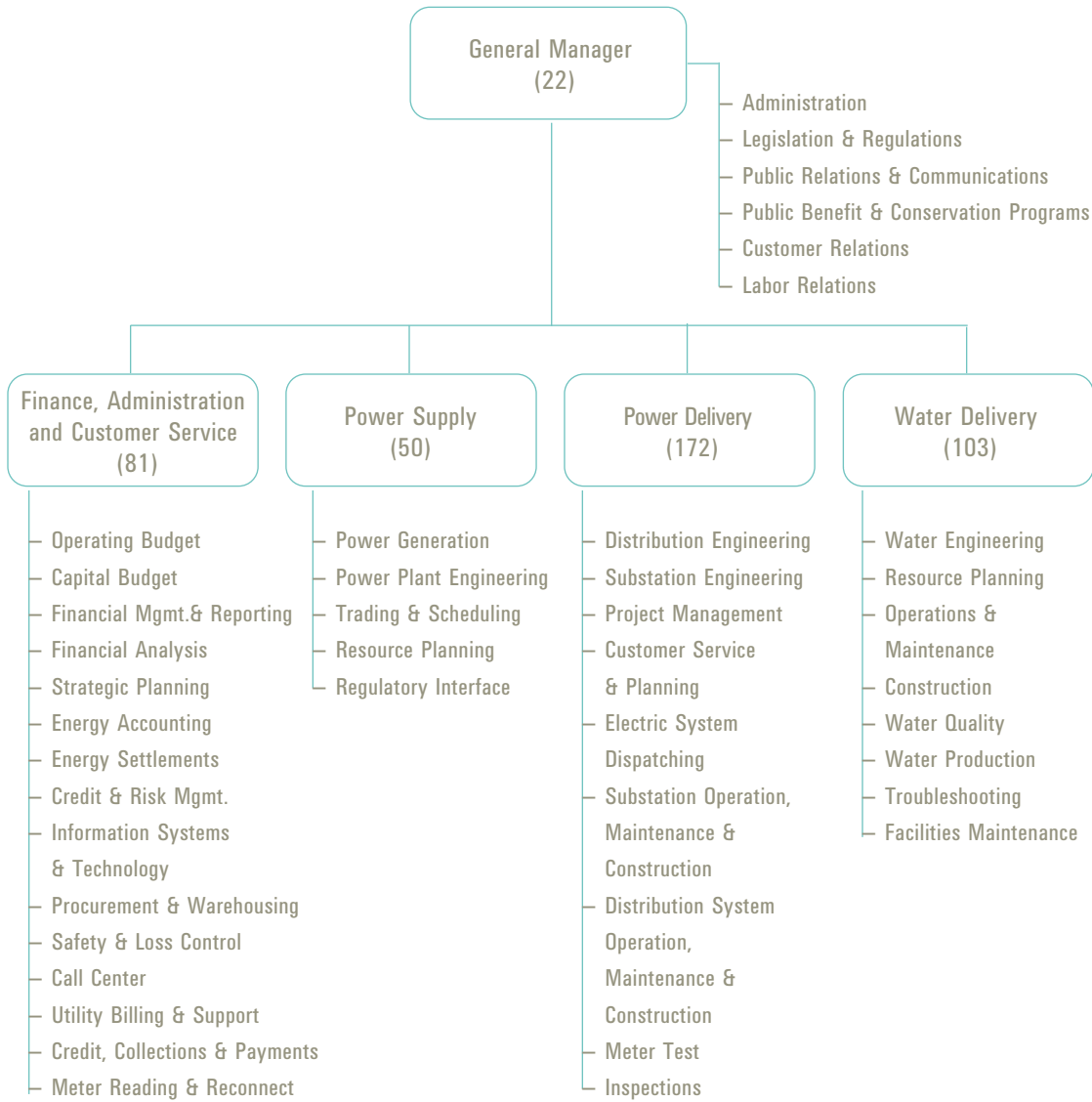


# WATER AND POWER



ADOPTED OPERATING  
BUDGET FISCAL YEAR  
**2009**

CITY OF PASADENA  
WATER AND POWER



# CITY OF PASADENA WATER AND POWER

## DEPARTMENT SUMMARY WATER AND POWER

### Mission Statement

As a community-owned utility, it is the mission of Pasadena Water and Power (PWP) to provide superior customer service, reliable electricity, and quality water at reasonable rates and in an environmentally responsible manner.

A partner in Pasadena's prosperous future, PWP is an integral part of the City's resources and a valued community asset committed to improving the quality of life in Pasadena.

### Program Description

PWP supplies electricity and water to residents and businesses in Pasadena, as well as to other areas outside of the city limits. Providing high quality service at reasonable rates is the main goal of this community-owned, full-service utility. In addition, PWP also supports other Pasadena improvements and activities by contributing to the City's General Fund.

### Departmental Relationship to City Council Goals:

- **Assure a Safe and Secure Community**

PWP will continue to ensure the delivery of high quality water by monitoring, sampling, and testing its water in accordance with all applicable laws and regulations. Ongoing implementation of the Water Master Plan will maintain and improve the water system infrastructure to ensure the reliability of the distribution system and maintain high quality water. In addition, PWP has placed a greater emphasis on safety, power reliability, and its emergency response capabilities.

An Electric Distribution System Inspection Program has been implemented that is consistent with the California Public Utilities Commission's General Order 165. This inspection program has been implemented in order to ensure safety for employees and the public, enhance the reliability of the power distribution system, and to extend the useful life of the power distribution system assets. In addition, data collecting techniques have been implemented that will provide increased data quality and quantity.

- **Focus on Planning, Programming and Reinvesting in Our Parks and Open Space**

PWP has assumed responsibility for the management of the spreading grounds within the Hahamongna Watershed Park and is helping to enhance and improve the environment as well as making the best and most efficient use of the natural resources in Pasadena.

- **Operate A More Effective and Cost Efficient Government**

PWP is committed to improving efficiencies and facilitating appropriate management decisions related to costs. Decision support systems have been developed and implemented to ensure that necessary information is available. Long term historical trends and future-oriented financial plans are being used to make strategic changes whenever necessary. A strategic marketing group has been created to improve customer service with a focus on customer satisfaction and retention. In addition, PWP continues to support the Fiber Optics Communication Program, a commitment to technology which will enable the utility to better serve the needs of the community.

### Major Accomplishments

Water and Power major accomplishments include the following:

- Successfully issued \$58 million Series 2008 Power Revenue Bonds to fund the on-going implementation of the Electric Distribution System Master Plan (EDSMP)
- Completed construction of new capacitor banks and control house at Santa Anita Substation
- Completed construction of four new feeders from Glenarm IV
- Completed construction of oil containment facilities at Brookside and Santa Anita Substations, and at TM Goodrich Receiving Station
- Implemented the Council approved utilization plan of the Stranded Investment Reserve Fund by transferring the second of two transfers of \$5 million to the Power Fund to mitigate increased energy cost.
- Approved and finalized with Public Works the construction plans for the new two-story PWP building which will also house the new Emergency Operations Center (EOC) and the PWP Department Operation Center (DOC)

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- Continued to assist the City Hall retrofit project team in pursuing certification from the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) program. City Hall received the gold level LEED certification as a result
- Continued to promote the Green Power Program in which 1,470 residential customers and 37 commercial customers have subscribed to an electric service from 100% renewable resources for a premium fee. Three large customers, Kaiser Permanente, Caltech Housing, and Huntington Memorial Hospital, have committed to 4 mW of green power
- Developed and implemented an extensive public education campaign (press conference, media relations, direct mail, flyers etc.) to alert customers about the City's projected water shortage and conservation measures stipulated in Water Shortage Plan I, which went into effect in December 2007. Launched a new water conservation marketing campaign in conjunction with the water shortage
- Implemented commercial water rebates to various customer segments that resulted in over 110 acre feet, or nearly 36 million gallons in water savings. This included installation of over 500 high-efficiency toilets in multi-family units and commercial buildings, resulting in 25.5 acre-feet in water savings
- Promoted the Mayor's 10% Water Use Reduction challenge and monitored the citywide progress toward that goal
- Completed design and procurement of new switchgear for Eastern Substation
- Designed over 75 projects converting sections of the 4 kV distribution systems to 17 kV in the Chester, Eastern, Fair Oaks and Santa Anita circuits; and completed construction of several projects on the Chester circuit
- Completed redesign of Los Robles Underground System
- Replaced more than 8,000 customer electric meters with new Automated Meter Reading (AMR) and added 740 new electric meters to accommodate system growth
- Collected over \$3.7 million of combined electric and water customer aid to construction
- Received the Tree Line USA Award for power line clearance practices for the sixth consecutive year
- Replaced 7,000 water meters as part of the Meter Replacement Program
- Completed the design of the well collector pipeline that will collect water from seven wells for storage in the Jones Reservoir
- Selected a vendor to provide equipment for the Monk Hill Perchlorate Treatment Plant, which will initially treat four of the five groundwater wells that flow into Sunset Reservoir.
- Conducted mandatory Labor Relations 101 training with 122 of the department's managers, supervisors, and lead personnel
- Completed mandatory supervisory and lead worker training courses specific to 24 department employees (12 employees per course) through the Fundamentals of Supervision and Lead Worker Program training
- Successfully trained 30 Power Plant employees through MindLeaders, a company offering hundreds of courses on a variety of business topics. Mindleaders has proven to be a helpful tool in enhancing employee skill sets through personalized learning that supports organizational success
- Successfully launched a PWP succession plan by implementing staff reorganization in the Power Production division and creating a knowledge transfer system
- Successfully sold excess local capacity and system resource adequacy attributes yielding a revenue increase of over \$400,000
- Successfully completed the transition of real-time scheduling and trading from PWP staff to ACES Power Marketing in accordance with the target. of September 2008
- Successfully awarded contracts to build the new state-of-the-art outdoor racking system of inventory parts as outlined in the Warehouse Modernization Plan
- Completed and deployed 45% of water and power GIS conversion data in the system
- Successfully implemented the new Warehouse Bar Coding Inventory Management System
- Negotiated a contract with MWD for a conjunctive use groundwater storage project. Once completed, the project will recharge the groundwater basin for future use, and will provide an interconnection between PWP and Foothill Municipal Water District.

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Summary of Appropriations and Revenues	FY 2006 Actual	FY 2007 Actual	FY 2008 Adopted	FY 2008 Revised	FY 2009 Adopted
FTEs					
Operating	280.32	287.92	290.92	288.80	290.80
Capital (Memo)	121.68	127.08	132.08	134.20	137.20
Total FTEs	402.00	415.00	423.00	423.00	428.00
Appropriations					
Operating	202,771,465	202,761,363	204,349,106	202,615,962	236,151,047
Capital (Memo)*			14,551,779	14,742,336	16,503,701
Revenues by Fund					
Power Fund (Incl. PBC)	163,487,549	171,089,771	181,041,926	181,041,926	201,516,311
Water Fund	40,657,333	42,279,875	45,055,190	45,055,190	47,046,967
Total Revenues	204,144,882	213,369,646	226,097,116	226,097,116	248,563,278

\*This line item not included in total.

**Departmental Results Statements**

	Actual	FY 2007 Target	% Target	FY 2008 Target	FY 2009 Target
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**RESULT 1: THE CITY-OWNED POWER UTILITY WILL BE COMPETITIVE.**

Measure 1.1 Rates of the City-owned power utility compared with competitors (Annualized Average)

A. Residential electric rates will be comparable with those of selected neighboring utilities. (Pasadena's rate is in the target column)	\$74.09	\$73.90	100%	\$78.53	\$83.79
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**RESULT 2: ELECTRICAL POWER INTERRUPTIONS WILL BE MINIMAL.**

Measure 2.1 System Average Interruption Duration Index (SAIDI)

A. 120 minutes (SAIDI)	0.3836	120	100%	120	120
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Measure 2.2 System Average Interruption Frequency Index (SAIFI)

A. 1.5 service interruptions per year (SAIFI)	0.0016	1.5	100%	1.5	1.5
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**RESULT 3: THE CITY'S WATER UTILITY WILL BE COMPETITIVE.**

Measure 3.1 Rates of the City water customers compared with competitors. (Annualized Average)

A. Residential water rates will be comparable with those of selected neighboring utilities. (Pasadena's rate is in the target column)	\$40.78	\$35.85	100%	\$39.54	\$44.78
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CITY OF PASADENA  
WATER AND POWER

Departmental Results Statements

	Actual	FY 2007 Target	% Target	FY 2008 Target	FY 2009 Target
<b>RESULT 4: THE CITY'S WATER SUPPLY WILL BE SAFE AND FREE OF CONTAMINATION.</b>					
Measure 4.1	Compliance with primary drinking water regulation				
A. 100% compliance	100%	100%	100%	100%	100%
Measure 4.2	Number of chemical and bacteriological analyses annually				
A. More than 36,000 per year	35,880	20,800	100%	20,000	36,000
Measure 4.3	Required certificates maintained				
A. 100% at all times	100%	100%	100%	100%	100%
<b>RESULT 5: RESIDENTIAL AND COMMERCIAL ELECTRIC AND WATER CUSTOMERS WILL RECEIVE EXCELLENT SERVICE.</b>					
Measure 5.1	Timeliness of plan checks				
A. 90% of all plans check requests will be completed two working days before the customer's required date.	90%	90%	100%	90%	90%
Measure 5.2	Accuracy of meter readings				
A. 99.95% of meter readings will be accurate	99.97%	99.95%	100%	99.95%	99.95%
Measure 5.3	Cycle time from meter reading to billing				
A. Average 5 working days turnaround time from meter reading to billing	5	5	100%	5	5
Measure 5.4	Cycle time for high-bill complaint investigation				
A. Average 5 working days turnaround time for high-bill complaint investigation	5	5	100%	5	5
<b>RESULT 6: THE CITY'S WATER MAINS SHALL BE UPGRADED ON A CONTINUAL BASIS.</b>					
Measure 6.1	Number of miles upgraded on an annual basis				
A. 8.0 miles per year	7.4	8	92%	8	8
Measure 6.2	Number of valves exercised on annual basis				
A. 5,000 valves per year	6,035	5000	100%	5,000	5,000
Measure 6.3	Number of water meters replaced on an annual basis				
A. 7,000 meters per year	7,048	7000	100%	7,000	7,000

CITY OF PASADENA  
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Departmental Results Statements

	Actual	FY 2007 Target	% Target	FY 2008 Target	FY 2009 Target
<b>RESULT 7: THE ELECTRIC DISTRIBUTION MASTER PLAN GOALS SHALL BE IMPLEMENTED.</b>					
Measure 7.1 Number of new Feeders and Communication Circuits installed.					
A. Feeders & Communication Circuits installed.	0	4	0%	4	4
Measure 7.2 Number of fault indicators installed.					
A. Fault indicators installed.	21	60	35%	30	30
Measure 7.3 Number of Switchgear Upgrades for Power System Facilities.					
A. 34kV Circuit Breakers to be replaced.	6	14	43%	12	12
Measure 7.4 Number of Wood Utility Pole Replacement/Reinforcement.					
A. Overhead Poles to be replaced.	22	65	34%	65	65
B. Number feet of overhead conductors to be replaced.	73,300	58,000	100%	40,000	40,000
Measure 7.5 Number of Oil Containment Facilities to Construct.					
A. Oil Containment Facility to be constructed.	0	2	0%	2	2
Measure 7.6 Number of miles of Cable Replacement and testing.					
A. Miles of cable replaced.	13.6	10	100%	5	5
Measure 7.7 Number of Capacity & Reliability Equipment installed.					
A. Substation Switches replaced.	9	10	90%	5	5
B. Miles of Underground Cables replaced.	11.5	4	100%	2	2
C. Underground Transformers replaced.	127	30	100%	30	30
D. Underground Switches replaced.	54	14	100%	10	10
Measure 7.8 Number of Electric Meters Installed/Replaced.					
A. Electric meters Installed.	7,984	6,000	100%	6,000	6,000
Measure 7.9 Number of Underground Vaults Replaced.					
A. Underground vaults replaced.	7	20	35%	20	20

# CITY OF PASADENA WATER AND POWER

## Changes from Prior Year

- **Cost Changes:** The \$33,535,085 net increase in operations from the fiscal year 2008 revised operating budget is due to higher personnel costs resulting from negotiated salary and benefit adjustments; 1.00 additional FTE; increased service and supplies expense associated with higher purchased power and water costs as well as increased rebate programs; increases in equipment and internal service charges, associated, respectively, with higher depreciation and network services, printing and tenant improvements.
- **FTE Changes:** There is 1.0 additional FTE approved for the fiscal year 2009 operating budget as well as 4.0 FTEs approved for the capital budget.

## Future Outlook

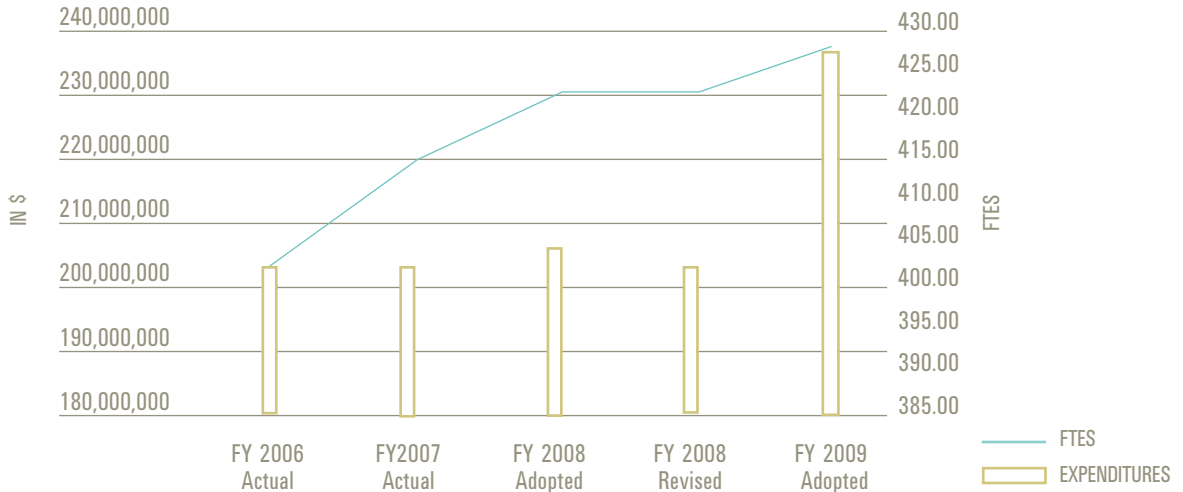
As a partner in Pasadena’s prosperous future, PWP will continue to focus on financial health and stability by implementing the appropriate measurements, controls, and procedures, while maintaining a General Fund transfer that provides the City a reasonable return on capital. PWP will also continue to conduct competitive analysis to position or reposition itself within the market. Consistent with Pasadena’s environmental initiative, PWP will continue to provide funding towards energy efficiency and photovoltaic programs in order to ensure that the utility meets certain state goals, assists its customers in reducing carbon footprint, and remains an active participant in focused on protecting the environment.

The Electric Distribution System Master Plan (EDSMP) implementation and spending plan for specific projects is in the third year of a five-year construction plan, with projects prioritized by the State of the System report. PWP will continue to invest in technology such as GIS, and automated meter technology programs, and will begin the seismic upgrade of all power facilities, while continuing to maintain an aggressive program of inspections and maintenance to ensure a high level of performance reliability.

PWP will also continue to meet the goals of an aggressive Capital Improvement Program as outlined in the Water Distribution System Master Plan. The Cross Town Well Collector Pipeline will begin construction in fiscal year 2009 and will transport water supply from west of the City to the Jones Reservoir in east Pasadena.

Following the results of the study conducted to evaluate the seismic and structural stability of the City’s reservoirs, it is anticipated that major repairs and upgrades will be needed on nearly all 13 of Pasadena’s reservoirs. In addition, substantial resources will also be required in future years to upgrade the water storage facilities. In fiscal year 2009, seismic retrofit work will continue on Windsor and Sheldon reservoirs, while the Water Delivery Business Unit will continue its third year of a five-year program to replace all old meters with more accurate and efficient automatic meter read meters (AMR).

**Water and Power  
Budget and Position Control**



(Capital Expenditures are not included in the total.)



CITY OF PASADENA  
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**PROGRAM SUMMARY  
GENERAL MANAGER'S OFFICE**

**Program Description**

The General Management function of the utility provides general administration, guidance and oversight to the five operational business units of PWP with direct responsibility for the Customer Relations and Legislative/Regulatory Affairs affecting the utility. It also functions as the intermediary between PWP and the City Manager, the City Council, and other City departments; and various external private and public agencies. The General Manager's Office is committed to ensuring that PWP succeeds in a competitive marketplace and continually restructures the utility to effectively address core business concerns.

**Major Accomplishments**

The General Manger's Office continued to provide strong direction in major infrastructure upgrade endeavors, including both Water and Power Distribution master plans. The division continued to modify PWP's business plan and manage the utility to improve internal and external communication, reduce costs, and maintain competitiveness in the ever-changing California energy market. The General Manager's Office will continue to manage the internal affairs affecting PWP through its Employee/Labor Relations, and

external affairs through its Legislative/Regulatory and Customer Relations programs.

In an effort to proactively address succession planning, PWP embarked on a major training initiative this fiscal year both to prepare its staff to take on key roles when retirements occur, and to become a learning organization that strives to continuously enhance its professional skills and abilities.

- Conducted mandatory supervisory training for the department's managers, supervisors, and lead personnel (122 supervisors were required to attend the Labor Relations 101 course)
- Completed the mandatory supervisory and lead worker training courses specific to 24 department employees (12 employees per course) through the Fundamentals of Supervision and Lead Worker Program training
- Successfully trained 30 Power Plant employees through MindLeaders, a company offering hundreds of courses on a variety of business topics. Mindleaders has proven to be a helpful tool in enhancing employee skill sets through personalized learning that supports organizational success.

For additional accomplishments, please refer to the Major Accomplishments under the Department Summary.

Summary of Appropriations and Revenues	FY 2006 Actual	FY 2007 Actual	FY 2008 Adopted	FY 2008 Revised	FY 2009 Adopted
Operating FTEs	18.450	18.450	18.450	18.450	18.450
Appropriations	2,572,082	2,947,358	3,759,546	3,754,667	4,163,711

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Changes from Prior Year

- Cost Changes: The net change of \$409,044 from the fiscal year 2008 revised operating budget is due mainly to anticipated negotiated increases in salaries and benefits and multiple Services and Supplies accounts.

Future Outlook

Recent legislative and regulatory developments have increased PWP's focus on reliability and on environmental compliance affecting the utility industry. PWP will continue to conduct competitive analysis to appropriately position or reposition itself within the market while addressing important environmental issues through its resource investment, procurement, and operating decisions. Potential alliances with companies specializing in certain

aspects of utility operations will continue to be explored in order to ensure that PWP takes advantage of all opportunities that promote environmental protection, better service and lower costs to the customer. For additional information, please refer to the Future Outlook section under the Department Summary.

PWP will continue in its succession planning efforts by further executing MindLeaders to the general PWP staff (approximately 350 employees) beginning in the current fiscal year and throughout the early part of the upcoming 2009 fiscal year. In addition, PWP will continue to mandate City sponsored supervisory and lead worker training courses throughout fiscal year 2009 as a means of further addressing employee retention and transfer of critical job knowledge.

## PROGRAM SUMMARY

### GENERAL MANAGER'S OFFICE CUSTOMER RELATIONS

#### Program Description

The Customer Relations section provides value-added, personable customer service to Pasadena electric and water customers. With extensive product offerings to meet its customers' rapidly evolving needs in the new conservation-focused economy, the Customer Relations section strives to match and exceed the services of large utility providers. It monitors shifting market conditions, emerging technologies and new outreach strategies in order to readily respond to the changing needs of customers. It develops, implements and promotes environmental programs and services aimed at reducing customers' electricity and water consumption. Using both broad-based and person-to-person public outreach methods to all customer segments, from large commercial customers to low-income customers, the Customer Relations Section is PWP's frontline in informing and advising the public and the City on water and energy conservation issues and programs. It is a vital player in accomplishing the goals of the City's Green City Action Plan.

#### Major Accomplishments

- Continued to assist the City Hall retrofit project team in pursuing certification from the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) program. City Hall received the gold level LEED certification as a result
  - Implemented commercial water rebates to various customer segments that resulted in over 110 acre feet, or nearly 36 million gallons in water savings. This included installation of over 500 high-efficiency toilets in multi-family units and commercial buildings, resulting in 25.5 acre-feet in water savings
  - Assisted PUSD in the conversion of irrigation controllers to the newer weather-based technology at over 20 sites
  - Promoted the Mayor's 10% water use reduction challenge and monitored the citywide progress toward that goal
  - Developed and implemented an extensive public education campaign (press conference, media relations, direct mail, flyers etc.) to alert customers about the City's projected water shortage and conservation measures stipulated in Water Shortage Plan I, which went into effect in December 2007.
- Launched a new water conservation marketing campaign in conjunction with the water shortage
- Developed and implemented the Pasadena Solar Initiative, a solar energy rebate program designed to help the City install 14 megawatts of solar power by 2017
  - Developed and implemented the Energy Efficiency Partnering Program, which provides rebate incentives to encourage customers to pursue energy efficiency retrofit projects for permanently installed equipment and systems such as HVAC, lighting, motors, compressors, etc
  - Initiated a pilot demonstration program ("direct install program"), which subsidizes a customer's adoption of an emerging energy or water efficiency technology. The program was fully subscribed within one week and thus extended by an additional \$75,000
  - Continued to promote the Green Power Program in which 1470 residential customers and 37 commercial customers have subscribed to an electric service from 100% renewable resources for a premium fee. Three large customers, Kaiser Permanente, Caltech Housing, and Huntington Memorial Hospital, have committed to 4 mW of green power
  - Continued the use of Customer Relationship Management Software (CRM) as an account management tool which is essential in scheduling, tracking, and creating customer contacts and also generating customer service management reports. The number of contacts made in fiscal year 2008 was 3,845
  - Created and/or continued marketing outreach campaigns to promote new and existing rebate and incentive programs, water and energy conservation, the Green Power Program, and various supporting events through media/public relations; and advertising through movie screen slideshows, radio broadcast, public access television, internet advertising, direct mail, bus shelters ads, newsprint ads, bill inserts, bus headers, flyers, posters, and monthly newsletters
  - As a major component of its public outreach strategy, Customer Relations coordinated 50 public events and educational workshops to promote its programs and educate the public on conservation issues. A small sampling of these events includes California-friendly landscaping workshop series for residents, a landscaping workshop for commercial customers and home

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owners associations, solar energy workshops, business efficiency workshops, World Water Day, Lights Out, Walk About Pasadena, Greening the Earth Day, Public Power Day, Black History Festival, National Night Out, and Water Awareness Day. Over 10,000 PWP customers participated in these events

- Hosted the department’s first-ever Energy & Water Efficiency Expo for Pasadena Businesses to educate commercial customers on PWP efficiency programs, and provide a forum for discussion on the challenges and opportunities for “greening” business in

Pasadena. The expo was well attended by 100 of PWP’s top commercial customers

- Developed new content for and maintained the Department’s website
- Provided inter-departmental communications assistance and public outreach services to various other sections within the Department to support communications goals for internal programs, such as water quality reports, water mainline upgrades, the vault inspection program, etc.

Summary of Appropriations and Revenues	FY 2006 Actual	FY 2007 Actual	FY 2008 Adopted	FY 2008 Revised	FY 2009 Adopted
Operating FTEs	0	0	0	0	0
Appropriations	0	0	0	0	0

Note: Appropriations and FTEs for this unit are shown above under General Manager’s Office.

**Future Outlook**

The Customer Relations Section, working closely with the Public Benefits Section, has positioned itself into a valued source of information and personalized services. The myriad of programs and customer support mechanisms offered are of high quality and great benefit to PWP customers. The Customer Relations Section will continue to promote energy efficiency and water conservation

to meet the City’s aggressive environmental goals through its evolving rebate incentive programs. In addition, customers will benefit from PWP’s research and demonstration programs aimed at exposing our customers to cutting edge technology that will provide greater efficiency and savings for years to come.

# CITY OF PASADENA WATER AND POWER

## PROGRAM SUMMARY

### GENERAL MANAGER'S OFFICE PUBLIC BENEFIT CHARGE PROGRAM

#### Program Description

In accordance with Assembly Bill 1890, the Public Benefit Charge Program was created in 1998 and its initial time frame was extended until 2011. The purpose of the program is to support electric customers by funding programs that improve energy efficiency, provide assistance to low-income households, promote renewable energy technology, and demonstrate emerging energy-related technologies.

#### Major Accomplishments

##### Energy Efficiency Business Programs

- Provided more than \$1,500,000 in cash rebates to business customers for retrofits that are saving over 4.5 GWh and reducing load by 1.2 MW through programs such as Energy Efficiency Partnering, High Performance Building, High Efficiency Compressor, and new Small Business Food Service Pilot.
- Conducted over 75 onsite energy surveys and provided customers with information on how to reduce their energy use.

##### Energy Efficiency Residential Programs

- Provided more than 53,000 customers with over \$600,000 in cash rebates through programs such as Energy Star, Efficient Cooling, Cool Trees, Refrigerator Retirement, and new Pool Pump. The combined programs are saving customers approximately 4.94 GWh's
- Provided over 100,000 Compact Fluorescent Light bulbs (CFL's) to customers as part of the Residential Lighting Distribution
- Conducted 130 onsite and 105 online surveys via the Home Energy Suite and Southern California Public Power Authority (SCPPA).

##### Energy Efficiency School Programs

- Provided funds for emerging energy efficiency technology measures implemented throughout schools in the Pasadena Unified School District (PUSD)
- Co-sponsored the Armory Center for the Arts "Children Investigate the Environment Program".

##### Energy Efficiency Municipal Facility Programs

- Provided contribution to the General Fund for efficient equipment retrofits installed during the City Hall Seismic Retrofit Project
- Funded staff to verify credits that earned City Hall a gold level green building designation (LEED)
- Exchanged incandescent holiday lights for efficient LED light strings on the City Hall Christmas tree and in several city offices
- Partnered with BSFMD to demonstrate new lighting technologies in libraries and street lights
- Set aside funds for the upcoming LED Street Signal Retrofit, Pasadena Center Chiller Retrofit, and the Ice Skating Center facility.

##### Income Qualified Residential Programs

- Continued to provide programs such as the Electric Utility Assistance Program (EUAP) to assist low-income customers, by providing electric rate relief of about \$200,000 to over 3,600 residential customers
- The Project A.P.P.L.E. program provided over 400 low-income customers "one-time" emergency financial assistance
- The Torchiere Exchange Program provided efficient lighting fixtures and lamps
- The Refrigerator Exchange Program removed and replaced 100 old inefficient refrigerator units for recycling
- Reserved funds for the Efficient Affordable Housing Pilot program for efficient equipment and appliances, and for building design upgrades above Title 24 requirements (Fair Oaks Court).

##### Emerging Energy Technology (RD&D) Programs

- Provided funds of about \$150,000 for demonstrating and encouraging various energy efficiency and demand response emerging technologies
- Installed new EV chargers at the office building where PWP Engineering can utilize zero-emission transportation
- Continued to provide incentives for the LEED certification and designation of sustainable building design and construction

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**Renewable Energy Projects**

- Provided over \$500,000 for customer-sited photovoltaic system installations through the new Pasadena Solar Initiative, a 10-year program designed to encourage 14MW of local renewable solar energy capacity
- Reserved funds for Lake Ave. Station and Public Works Emergency Backup PV systems. PWP also promoted the Green Power Program for potential new customers and supported demonstrations of PV technology at community events.

Summary of Appropriations and Revenues	FY 2006 Actual	FY 2007 Actual	FY 2008 Adopted	FY 2008 Revised	FY 2009 Adopted
Operating FTEs	6.550	6.550	6.550	6.550	6.550
Appropriations	3,354,805	3,111,112	3,427,490	3,425,104	7,100,000

**Changes from Prior Year**

- Cost Changes: The net change of \$3,674,896 from the fiscal year 2008 Revised Budget is mainly attributed to aggressive rebate programs, approved by Council, related to the Green Initiative and State-wide requirements as well as anticipated negotiated increases in salaries and benefits.

**Future Outlook**

Low-income assistance expenditures are expected to increase due to EUAP program outreach. In addition, increases in energy efficiency program revenue and funding for all customer classes are expected as a result of city and state environmental goals. PWP will continue to offer its customers various programs and incentives such as Energy Star, Energy Efficiency Partnering, and Efficient School and Municipal Building rebates. Customers will

also continue to receive assistance with high bill investigations and energy use assessments. PWP will continue to team up with SCPPA for cost-effective purchasing, direct install and regional research and development projects which showcase the commitment of municipal utilities to meeting state environmental goals. PWP will continue to work with other City departments and community based organizations to increase awareness and provide outreach to customers for environmentally friendly programs such as Kidspace Children’s Museum and Eaton Canyon Nature Center. Current city and state legislation mandates additional funding for energy efficiency and solar programs, which may be funded from non PBC sources, such as the Energy Charge Fund. Results of studies conducted last year will provide recommendations for expanded energy efficiency programs.

# CITY OF PASADENA WATER AND POWER

## PROGRAM SUMMARY

### FINANCE, ADMINISTRATION AND CUSTOMER SERVICE BUSINESS UNIT FINANCE AND ADMINISTRATION GROUP

#### Program Description

The Finance and Administration Section plans and oversees the finance, administrative support, and cross-functional operations and systems for PWP. The overall goal is to implement a fiscally responsible and cost-effective manner; gather, organize and process data in order to supply relevant information to be used in decision making; provide financial analysis and administrative support to other business units on an as-needed basis; develop and execute an overall financial strategy for PWP that supports business strategies and captures maximum benefits for the City; and ensure PWP's financial integrity. Functions include budgeting, financial analysis and planning, rates, capital financing, risk management, information systems, warehousing and materials management, safety, training, and management analysis.

The Energy Settlements Section validates the multitude of energy transactions required to support effective retail and wholesale operations. The Section interacts with the California Independent System Operator (CAISO) and other energy partners to process the daily transactions and confirm the economic agreements made between the transacting parties. The Section is also responsible for performing analysis on wholesale operations and providing reports to monitor and improve overall business unit performance.

The Strategic Planning Section is responsible for developing PWP's long term resource plan, negotiating long-term energy contracts, and monitoring energy industry regulatory changes. This section provides the long-term vision required to ensure that adequate supply is available into the future to meet the energy requirements for Pasadena customers.

#### Major Accomplishments

- Successfully issued \$58 million Series 2008 Power Revenue Bonds to fund the on-going implementation of the Electric Distribution System Master Plan (EDSMP)
- Implemented the Council approved utilization plan of the Stranded Investment Reserve Fund by transferring the second of two transfers of \$5 million to the Power Fund to mitigate increased energy cost.
- Approved and finalized with Public Works the construction plans

of the new two-story PWP building, which will also house the new Emergency Operations Center (EOC) and the PWP Department Operation Center (DOC)

- Continued to implement water and electric rate adjustments to recover increasing operating cost
- Continued to update and revise the Power Cost Adjustment Charge, Transmission Access Charge, Purchased Water Adjustment Charge and the Capital Improvement Charge to enable PWP to adjust to changes in energy and water prices
- Installed and implemented new Market Redesign Technology Upgrade (MRTU) nMarket software in order to meet the challenges of a new MRTU California electricity market
- Developed and implemented key software interfaces with our existing trade management software and nMarket system to facilitate communication between ISO and Pasadena
- Developed and implemented trading data interface between the PWP and Aces Power Marketing, a third party which manages PWP's real-time operations
- Scheduled and completed key training opportunities to prepare Pasadena for the new (MRTU) California electric market
- Successfully implemented the new material Warehouse Bar Coding Inventory Management System
- Started transferring all non-inventory items such as electric meters, transformers, switches and primary cable handled by Electrical Test and Power Engineering to the new warehouse bar coding inventory system
- Successfully awarded contracts to build the new state-of-the-art outdoor racking system of inventory parts as outlined in the Warehouse Modernization Plan
- Achieved crane certification for two Warehouse Light Equipment Operators as mandated by the State of California
- Completed and deployed 45% of water and power GIS conversion data in the system
- Started work on the IVR and IWR application with the selected contractor
- Successfully implemented approximately 25 virtual servers in the VMware Infrastructures saving about \$125,000 in server cost
- Completed the use of LexisNexis-Accurate Positive ID Program which cleaned up social security number data in the ECIS
- Processed over 692 vendor purchase orders and contracts valued approximately \$47 million
- Continued to monitor the Taxpayer Protection Amendment of 2000 (Oaks Initiative).

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Summary of Appropriations and Revenues	FY 2006 Actual	FY 2007 Actual	FY 2008 Adopted	FY 2008 Revised	FY 2009 Adopted
Operating FTEs	32.000	35.000	35.000	35.000	37.000
Appropriations	32,411,247	17,781,052	27,672,574	27,495,674	28,030,830

**Changes from Prior Year**

- **Cost Changes:** The net change of \$535,156 from the fiscal year 2008 revised budget is due mainly to anticipated, negotiated increases in salaries and benefits, increases in equipment, depreciation and reductions in Services and Supplies.
- **FTE Changes:** There are 2.00 additional FTEs reflected in this budget. A Department Information Systems Analyst III was approved, as a new hire, for the operating budget and a Department Information Systems Analyst II was transferred from the capital budget.

**Future Outlook**

PWP continues to restructure its business systems and processes to effectively manage and comply with the ever-increasing business-critical legal, environmental, and political requirements facing the utility. PWP also continues to update its business strategies, creating a conducive environment for its employees and stakeholders, while seeking better ways to improve upon its services.

PWP continues to improve its financial decision-making system and its financial operations data integrity, resulting in increased monitoring and evaluation of expenses. In addition, PWP continues

to update its financial plan to reflect adjustments to the changing economy and department needs as necessary.

In fiscal year 2009, PWP will continue to monitor and recommend electric and water rate adjustments to support the rising operating costs associated with fuel, energy, water, and capital expenses. In addition, PWP has contracted a consultant to conduct a cost-of-service study of the current water rate components. The study, which involves rate review of the Purchased Water Adjustment Charge (PWAC), Commodity Charge (including distribution and customer), and the Capital Improvement Charge (CIC), will enable PWP to assess and recommend rate adjustments to make the water operation financially sound. Furthermore, PWP is planning to conduct a cost of service study during fiscal year 2009 to review the current electric rate components.

PWP is continuing to work with City staff and consultants to implement a comprehensive plan detailing space usage and seismic retrofitting of the warehouse. The utility will continue to pursue technological advances to aid in productivity, supply procurement, financial planning, and the security of electric and water infrastructures. The GIS project for both electric and water will continue with the implementation of the eight applications, GIS infrastructure, and data conversion, and is expected to be completed in the year 2010.



CITY OF PASADENA  
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**PROGRAM SUMMARY**

**FINANCE, ADMINISTRATION AND CUSTOMER SERVICE  
BUSINESS UNIT CUSTOMER SERVICE GROUP**

**Program Description**

The Customer Services Group strives to provide the highest level of service to the customer. Customers can access account information and make credit card payments through the automated 24/7 phone payment service. In addition, they can use the website at [www.PWPWeb.com](http://www.PWPWeb.com) to access accounts and make credit card payments 24/7, obtain rate and utility rebate information, and much more.

In an annual benchmarking survey, Customer Service reports activity related to meter reading, the call center, billing, and credit operations to national investor owned utilities, with the objective of achieving the highest performance results.

A state-of-the-art Customer Information System (CIS) is the backbone of the customer service operation. The CIS system holds customer accounts, billing, credit, and payment history on each customer, while integrating with meter reading software and handheld devices to generate customer invoices. Customer Service works closely with the Customer Relations group on solutions related to conservation and environmental concerns, and the Water and Electric Meter Shops on issues related to metering. The goal is to meet or exceed customer expectation in an accurate, timely, safe, reliable, and responsible manner, while facilitating the economic growth of the City.

**Major Accomplishments**

- Upgraded the Itron Multi-Vendor Reading System (MV-RS) to version 7.8.6 to support Electrical Optical Probe Meters that store interval data which supports the Load Research Program.
- Captured and downloaded Interval Data from MV-90 Meter Reads and Optical Probe Meter Reads to the load research project .
- Developing and reviewing specifications for the Interactive Voice Response (IVR) and the Interactive Web Response (IWR) to meet PWP requirements. The new system will improve customer service and enhance the ability of customers to communicate with PWP
- Upgraded the Alliance Data Systems Software from V7R3 to V7R6, which will enhance the background batch processing, plus will add comment history and meter set-up options.
- Conducted a successful pilot program of Itron’s MC Lite drive-by meter reading system.
- Upgraded RouteSmart Routing Software for Meter Reading.
- Attained an overall first quartile ranking in the annual PA Consulting Benchmark Survey done on municipalities and investor owned utilities (IOU).
- Answered more than 99,000 calls, processed over 705,000 bills, completed 681,000 meter reads and processed 41,000 service orders during fiscal year 2008.
- Processed 14,000 credit card payments through the automated phone system and 49,000 credit card payments through PWPWeb. Web transactions continue to grow each year.
- Collected \$220 million through bill remittance, payment center, and credit card transactions.

<b>Summary of Appropriations and Revenues</b>	<b>FY 2006 Actual</b>	<b>FY 2007 Actual</b>	<b>FY 2008 Adopted</b>	<b>FY 2008 Revised</b>	<b>FY 2009 Adopted</b>
Operating FTEs	40.000	40.000	40.000	40.000	40.000
Appropriations	5,230,936	4,822,896	6,083,920	6,082,798	6,535,308

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Changes from Prior Year

- Cost Changes: The net change of \$452,510 is due mainly to anticipated, negotiated increases to salaries and benefits as well as multiple accounts for Services and Supplies, Equipment purchases and Internal Services.

Future Outlook

The Customer Service Group is a vital link between PWP and the customers of the community. Customer Service is consistently evaluating products and services that will enhance PWP's ability to serve its customers. The combination of top-flight call center, billing, credit, and field operations has resulted in PWP's ability to deliver high quality, cost-effective customer services. Projects underway that will be completed in FY09 are the implementation

of IVR/IWR. IWR will enable customers to sign up or disconnect service via the web 24/7, as well as make online payments. The collections group will benefit from the new IVR automated out-dial capability to make soft collection calls to delinquent customers. Web based versus terminal based credit card transactions will be evaluated to enhance security and privacy issues. The Credit and Collections Group will consistently promote the A.P.P.L.E. program to customers requiring payment assistance for their utility bills. Customer Service, in partnership with Customer Relations, will continue to process Green Power applications, which will increase the number of customers using renewable wind power. It will also manage and bill solar customer usage, while helping to promote energy and water conservation programs.

**PROGRAM SUMMARY**  
**POWER SUPPLY BUSINESS UNIT**

**Program Description**

The Power Supply Business Unit (PSBU) produces and procures electric energy for PWP's customers, sells excess resources in wholesale markets, verifies energy transactions, manages energy and transmission contracts, and plans for future energy needs. The business unit is comprised of three sections:

- 1) Power Production (Operations, Maintenance and Engineering)
- 2) Wholesale Energy Trading and Scheduling
- 3) Environment and Resource

The Power Production Section operates and maintains Pasadena's local generation resources located at the Broadway and Glenarm properties. By maintaining high availability of these resources, Power Production provides electric customers with access to a flexible and cost-effective source of electric power. When not used for Pasadena loads, these resources are sold into wholesale energy markets and the California ISO ancillary services markets, providing additional value to customers from wholesale revenues.

The Wholesale Energy Trading and Scheduling Section is responsible for the procurement of power to serve customers, and for natural gas to use at the Broadway and Glenarm generation units and at the Magnolia Power Plant located in Burbank, CA. The section is also responsible for marketing excess energy and transmission effectively to optimize the assets owned by the City. PWP participates in the California Independent System Operator (CAISO) market as a Scheduling Coordinator and a Participating Transmission Owner. The Wholesale Energy Trading and Scheduling Section is responsible for communicating with the CAISO to provide reliable and economical energy to Pasadena customers.

The Environmental and Resource Planning Section is responsible for developing the long-term resource plan; negotiating long term energy contracts; and monitoring regulatory changes in energy environmental and other industries. The section provides the long-term vision required to ensure that an adequate power supply is available to meet Pasadena's current and future energy requirements.

**Major Accomplishments**

- Successfully launched a PWP succession plan by implementing staff reorganization in the Power Production division and creating a knowledge transfer system
- Provided MindLeaders training and initiated a Technical Library at the Power Plant
- Increased optimization of excess transmission capacity which contributed to a \$ 500,000 net revenue increase
- Successfully sold excess local capacity and system resource adequacy attributes yielding a revenue increase of over \$400,000
- Successfully completed the transition of real-time scheduling and trading from PWP staff to ACES Power Marketing in accordance with the target of September 2008
- Successfully completed development and implementation of interfaces between PWP's scheduling, trading and settlements software and ACES Power Marketing
- Installed and implemented new Market Redesign Technology Upgrade (MRTU) Market software to meet the challenges of a new MRTU California electricity market
- Actively participated in CAISO MRTU market simulation for future MRTU implementation
- Initiated work for Penstock Seismic assessment related to the Azusa Hydro Renewals and Replacement CIP
- Completed patch test to determine the work scope for Penstock recoating related to the Azusa Hydro Renewals and Replacement CIP
- Awarded contract and initiated work for a noise study at the Power Plant.

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Summary of Appropriations and Revenues	FY 2006 Actual	FY 2007 Actual	FY 2008 Adopted	FY 2008 Revised	FY 2009 Adopted
Operating FTEs	43.000	44.800	46.800	46.800	46.800
Appropriations	108,435,156	105,170,112	109,628,302	109,493,946	128,948,718

**Changes from Prior Year**

- **Cost Changes:** The net change of \$19,454,772 from the fiscal year 2008 Revised Budget is mainly due to anticipated, negotiated increases in salaries and benefits as well as over \$18 million in purchased energy and fuel costs.

**Future Outlook**

Greenhouse Gas (GHG) Legislation: AB32 requires statewide GHG emissions to be reduced to 1990 levels by 2020. The rules for GHG reduction for the electric sector will be implemented beginning in 2012. Currently, the rule making is in progress. The electric sector is expected to reduce GHG emissions far more than initially planned. PWP’s GHG emissions are relatively high as it uses a considerable amount of power from its coal fired Intermountain Power Plant. Given the regulatory uncertainty and the current proposals under consideration, AB32 poses a potentially significant financial impact to PWP.

PSBU continues to work on augmenting the renewable portfolio through evaluation of renewable projects including potential wind, bio-mass, solar and geothermal projects.

The California Independent System Operator (CAISO) will implement the Market Redesign and Technology Upgrade (MRTU) program beginning in late 2008. This new method of conducting

wholesale energy trading in the CAISO markets includes the creation of a “day-ahead” wholesale market, a “locational” marginal pricing scheme to reflect the impact of transmission congestion, and will provide incentives for new transmission investment. MRTU represents a substantial operational and financial risk to PWP as the utility has no experience with “locational” marginal pricing or the associated exposures to the highly volatile costs of transmitting energy to Pasadena. Similarly, the market structure will likely have a substantial impact on how Pasadena’s local generation plants may operate, and how they are compensated for energy output when fiscal consequences are unknown.

The ongoing California market regulatory changes are a reminder that local generation continues to be a valuable resource that enables utilities such as PWP to maintain a sense of independence from market dynamics. The increasing natural gas prices indicate an ongoing need for improvements and updates to local generation units. Since three out of five of PWP’s local natural gas units are over 40 years old, the Integrated Resource Plan should confirm the need to improve the efficiency and reliability of the local power plant by replacing the older units with newer generation technology.

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**PROGRAM SUMMARY**  
**POWER DELIVERY BUSINESS UNIT**

**Program Description**

The purpose of the Power Delivery Business Unit is to deliver safe and reliable electric service to our customers; install, operate, and maintain overhead and underground lines, stations, customer meters, and associated equipment at the lowest possible cost and at the highest level of service, with minimal service interruptions.

**Major Accomplishments**

In fiscal year 2008, Power Delivery continued work on the Electric Distribution System Master Plan (EDSMP). In addition to the capital projects, Power Delivery completed an average of 55 customer projects per month, and completed all necessary operation and maintenance projects.

- Completed construction of new capacitor banks and control house at Santa Anita Substation
- Designed over 75 projects converting sections of the 4 kV distribution systems to 17 kV in the Chester, Eastern, Fair Oaks

and Santa Anita circuits and completed construction of several projects on the Chester circuit

- Completed construction of oil containment facilities at Brookside and Santa Anita Substations and at TM Goodrich Receiving Station
- Completed design and procurement of new switchgear for Eastern Substation
- Updated the model of the electric distribution system and prepared a State of the System Report
- Completed construction of four new feeders from Glenarm IV
- Completed redesign of Los Robles Underground System
- Installed 10 new 34-kV circuit breakers
- Completed a seismic assessment of all power facilities
- Completed a cross tie-line study of the electric system
- Installed more than 8,000 customers electric meters
- Dispatched 660 active customer work orders
- Collected over \$3 million of customer aid to construction
- Added 740 new electric meters to accommodate system growth
- Received the Tree Line USA Award for power line clearance practices for the sixth consecutive year.

Summary of Appropriations and Revenues	FY 2006 Actual	FY 2007 Actual	FY 2008 Adopted	FY 2008 Revised	FY 2009 Adopted
Operating FTEs	94.210	95.010	95.010	92.890	92.890
Appropriations	20,106,550	42,320,037	24,781,874	24,144,894	29,127,911

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Changes from Prior Year

- Cost Changes: The net change of \$4,983,017 from the fiscal year 2008 revised budget is due mainly to anticipated, negotiated increases in salaries and benefits as well as interest payments due on bonds issued in fiscal year 2008.

Future Outlook

Capital spending on the Master Plan will continue in fiscal year 2009. We have prioritized projects based on the State of the System reports, and funds have been allocated for two more capital improvement projects: Seismic Upgrade of all power facilities and Distribution System enhancements. Seismic retrofitting will begin at Goodrich and Glenarm. New switchgear will be installed at Eastern Substation and new substations will be designed for Hastings and Chester substations to add capacity to

those circuits. Conversion of the 4 kV electric distribution systems to 17 kV will continue on the Chester, Eastern, Fair Oaks and Santa Anita circuits. Two new oil containment projects will be completed. Approximately \$8,000,000 is allocated for cable and switch replacement and other projects to improve the system capacity and reliability. All inspection programs will continue, and we anticipate that customer projects will continue at the same pace in 2009.

CITY OF PASADENA  
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**PROGRAM SUMMARY**  
**WATER DELIVERY BUSINESS UNIT**

**Program Description**

The Water Delivery Business Unit (WDBU) constructs, operates and maintains the water system infrastructure that enables it to provide and deliver the highest quality water at low and competitive rates in an environmentally responsible and cost-effective manner.

**Major Accomplishments**

- Continued the implementation of the Water Distribution System Master Plan
- Completed major water main replacement and/or rehabilitation program by replacing nearly eight miles of aging water mains
- Replaced 7,000 water meters as part of the meter replacement program
- Completed the design of the well collector pipeline that will collect water from seven wells for storage in the Jones Reservoir
- Selected a vendor to provide equipment for the Monk Hill Perchlorate Treatment Plant, which will initially treat four of the five groundwater wells that flow into Sunset Reservoir
- Negotiated a contract with MWD for the conjunctive use groundwater storage project. Once completed, the project will recharge the groundwater basin for future use. The project will also provide an interconnection between PWP and Foothill Municipal Water District
- Completed design work for the retrofit of the electrical systems at the Jones and Glorieta Booster pumps. Construction should be completed mid - FY 2009
- Modified design of the Windsor reservoir retrofit to accommodate solar panels on the reservoir’s roof.

Summary of Appropriations and Revenues	FY 2006 Actual	FY 2007 Actual	FY 2008 Adopted	FY 2008 Revised	FY 2009 Adopted
Operating FTEs	46.110	48.110	49.110	49.110	49.110
Appropriations	30,660,689	26,608,796	28,995,400	28,218,879	32,244,569

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Changes from Prior Year

- Cost Changes: The net change of \$4,025,690 from the fiscal year 2008 Revised Budget is due mainly to anticipated, negotiated increases in salaries and benefits as well as over \$3 million in purchased water.

Future Outlook

The Water Delivery Business Unit will continue to meet the goals of an aggressive Capital Improvement Program as outlined in the Water System Master Plan. The City's aging water infrastructure will be updated to provide the fire flow, water quality, and supply reliability demands of its customers.

Following the result of the seismic and structural study of the City's reservoirs, it is anticipated that major repairs and upgrades will be needed on nearly all of the City's 13 reservoirs. Substantial resources will be required in the next five years to upgrade the water storage facilities. In fiscal year 2009, work will commence on Windsor and Sheldon reservoirs.

The well collector pipeline will be installed and deliver water from seven City wells to the Jones reservoir. The 4.7 mile project will be included as part of the Master Plan goal for the annual replacement or rehabilitation of eight miles of main.

Water quality regulations will continue to increase and impose more stringent requirements on water agencies. The Water Delivery Business Unit continues to be proactive in keeping abreast of upcoming regulations. New regulations may require substantial capital investments into the water infrastructure. PWP will be installing two new perchlorate treatment plants beginning in fiscal year 2009.

In FY 2009, the Water Delivery Business Unit will continue in its fourth year of a five-year program to replace all old meters with new accurate and efficient automatic meter read meters (AMR).