of this project, the Department's share of such surplus funds totaled \$110 million at July 1, 1988, to be received over a three to four year period. At June 30, 1989, the Department had a receivable from IPA of \$50 million which represented a deferred credit for use as a future reduction of purchased power expense.

**Note C — Revenue Certificates**

At June 30, 1989 and 1988, the average interest rate of revenue certificates payable was 6.4% and 4.9% with various maturities of up to 130 and 242 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 D — 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 is responsible for financing its share of construction and operating costs. The following schedule shows the Power System's investment in each jointly-owned utility plant as included in the balance sheet at June 30, 1989 (dollar amounts in millions):

Projects	Ownership Interest	Plant in Service		
		Cost	Accumulated Depreciation	Work In Progress
Palo Verde Nuclear Generating Station (Note H)	5.7%	\$490	\$ 31	\$10
Navajo Steam Generating Station	21.2%	180	71	5
Mohave Coal Generating Station	20.0%	75	23	9
Pacific Intertie DC Transmission System	40.0%	161	14	—
Other transmission systems	Various	72	15	1
		<u>\$978</u>	<u>\$154</u>	<u>\$25</u>

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 E — Long-Term Debt**

Long-term debt outstanding at June 30, 1989, consisted of revenue bonds due serially in varying annual amounts through 2029. Interest rates, which vary among individual maturities, averaged approximately 6.8% and 6.7% at June 30, 1989 and 1988, respectively. The revenue bonds generally are callable ten years after issuance. Scheduled annual principal maturities during the five years succeeding June 30, 1989 are \$52 million, \$53 million, \$55 million, \$56 million and \$58 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, 1989, \$48 million of these escrow accounts have been offset against the advance refunding bonds in the accompanying balance sheet (during fiscal year 1989 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 F — 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.

Operating expenses shared with the Water System were \$251 million, \$256 million and \$235 million for fiscal years 1989, 1988 and 1987, respectively, of which \$166 million, \$167 million and \$153 million were allocated to the Power System.

**Note G — 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.

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 years 1989 and 1988 for the Power System include the following (amounts in millions):

	1989	1988
Service cost	\$ 33	\$ 35
Interest cost	130	120
Actual return on plan assets	(194)	(31)
Net amortization and deferral	122	(37)
Net retirement plan cost	91	87
Disability and death benefit plan cost and administrative expenses	13	12
Total benefit plan costs	<u>\$ 104</u>	<u>\$ 99</u>

The Power System was allocated 76% of the plan's total costs for fiscal year 1987 amounting to \$102 million.

## POWER SYSTEM NOTES TO FINANCIAL STATEMENTS

The following schedule reconciles the funded status of the plan with amounts reported in the financial statements (amounts in millions):

	June 30, 1989	June 30, 1988
Actuarial present value of benefit obligations:		
Vested benefits	\$ 1,527	\$ 1,300
Non-vested benefits	1	5
Accumulated benefit obligation	1,528	1,305
Projected future compensation level	300	227
Projected benefit obligation	1,828	1,532
Plan assets at fair value	1,368	1,163
Projected benefit obligation in excess of plan assets	460	369
Unrecognized net gain and effects of changes in assumptions	(83)	25
Unrecognized net obligation at July 1, 1987 being recognized over 15 years	(299)	(322)
Accrued pension liability	<u>\$ 78</u>	<u>\$ 72</u>

The increase in the projected benefit obligation was primarily attributable to a decrease in the discount rate from 8.25% in fiscal year 1988 to 7.75% in fiscal year 1989. The assumed rate of increase in future compensation levels was 6.0% in both years. The long-term rate of return on plan assets was 8.0% in both 1989 and 1988. 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 amounted to \$8 million, \$9 million and \$7 million for fiscal years 1989, 1988 and 1987, respectively.

#### Note H — 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 \$86 million in fiscal year 1990 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 to the energy generated at the 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, 1989, are as follows:

	Total Bonds Outstanding (millions)	Department Share of Capacity (megawatts)
Palo Verde Nuclear Generating Station (through SCPPA)	\$ 1,058	145
Intermountain Power Project	5,047	1,004
Southern Transmission System (for IPP power through SCPPA)	1,020	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 \$340 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 \$440 million, \$320 million and \$260 million in fiscal years 1989, 1988 and 1987, 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 is approximately 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, any ultimate liability which may arise from these actions will not materially affect the Power System's financial position as of June 30, 1989.

#### REPORT OF INDEPENDENT ACCOUNTANTS

August 28, 1989

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, retained income reinvested in the business and 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, 1989 and 1988, and the results of its operations and its cash flows for each of the three years in the period ended June 30, 1989, 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.

*Rice Waterhouse  
Gingerson & Simpson*

## WATER SYSTEM SELECTED FINANCIAL DATA AND STATISTICS

(\$ Millions)	1989	1988	1987	1986	1985
<b>Statement of Income</b>					
Operating revenues					
Residential	\$ 110.1	\$ 94.5	\$ 92.4	\$ 84.2	\$ 79.0
Commercial and industrial	166.5	142.5	135.2	122.9	111.1
Governmental and other	17.8	14.3	14.8	13.4	13.0
Fire hydrants	4.4	4.1	4.1	4.0	4.0
Miscellaneous	1.4	1.7	1.9	1.5	1.2
Total revenues	\$ 300.2	\$ 257.0	\$ 248.4	\$ 226.0	\$ 208.3
Operating income	61.4	54.1	69.9	69.4	67.8
As % of revenues	20.5%	21.1%	28.1%	30.7%	32.6%
Net income	\$ 42.3	\$ 34.4	\$ 44.6	\$ 61.8	\$ 63.3
<b>Balance Sheet</b>					
Net utility plant	\$1,202.1	\$1,114.7	\$1,046.1	\$ 988.8	\$ 902.2
Capital expenditures	118.1	97.8 <sup>a</sup>	91.7 <sup>a</sup>	102.0 <sup>a</sup>	90.9 <sup>a</sup>
Capitalization					
Equity	870.6	822.3	768.5	712.1	642.6
Long-term debt	379.7	350.2	285.6	305.0	324.6
Total capitalization	1,250.3	1,172.5	1,054.1	1,017.1	967.2
Debt as % of net utility plant*	31.6%	30.2%	25.3%	28.0%	32.1%
Interest on debt	27.6	23.7	22.0	23.2	23.3
Payments to City of L.A.	12.9	12.4	11.3	10.4	9.9
<b>Operations</b>					
Gallons sold (billions)	208.1	203.6	210.1	204.3	203.4
Customers -- average number (thousands)	640.6	637.8	632.3	630.1	630.4
Average revenue per hundred cu. ft. sold (in cents)					
Residential	106.0	92.8	87.2	81.8	75.7
Commercial and industrial	107.9	93.6	87.5	81.7	75.8
Water supply (in cu. ft. per second -- c.f.s.)					
Local supply	188.3	166.9	137.0	144.5	164.8
DWP Aqueduct	451.9	573.6	661.4	671.8	709.3
Metropolitan Water District	319.2	207.7	177.1	123.9	64.8
Gross supply	959.4	948.2	975.5	940.2	938.9
Diversion from (to) local storage	1.5	(0.3)	(1.7)	(6.6)	(6.4)
Net supply to distribution systems	<u>960.9</u>	<u>947.9</u>	<u>973.8</u>	<u>933.6</u>	<u>932.5</u>

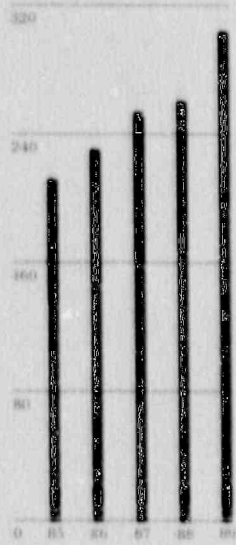
\* Excludes revenue notes and advances refunding revenue bonds.

<sup>a</sup> Reversed due to change in accounting method.



**OPERATING REVENUES**

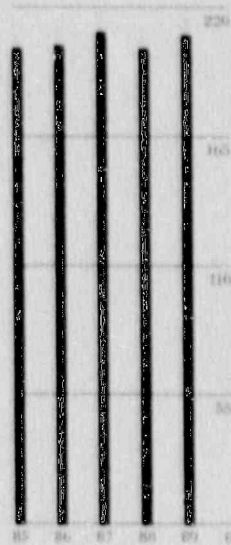
\$ in Millions



- Residential
- Commercial and Industrial
- Other
- Fire Hydrant
- Miscellaneous

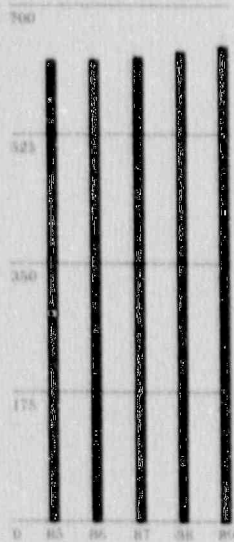
**GALLONS SOLD**

In Billions



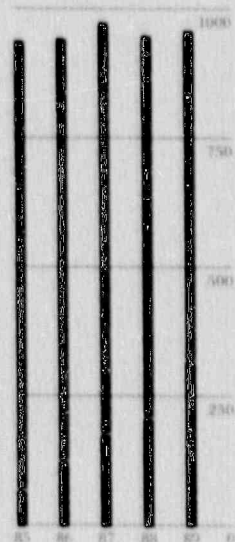
**AVERAGE NUMBER OF CUSTOMERS**

In Thousands



**WATER SUPPLY**

In Cu. Ft. per Second



- Local Supply
- DWP Aqueduct
- Metropolitan Water District

## POWER SYSTEM SELECTED FINANCIAL DATA AND STATISTICS

(\$ Millions)	1989	1988	1987	1986	1985
<b>Statement of Income</b>					
Operating revenues					
Residential	\$ 484.6	\$ 430.7	\$ 388.7	\$ 379.5	\$ 373.0
Commercial and industrial	1,162.0	1,085.5	963.1	932.2	859.2
Street lighting and other	53.5	39.7	38.2	37.9	48.5
Miscellaneous	16.2	14.1	13.4	8.5	7.3
Total revenues	<u>\$1,716.3</u>	<u>\$1,570.0</u>	<u>\$1,403.4</u>	<u>\$1,358.1</u>	<u>\$1,288.0</u>
Operating income	278.2	254.3	256.3	259.5	274.5
As % of revenues	16.2%	16.2%	18.3%	19.1%	21.3%
Net income	\$ 193.4	\$ 175.6	\$ 186.8	\$ 193.6	\$ 213.6
<b>Balance Sheet</b>					
Net utility plant	\$3,523.9	\$3,324.9	\$3,133.5	\$2,943.9	\$2,656.1
Capital expenditures	336.2	317.3 <sup>(a)</sup>	303.4 <sup>(a)</sup>	392.6 <sup>(a)</sup>	166.6 <sup>(a)</sup>
Capitalization					
Equity	2,023.7	1,890.5	1,771.7	1,646.1	1,511.8
Long-term debt	1,602.4	1,554.2	1,408.9	1,475.1	1,440.2
Total capitalization	<u>3,626.1</u>	<u>3,444.7</u>	<u>3,180.6</u>	<u>3,122.2</u>	<u>2,952.0</u>
Debt as % of net utility plant*	45.5%	46.7%	44.5%	49.3%	52.0%
Interest on debt	110.3	102.4	96.9	97.5	96.1
Payments to City of L.A.	78.5	70.2	67.9	64.4	58.9
<b>Operations</b>					
Kilowatt hours sold (billions)	21.9	21.1	20.5	20.3	19.9
Customers -- average number (thousands)	1,325.3	1,304.6	1,275.9	1,262.0	1,251.2
Average revenue per kwh sold (in cents)					
Residential	8.2	7.7	7.1	6.9	6.7
Commercial and industrial	7.7	7.3	6.8	6.6	6.3
Energy production (billion kwh)					
Hydro	1.1	1.8	2.9	3.8	4.9
Thermal	19.7	20.2 <sup>(b)</sup>	16.0 <sup>(b)</sup>	13.3	12.3
Total generation	<u>20.8</u>	<u>22.0</u>	<u>18.9</u>	<u>17.1</u>	<u>17.2</u>
Purchases	4.7	2.6	4.3	5.8	6.5
Total production	<u>25.5</u>	<u>24.6<sup>(b)</sup></u>	<u>23.2<sup>(b)</sup></u>	<u>22.9</u>	<u>23.7</u>
Net system capability (thousand megawatts)					
Hydro	1.4	1.9	1.9	1.9	1.9
Oil and gas owned	3.1	3.1	3.3	3.3	3.2
Total owned	<u>4.5</u>	<u>5.0</u>	<u>5.2</u>	<u>5.2</u>	<u>5.1</u>
Jointly owned	2.2	1.1	1.1	1.0	1.1
Firm purchases	.6	1.2	1.3	1.1	0.3
Total capability	<u>7.3</u>	<u>7.3</u>	<u>7.6</u>	<u>7.3</u>	<u>6.5</u>

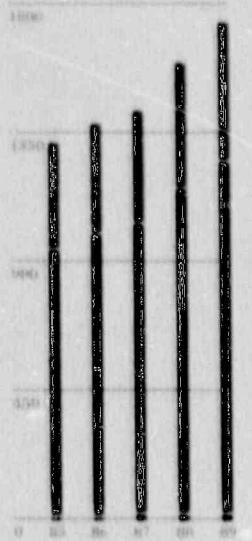
\* Excludes revenue notes and advance refunding revenue bonds.

<sup>(a)</sup> Restated due to change in accounting method.

<sup>(b)</sup> Restated to include cogeneration.

**OPERATING REVENUES**

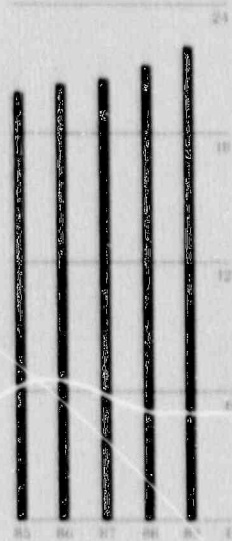
\$ in Millions



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

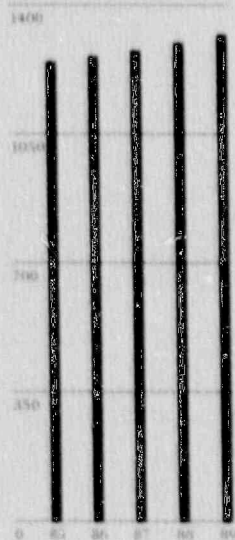
**KILOWATT HOURS SOLD**

In Billions



**AVERAGE NUMBER OF CUSTOMERS**

In Thousands



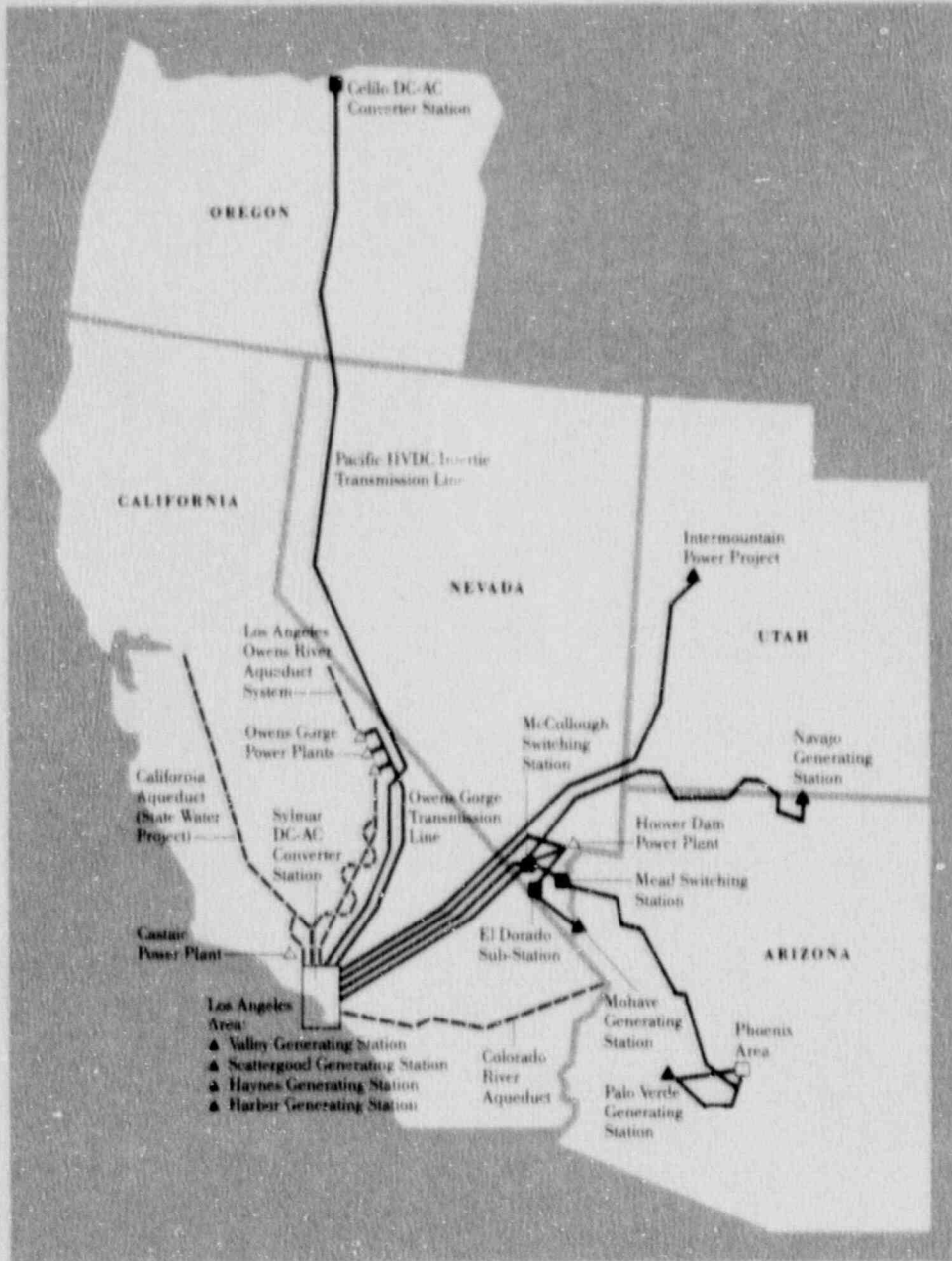
**ENERGY PRODUCTION**

KWH in Billions



- Hydro
- Thermal
- Purchases

## WATER/POWER NETWORK



--- Water System    — Power Supply

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.

## INFORMATION OF INTEREST

### Water

The amount of water contained every second in the City of Los Angeles would fill a medium-sized swimming pool.

The first water meter in Los Angeles was installed at a saleroom near the corner of Mary Street and Mission Road in 1889.

Los Angeles' largest body of water in terms of surface area is the Los Angeles Reservoir in Mission Hills, covering 176.1 acres.

Los Angeles' largest body of water in terms of volume is James Ross Canyon Reservoir above Red Air, holding 3.4 billion gallons.

Peak daily water demand in the City of Los Angeles last year occurred on August 22, 1966, when 823 million gallons were delivered.

Annual rainfall in Los Angeles over the last decade has ranged from a high of more than 30 inches in 1952-53 to a low of less than 10 inches in 1958-59.

Daily per capita water consumption here over the last decade has ranged from a high of almost 190 gallons in 1954-55 to a low of less than 170 gallons in 1975-76.

The first water main system in America was built in Boston, Mass. in 1652.

The first municipal water system in Los Angeles was established in 1854.

Unusually drought conditions in 1960 cut water flow through the Los Angeles Aqueduct to just over 30 percent of normal, the lowest level ever recorded.

The highest single day usage of water in Los Angeles—763 million gallons—occurred on June 16, 1966.

### Power

Altogether first standard power line street lighting was provided by the California Electric Light Company of San Francisco in 1879.

The first electricity sold to private customers was generated by the Edison Electric Manufacturing Company in 1882.

It would take the physical labor of every adult male in California, working steadily from 9 to 5, to produce as much energy as the DWP delivers in an hour.

Peak electrical demand in Los Angeles last year occurred on September 6, 1966, when 4,991 megawatts were delivered.

The DWP owns, jointly or with partners, nearly 200,000 power poles.

Cables used to carry DWP electricity, if joined end to end, would reach from coast to coast more than five times.

The typical residential electric bill in Los Angeles last year was around \$35.43 per month.

The DWP maintains nearly 3,500 portable and mobile radio transmitters, nearly 1,500 in-vehicle and pager-based 123 telephone substations, in order to communicate efficiently and provide efficient customer services.



**CITY OF LOS ANGELES BOARD OF WATER AND POWER COMMISSIONERS**

**Los Angeles Department of Water and Power  
General Office Building  
111 North Hope Street  
Los Angeles, California 90012  
Telephone 213 481 4211**

ESTIMATION OF ESTIMATES



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