# PRELIMINARY OFFICIAL STATEMENT DATED \_\_\_\_\_\_, 2016

[INSERT DAC LOGO]

NEW ISSUE - FULL BOOK-ENTRY ONLY

Ratings:

Fitch: "\_\_\_"

(See "RATINGS" herein)

In the opinion of Norton Rose Fulbright US LLP, Los Angeles, California, Bond Counsel, under existing law interest on the 2016A Bonds is exempt from personal income taxes of the State of California and, assuming compliance with the tax covenants described herein, interest on the 2016A Bonds is excluded pursuant to section 103(a) of the Internal Revenue Code of 1986 (the "Code") from the gross income of the owners thereof for federal income tax purposes. In the further opinion of Bond Counsel, interest on the 2016A Bonds is not an item of tax preference for purposes of the federal alternative minimum tax. See "TAX MATTERS."

[INSERT CITY LOGO]

# CITY OF PASADENA, CALIFORNIA ELECTRIC REVENUE/REFUNDING BONDS, 2016A SERIES

Dated: Date of Delivery

Due: June 1, as shown on the inside cover

This cover page contains certain information for general reference only. It is not intended to be a summary of the security or terms of this issue. Investors are advised to read the entire Official Statement to obtain information essential to the making of an informed investment decision. Capitalized terms used on this cover page not otherwise defined shall have the meanings set forth herein.

The \$\_\_\_\_\_\* aggregate principal amount of City of Pasadena, California Electric Revenue/Refunding Bonds, 2016A Series (the "2016A Bonds") are being issued for the purpose of providing moneys to (i) finance costs of acquisition and construction of certain capital improvements to the Electric System, (ii) refund a portion of the City's outstanding Electric Revenue Bonds, 2008 Series (the "Refunded 2008 Bonds"), (iii) pay in full the outstanding balance on a line of credit, (iv) fund a deposit to the Parity Reserve Fund and (v) pay the costs of issuance of the 2016A Bonds. See "PLAN OF FINANCE" herein.

The 2016A Bonds are being issued pursuant to an Electric Revenue Bond Fiscal Agent Agreement, dated as of August 1, 1998, by and between the City of Pasadena, California (the "City") and The Bank of New York Mellon Trust Company, N.A., as successor fiscal agent (the "Fiscal Agent"), as amended and supplemented, including as amended and supplemented by a Ninth Supplement to Electric Revenue Bond Fiscal Agent Agreement, dated as of 1, 2016, by and between the City and the Fiscal Agent (collectively, the "Fiscal Agent Agreement"). The 2016A Bonds are being issued in fully registered form, and, when issued, will be registered in the name of Cede & Co., as nominee of The Depository Trust Company, New York, New York ("DTC"). DTC will act as securities depository of the 2016A Bonds. Beneficial ownership interests in the 2016A Bonds may be purchased in book-entry form only in denominations of \$5,000 principal amount or any integral multiple thereof. Interest on the 2016A Bonds will be payable semiannually on June 1 and December 1 of each year, commencing June 1, 2017. Payments of principal of, premium, if any, and interest on, the 2016A Bonds will be paid by the Fiscal Agent to DTC, which is obligated in turn to remit such principal, premium, if any, and interest to its participants for subsequent disbursement to the beneficial owners of the 2016A Bonds.

The 2016A Bonds are subject to optional and mandatory sinking fund redemption prior to maturity as described herein.

The 2016A Bonds are an obligation payable only from the Net Income of the Electric System in the Light and Power Fund of the City and certain other funds as provided in the Fiscal Agent Agreement. The 2016A Bonds are secured by a pledge of and lien upon Net Income of the Electric System on a parity with other obligations of the Electric System payable from Net Income of the Electric System and issued from time to time pursuant to the terms of the Fiscal Agent Agreement. Upon the issuance of the 2016A Bonds and refunding of the Refunded 2008 Bonds, in addition to the 2016A Bonds, the City will have \$\_\_\_\_\_\_ principal amount of parity obligations outstanding payable from Net Income of the Electric System pursuant to the terms of the Fiscal Agent Agreement.

The general fund of the City is not liable for the payment of any 2016A Bonds, any premium thereon upon redemption prior to maturity or their interest, nor is the credit or taxing power of the City pledged for the payment of any 2016A Bonds, any premium thereon upon redemption prior to maturity or their interest. The Owner of any 2016A Bond shall not compel the exercise of the taxing power by the City or the forfeiture of any of its property. The principal of and interest on any 2016A Bonds and any premiums upon the redemption of any thereof prior to maturity are not a debt of the City nor a legal or equitable pledge, charge, lien or encumbrance upon any of its property or upon any of its income, receipts or revenues, except the Net Income and other funds, security or assets which are pledged to the payment of the 2016A Bonds, interest thereon and any premiums upon redemption pursuant to the Fiscal Agent Agreement.

Dated: \_\_\_\_\_, 2016

<sup>\*</sup> Preliminary; subject to change.

# CITY OF PASADENA, CALIFORNIA ELECTRIC REVENUE/REFUNDING BONDS, 2016A SERIES

#### **MATURITY SCHEDULE**

	\$	Serial 2016A	Bonds	
Maturity Date (June 1)	Principal Amount	Interest Rate	Yield	CUSIP <sup>†</sup>

•				
\$	% Term 2016A Bonds due June 1, 20_	- Yield:	% CUSIP <sup>†</sup> :	
\$	% Term 2016A Bonds due June 1, 20		% CUSIP <sup>†</sup> :	

<sup>&</sup>lt;sup>†</sup> CUSIP is a registered trademark of The American Bankers Association. CUSIP data herein is provided by CUSIP Global Services, managed by S&P Capital IQ Financial Services LLC on behalf of The American Bankers Association. CUSIP numbers have been assigned by an independent company not affiliated with the City, Pasadena Water and Power ("PWP") or the initial Purchaser and are included solely for the convenience of the holders of the 2016A Bonds. This data is not intended to create a database and does not serve in any way as a substitute for the CUSIP Services. None of the City, PWP or the Initial Purchaser shall be responsible for the selection or correctness of the CUSIP numbers set forth herein. The CUSIP number for a specific maturity is subject to being changed after the delivery of the 2016A Bonds as a result of various subsequent actions including, but not limited to, a refunding in whole or in part of such maturity or as a result of the procurement of secondary market portfolio insurance or other similar enhancement by investors that is applicable to all or a portion of the 2016A Bonds.

#### CITY OF PASADENA

#### **CITY COUNCIL**

Terry Tornek, Mayor
Gene Masuda, Vice-Mayor
Tyron Hampton, Council Member
Margaret McAustin, Council Member
John J. Kennedy, Council Member
Victor M. Gordo, Council Member
Steven G. Madison, Council Member
Andy Wilson, Council Member

#### **CITY STAFF**

Steve Mermell, City Manager
Matthew Hawkesworth, Director of Finance
Vicken Erganian, Treasurer and Deputy Director of Finance

# CITY ATTORNEY

Michele Beal Bagneris

# PASADENA WATER AND POWER STAFF

Gurcharan Bawa, Interim General Manager
Eric Klinkner, Assistant General Manager & Chief Deputy
Shari M. Thomas, Assistant General Manager for Finance, Administration and Customer Service
Jeff Barber, Interim Assistant General Manager for Power Delivery
Shan Kwan, Assistant General Manager for Water Delivery

#### SPECIAL SERVICES

#### FINANCIAL ADVISOR

Public Resources Advisory Group Los Angeles, California

# FISCAL AGENT AND ESCROW AGENT

The Bank of New York Mellon Trust Company, N.A. Los Angeles, California

# BOND AND DISCLOSURE COUNSEL

Norton Rose Fulbright US LLP Los Angeles, California

#### INDEPENDENT ACCOUNTANTS

Lance, Soll & Lunghard, LLP Brea, California

# VERIFICATION AGENT

Grant Thornton LLP Minneapolis, Minnesota No dealer, broker, salesperson or other person has been authorized by the City to give any information or to make any representations, other than those contained herein, and if given or made, such other information or representations must not be relied upon as having been authorized by any of the foregoing. This Official Statement does not constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of the 2016A Bonds in any jurisdiction in which such offer, solicitation or sale would be unlawful.

This Official Statement is not to be construed as a contract with the purchasers of the 2016A Bonds. Statements contained in this Official Statement involving any estimates, forecasts or matters of opinion, whether or not expressly so stated, are intended solely as such and not as a representation of fact.

The information set forth herein has been furnished by the City and other sources which are believed to be reliable, but is not guaranteed as to accuracy or completeness. The information and expressions of opinions herein are subject to change without notice and neither the delivery of this Official Statement nor any sale made hereunder shall, under any circumstances, create any implication that there has been no change in the affairs of the City or the Electric System since the date hereof.

IN CONNECTION WITH THE OFFERING OF THE 2016A BONDS, THE INITIAL PURCHASER MAY OVER-ALLOT OR EFFECT TRANSACTIONS THAT MAY STABILIZE OR MAINTAIN THE MARKET PRICE OF SUCH 2016A BONDS AT A LEVEL ABOVE THAT WHICH MIGHT OTHERWISE PREVAIL IN THE OPEN MARKET. SUCH STABILIZING, IF COMMENCED, MAY BE DISCONTINUED AT ANY TIME. THE INITIAL PURCHASER IN CONNECTION WITH ANY REOFFERING MAY OFFER AND SELL THE 2016A BONDS TO CERTAIN DEALERS, INSTITUTIONAL INVESTORS AND OTHERS AT PRICES LOWER THAN THE PUBLIC OFFERING PRICES STATED ON THE INSIDE COVER PAGE HEREOF AND SUCH PUBLIC OFFERING PRICES MAY BE CHANGED FROM TIME TO TIME BY THE INITIAL PURCHASER.

This Official Statement, including any supplement or amendment hereto, is intended to be filed with the Municipal Securities Rulemaking Board through the Electronic Municipal Market Access (EMMA) website. The City maintains a website. However, the information presented therein is not part of this Official Statement and should not be relied upon in making investment decisions with respect to the 2016A Bonds.

References to website addresses presented herein are for informational purposes only and may be in the form of a hyperlink solely for the reader's convenience. Unless specified otherwise, such websites and the information or links contained therein are not incorporated into, and are not part of, this Official Statement for purposes of, and as that term is defined in, Securities and Exchange Commission Rule 15c2-12.

# CAUTIONARY STATEMENTS REGARDING FORWARD-LOOKING STATEMENTS IN THIS OFFICIAL STATEMENT

Certain statements included or incorporated by reference in this Official Statement constitute "forward-looking statements." Such statements are generally identifiable by the terminology used such as "plan," "expect," "estimate," "budget" or other similar words. The achievement of certain results or other expectations contained in such forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause actual results, performance or achievements described to be materially different from any future results, performance or achievements expressed or implied by such

forward-looking statements. The City does not plan to issue any updates or revisions to those forward-looking statements if or when its expectations or events, conditions or circumstances on which such statements are based occur.

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## OFFICIAL STATEMENT

# CITY OF PASADENA, CALIFORNIA ELECTRIC REVENUE/REFUNDING BONDS, 2016A SERIES

#### INTRODUCTION

This Introduction is subject in all respects to the more complete information contained elsewhere in this Official Statement and the offering of the City of Pasadena, California Electric Revenue/Refunding Bonds, 2016A Series to potential investors is made only by means of the entire Official Statement. Capitalized terms used in this Official Statement and not otherwise defined herein shall have the respective meanings assigned to them in the Fiscal Agent Agreement.

#### Purpose

The purpose of this Official Statement, which includes the cover page and Appendices hereto, is to set forth certain information in connection with the issuance and sale by the City of Pasadena, California (the "City") of \$\_\_\_\_\* aggregate principal amount of its Electric Revenue/Refunding Bonds, 2016A Series (the "2016A Bonds"). The 2016A Bonds are being issued for the purpose of providing moneys to (i) finance the costs of acquisition and construction of certain capital improvements to the Electric System, (ii) refund a portion of the City's outstanding Electric Revenue Bonds, 2008 Series (the "Refunded 2008 Bonds"), (iii) pay in full the outstanding balance on a line of credit, (iv) fund a deposit to the Parity Reserve Fund and (v) pay the costs of issuance of the 2016A Bonds. See "PLAN OF FINANCE."

# **Authority for Issuance**

The 2016A Bonds are authorized and will be issued pursuant to Article XIV of the Charter of the City, as amended (the "Charter"), an Ordinance adopted by the City Council of the City (the "City Council") on \_\_\_\_\_\_, 2016, and an Electric Revenue Bond Fiscal Agent Agreement, dated as of August 1, 1998, by and between the City and The Bank of New York Mellon Trust Company, N.A. (successor to BNY Western Trust Company), as fiscal agent (the "Fiscal Agent"), as amended and supplemented, including as amended and supplemented by a Ninth Supplement to Electric Revenue Bond Fiscal Agent Agreement, dated as of \_\_\_\_\_\_1, 2016 (the "Ninth Supplement"), by and between the City and the Fiscal Agent (collectively, the "Fiscal Agent Agreement"). All Electric Revenue Bonds issued pursuant to the Fiscal Agent Agreement are collectively referred to herein as the "Bonds."

# The City

The City is a charter city of the State of California (the "State"), comprising approximately 23 square miles, located in Los Angeles County in the northwestern portion of the San Gabriel Valley. See APPENDIX A—"THE CITY OF PASADENA" herein. The City owns and operates a municipal electric public utility (the "Electric System"), established by the Charter. The Electric System is managed and controlled by Pasadena Water and Power ("PWP") and supplies electricity to virtually all of the electric customers within the City limits. For the Fiscal Year ended June 30, 2016, the City estimates there were 65,318 customers of the Electric System, comprised of 56,674 residential customers, 8,629 commercial and industrial customers, 5 street lighting and traffic signals customers and 10 wholesale customers. The

Preliminary; subject to change.

total quantity of energy generated and purchased was 1,148,014 megawatt hours ("MWh"), and the peak demand was 307 megawatts ("MW").

# Security and Sources of Payment for the 2016A Bonds

The 2016A Bonds are an obligation payable only from the Net Income of the Electric System in the Light and Power Fund of PWP (the "Light and Power Fund") and amounts in the Parity Reserve Fund as provided in the Fiscal Agent Agreement. The 2016A Bonds are secured by a pledge of and lien upon Net Income of the Electric System on a parity with other obligations of the Electric System issued from time to time pursuant to the terms of the Fiscal Agent Agreement payable from Net Income of the Electric System and a pledge of amounts in the Parity Reserve Fund. Upon the issuance of the 2016A Bonds and the refunding of the Refunded 2008 Bonds, in addition to the 2016A Bonds, the City will have outstanding \$1,485,000\* principal amount of its Electric Revenue Bonds, 2008 Series (the "2008 Bonds"), \$22,035,000 principal amount of its Electric Revenue Refunding Bonds, 2019 Series (the "2019 Bonds"), \$23,290,000 principal amount of its Electric Revenue Refunding Bonds, 2010A Series (the "2010A Bonds"), \$6,510,000 principal amount of its Electric Revenue Refunding Bonds, 2012A Series (the "2012A Bonds"), and \$80,485,000 principal amount of its Electric Revenue Refunding Bonds, 2012A Series (the "2013A Bonds," and together with the 2008 Bonds, the 2009 Bonds, the 2010A Bonds and the 2012A Bonds, the "Outstanding Bonds"). See "SECURITY AND SOURCES OF PAYMENT FOR THE 2016A BONDS – Parity Reserve Fund" and "– Additional Bonds."

The 2016A Bonds are limited obligations of the City and are not secured by a legal or equitable pledge of, or charge or lien upon, any property of the City or any of its income or receipts, except the Net Income of the Electric System. Neither the full faith and credit nor the taxing power of the City is pledged to the payment of the principal of, premium, if any, or interest on the 2016A Bonds. No tax or other source of funds, other than the Net Income of the Electric System, is pledged to pay the principal of, premium, if any, or interest on the 2016A Bonds. Neither the payment of the principal of, nor the interest on, the 2016A Bonds constitutes a debt, liability or obligation of the City for which the City is obligated to levy or pledge any form of taxation or for which it has levied or pledged any form of taxation.

The general fund of the City (the "General Fund") is not liable for the payment of any 2016A Bonds, any premium thereon upon redemption prior to maturity or their interest, nor is the credit or taxing power of the City pledged for the payment of any 2016A Bonds, any premium thereon upon redemption prior to maturity or their interest. No Owner of any 2016A Bond shall compel the exercise of the taxing power by the City or the forfeiture of any of its property. The principal of and interest on any 2016A Bonds and any premiums upon the redemption of any thereof prior to maturity are not a debt of the City nor a legal or equitable pledge, charge, lien or encumbrance upon any of its property or upon any of its income, receipts or revenues, except the Net Income and other funds, security or assets which are pledged to the payment of the 2016A Bonds, interest thereon and any premiums upon redemption pursuant to the Fiscal Agent Agreement.

#### **Parity Reserve Fund**

Pursuant to Section 1413 of Article XIV of the Charter, the City has established the Parity Reserve Fund. Upon the issuance of the 2016A Bonds, there will be deposited in the Parity Reserve Fund from the proceeds of the 2016A Bonds an amount sufficient to cause the balance on deposit in or credited to the Parity Reserve Fund to be equal to the Reserve Fund Requirement upon delivery of the 2016A Bonds. The Parity Reserve Fund is required to be maintained in an amount equal to the Reserve Fund Requirement so long as any Bonds or Parity Obligations secured by the Parity Reserve Fund remain Outstanding. Amounts held in or credited to the Parity Reserve Fund are pledged to and may be used

<sup>\*</sup> Preliminary; subject to change.

solely for payment of debt service on the Bonds or Parity Obligations secured thereby in the event that money in the Parity Obligation Payment Fund or any comparable fund established for the payment of principal and interest on the Parity Obligations secured thereby is insufficient therefor. See "SECURITY AND SOURCES OF PAYMENT FOR THE 2016A BONDS – Parity Reserve Fund."

#### **Rate Covenant**

The City has covenanted in the Fiscal Agent Agreement to fix the rates for services furnished by the Electric System so as to provide Gross Revenues at least sufficient to pay, as the same become due, the principal of and interest on the Bonds, any Parity Obligations and all other obligations and indebtedness payable from the Light and Power Fund or from any fund derived therefrom, and also the necessary Maintenance and Operating Expenses, so that the Net Income of the Electric System will be at least equal to 1.10 times the amount necessary to pay principal and interest as the same become due on all Outstanding Bonds and Parity Obligations. See "SECURITY AND SOURCES OF PAYMENT FOR THE 2016A BONDS – Rate Covenant."

#### Other Matters

This Official Statement speaks only as of its date, and the information and expressions of opinions contained herein are subject to change without notice, and neither delivery of this Official Statement nor any sale made hereunder shall, under any circumstances, create any implication that there has been no change in the affairs of the City or the Electric System since the date hereof. This Official Statement, including any supplement or amendment hereto, is intended to be filed with the Municipal Securities Rulemaking Board through the Electronic Municipal Market Access (EMMA) website. Forward looking statements in this Official Statement are subject to risks and uncertainties, including particularly those relating to competition and electric industry restructuring, and the economy of the City's service area.

This Official Statement includes summaries of the terms of the 2016A Bonds, the Fiscal Agent Agreement, the Escrow Agreement, the Continuing Disclosure Agreement and certain contracts and other arrangements for the supply of capacity and energy. The summaries of and references to all documents, statutes, reports and other instruments referred to herein do not purport to be complete, comprehensive or definitive, and each such summary and reference is qualified in its entirety by reference to each document, statute, report or instrument. Copies of the Fiscal Agent Agreement, the Escrow Agreement and the Continuing Disclosure Agreement are available for inspection at the offices of the City in Pasadena, California, and will be available upon request and payment of duplication costs from the Fiscal Agent. Additional information regarding this Official Statement may be obtained by contacting the Fiscal Agent or the City of Pasadena. The City's address and telephone number for such purpose are as follows: City of Pasadena, 100 North Garfield Avenue, 3rd Floor, Pasadena, California 91101-1726, (626) 744-4350, Attention: Director of Finance.

#### PLAN OF FINANCE

#### General

The 2016A Bonds are being issued to provide funds to (i) finance the costs of acquisition and construction of certain capital improvements to the Electric System, (ii) refund the Refunded 2008 Bonds, being the \$47,130,000\* outstanding principal amount of 2008 Bonds maturing on June 1, 2018\* through June 1, 2037\*, (iii) pay in full the outstanding balance on a line of credit, (iv) fund a deposit to the Parity Reserve Fund and (v) pay the costs of issuance of the 2016A Bonds.

<sup>\*</sup> Preliminary; subject to change.

#### **Funding of Capital Improvements**

Five-year capital plans for the PWP Electric System are based on the City's Power Distribution System Master Plan and Energy Integrated Resource Plan and approved by the City Council. In March 2005, the City Council adopted the Power Distribution System Master Plan which identified the infrastructure needs of the power distribution system and recommended system improvements over a 20-year planning period (2005 - 2025). In March 2009, the City Council approved the Energy Integrated Resource Plan which provides a 20-year plan for producing and procuring energy supplies to serve the City's customers. The Energy Integrated Resource Plan was updated in 2012 and in 2015. See also "THE ELECTRIC SYSTEM OF PWP – Energy Integrated Resource Plan."

The City expects routine capital requirements, including those contemplated by the Power Distribution System Master Plan and the Energy Integrated Resource Plan for the next five Fiscal Years to aggregate approximately \$238.6 million. On average, approximately 30% of these improvements are expected to be funded through revenues and the balance will be funded through the issuance of the 2016A Bonds and future financings.

TABLE 1
CAPITAL REQUIREMENTS
(In Thousands)

Fiscal Year	<b>Capital Requirements</b>		
2017	\$47,768		
2018	40,393		
2019	51,498		
2020	48,598		
2021	50,373		
Total	\$238,630		

Source: Finance and Administration Business Unit of PWP.

The proceeds of the 2016A Bonds are expected to be used to finance a portion of the capital expenditures for Fiscal Years 2017 through 2021. The major objectives of the Capital Improvement Program during the five-year period are focused on improving system infrastructure, system capacity, and reliability. Projects will focus on upgrades to distribution components as well as major facilities: switchgear, cable, overcurrent protection devices, substations and dispatch sites. Conversion to 17kV distribution systems and cable rejuvenation programs ensure adequate service for new customers; construction of electrical systems undergrounding and planning for subtransmission system enhancements will mitigate risk and ensure dependability in service. Components of the near-term capital plan include, but are not limited to, the following:

Power Distribution Capacity and Reliability Program - This project provides for the continued repair and replacement of electrical distribution components such as transformers, cable, switches, and overcurrent protection devices that have unexpectedly failed or reached the end of their useful life. Additionally, existing and five-year projected system peak loads are determined to identify system deficiencies and criteria violations for necessary configuration and planning improvements.

**Distribution System Conversion to 17 kV** - This project provides for the conversion of existing 4 kV distribution systems to 17 kV. Existing 4 kV equipment will be replaced with 17 kV equipment to prevent overloading, voltage fluctuations, outages, and sustained damage to the electrical system. Conversion to 17 kV systems will ensure adequate electrical service for new residential and commercial construction, renovation, and upgrades.

Cable Replacement and Testing - This project provides for the testing and replacement of subtransmission and distribution underground cables. Proactive testing and rejuvenation of 34 kV lines are completed to avoid untimely cable failure and to maintain the reliability of the electrical system.

**Subtransmission System Enhancements** - This project provides for a study and subsequent construction of a new interconnection between two receiving stations and a major substation. The new installation will offer alternate routes for bulk power delivery and afford opportunities to de-energize aged portions of the system for needed repair and replacement.

System Automation Projects - Key capital investments are planned to increase automation of the electric distribution system, including expanded installation of fiber optic connections to key substations, meter data management and communication systems, security of major system components and enhancement of the time-of-use metering subsystems. A study of the subtransmission system requirements will include the projected impacts of distributed generation and energy storage options.

### **Refunding of Refunded 2008 Bonds**

Pursuant to an Escrow Agreement dated as of \_\_\_\_\_\_\_\_\_1, 2016 (the "Escrow Agreement"), by and between the City and The Bank of New York Mellon Trust Company, N.A., as escrow agent (the "Escrow Agent"), a portion of the proceeds of the 2016A Bonds will be deposited into an escrow fund and held as cash or applied to the purchase of certain federal securities ("Escrow Securities"), the principal of and interest on which, together with the cash held in the escrow fund, will be sufficient to pay interest due on the Refunded 2008 Bonds through and including June 1, 2017, and to redeem \$47,130,000\* principal amount of the Refunded 2008 Bonds on December 1, 2017 at a redemption price equal to 100% of the principal amount thereof, together with accrued and unpaid interest thereon.

On the date of delivery of the 2016A Bonds, the City will receive a report from Grant Thornton LLP, certified public accountants, verifying the adequacy of (i) the mathematical computation concerning the adequacy of the cash deposited and held in the escrow fund for the Refunded 2008 Bonds together with the maturing principal amounts of and interest earned on the Escrow Securities to pay the interest due on the Refunded 2008 Bonds through and including June 1, 2017, and to pay on December 1, 2017 the redemption price of the Refunded 2008 Bonds (*i.e.* 100% of the principal amount thereof) together with accrued and unpaid interest to such redemption date and (ii) the mathematical computations of the yield on the 2016A Bonds and the yield on the Escrow Securities purchased with portion of the proceeds of the sale of the 2016A Bonds and any other available funds of the City.

The report of such independent arbitrage consultants will include the statement that the scope of their engagement was limited to verifying the mathematical accuracy of the computations contained in such schedules provided to them and that they have no obligation to update their report because of events occurring or data or information coming to their attention subsequent to the date of their report.

Upon such deposit, the Refunded 2008 Bonds will no longer be deemed to be outstanding under the Fiscal Agent Agreement, and all obligations of the City with respect to the Refunded 2008 Bonds shall cease and terminate, except for the obligation of the City to cause the amounts due on the Refunded 2008 Bonds to be paid from funds on deposit in the escrow fund.

#### **Refunding of Line of Credit**

The City has entered into a Credit Agreement, dated as of February 1, 2015 (the "Credit Agreement"), pursuant to which Bank of America, N.A. provided a non-revolving line of credit (the

<sup>\*</sup> Preliminary; subject to change.

"Line of Credit") that the City has drawn down from a Electric System, which Line of Credit has an unpa proceeds of the 2016A Bonds will be used to pay in fu	paid balance of \$ A portion of the
Until February 9, 2018, or such later date as r may draw on the Line of Credit up to the remaining a repay any unpaid balance on the Line of Credit is secu Electric System on a subordinate basis to the Bonds.	cured by a pledge of and lien upon Net Income of the
ESTIMATED SOURCES	S AND USES OF FUNDS
The estimated sources and uses of funds in co	onnection with the 2016A Bonds are as follows:
Sources: Principal Amount of 2016A Bonds Plus Original Issue Premium	
Total Sources	
Uses:  Deposit to Construction Account Deposit to Escrow Fund Line of Credit Payment Deposit to Parity Reserve Fund Deposit to Costs of Issuance Account (1) Initial Purchaser's Discount Total Uses	

#### THE 2016A BONDS

#### General

The 2016A Bonds will be dated their date of delivery and will bear interest from that date at the rates per annum and will mature on June 1 in the years set forth on the inside cover page of this Official Statement. Interest on the 2016A Bonds will be payable semiannually on June 1 and December 1, commencing June 1, 2017, and will be calculated on the basis of a 360-day year comprised of twelve 30-day months. The 2016A Bonds are being issued in fully registered form, and when issued, will be registered in the name of Cede & Co., as nominee of The Depository Trust Company, New York, New York ("DTC"). So long as Cede & Co. is the registered owner of the 2016A Bonds, references herein to the owners or registered owners shall mean Cede & Co., and not the beneficial owners of the 2016A Bonds. See APPENDIX C – "BOOK-ENTRY SYSTEM" herein.

#### Redemption

Optional Redemption. The 2016A Bonds maturing prior to June 1, 2027 are not subject to call and redemption prior to maturity. The 2016A Bonds maturing on or after June 1, 2027 are subject to call and redemption prior to maturity, at the option of the City, as a whole or in part, on June 1, 2026 or on any date thereafter, in any order of maturity and by lot within a single maturity, from funds derived by the City from any legal source, at a redemption price equal to the principal amount of the 2016A Bonds called for redemption, together with interest accrued thereon to the date of redemption, without premium.

<sup>(1)</sup> Includes fees of Bond Counsel and Disclosure Counsel, the Fiscal Agent and the Escrow Agent, financial advisory fees, rating agencies' fees, printing costs and other miscellaneous expenses.

Mandatory Sinking Fund Redemption. The 2016A Bonds maturing on June 1, 20\_\_\_ shall be subject to mandatory sinking fund redemption in part at par, and by lot, from mandatory sinking account payments set aside in the Parity Obligation Payment Fund for such purpose, on June 1 of the years and in the amounts set forth below:

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oal Amount

Upon any purchase or optional redemption of the 2016A Bonds designated to be term bonds, an amount equal to the aggregate principal amount of 2016A Bonds so purchased or redeemed shall be credited towards a part or all of any one or more yearly mandatory sinking account payments required by the Fiscal Agent Agreement, as directed in writing by a certificate of the Director of Finance. The portion of any such mandatory sinking account payments remaining after the deduction of any such amounts credited toward the same (or the original amount of any such mandatory sinking account payments if no such amounts shall have been credited toward the same) shall constitute the unsatisfied balance of such mandatory sinking account payments for the purpose of the calculation of principal payments due on any future principal payment date. In such event, the City shall provide the Fiscal Agent with a revised sinking fund payment schedule.

Notice of Redemption. Notice of redemption shall be given by the Fiscal Agent, not less than thirty (30) nor more than sixty (60) days prior to the redemption date, (i) by mail to each Owner and the Securities Depositories and (ii) electronically to one or more of the Electronic Municipal Market Access database designated by the Municipal Securities Rulemaking Board at <a href="https://www.emma.msrb.org">www.emma.msrb.org</a>, or, in accordance with then current guidelines of the Securities and Exchange Commission, such other addresses and/or such other services providing information with respect to called bonds as the City may designate ("Information Services"). Notice of redemption to the Securities Depositories shall be given by telecopy, certified, registered or overnight mail or by such other method as may be requested by the Securities Depositories. Each notice of redemption shall state the date of such notice, the date of issue of the 2016A Bonds to which such notice relates, the redemption date, the Redemption Price, the place or places of redemption (including the name and appropriate address or addresses of the Fiscal Agent), the CUSIP number (if any) of the maturity or maturities, and, if less than all of any such maturity, the

distinctive certificate numbers of the 2016A Bonds of such maturity to be redeemed and, in the case of 2016A Bonds to be redeemed in part only, the respective portions of the principal amount thereof to be redeemed. Each such notice shall also state that on said date there will become due and payable on each of said 2016A Bonds the Redemption Price thereof or of said specified portion of the principal amount thereof in the case of a 2016A Bond to be redeemed in part only, together with interest accrued thereon to the date fixed for redemption, and that from and after such redemption date interest thereon shall cease to accrue, and shall require that such 2016A Bonds be then surrendered at the address or addresses of the Fiscal Agent specified in the redemption notice. Neither the City nor the Fiscal Agent shall have any responsibility for any defect in the CUSIP number that appears on any 2016A Bond or in any redemption notice with respect thereto, and any such redemption notice may contain a statement to the effect that CUSIP numbers have been assigned by an independent service for convenience of reference and that neither the City nor the Fiscal Agent shall be liable for any inaccuracy in such numbers.

In the event of an optional redemption of 2016A Bonds, if the City shall not have deposited or otherwise made available to the Fiscal Agent the money required for the payment of the redemption price of the 2016A Bonds to be redeemed at the time of the mailing of notice of redemption, such notice of redemption shall state that the redemption is expressly conditioned upon the timely deposit of sufficient funds therefor with the Fiscal Agent.

Failure by the Fiscal Agent to give notice to any one or more of the Information Services or Securities Depositories or failure of any Owner to receive notice or any defect in any such notice shall not affect the sufficiency of the proceedings for redemption.

Effect of Redemption. When notice of redemption has been given, and when the amount necessary for the redemption of the 2016A Bonds called for redemption (principal and premium) is set aside for that purpose, the 2016A Bonds designated for redemption shall become due and payable on the redemption date, and upon presentation and surrender of said 2016A Bonds, at the place specified in the notice of redemption, such 2016A Bonds shall be redeemed and paid at said redemption price, and no interest shall accrue on such 2016A Bonds called for redemption after the redemption date.

# SECURITY AND SOURCES OF PAYMENT FOR THE 2016A BONDS

#### General

The Bonds are an obligation payable only from the Net Income of the Electric System in the Light and Power Fund and amounts in the Parity Reserve Fund as provided in the Fiscal Agent Agreement. The 2016A Bonds are secured by a pledge of and lien upon Net Income of the Electric System on a parity with other obligations of the Electric System payable from Net Income of the Electric System and issued from time to time pursuant to the Fiscal Agent Agreement, including the Outstanding Bonds, and a pledge of amounts in the Parity Reserve Fund. See "— Parity Reserve Fund" and "— Additional Bonds" below.

"Net Income" is defined in the Fiscal Agent Agreement as Gross Revenues less Maintenance and Operating Expenses. "Gross Revenues" means all revenues (as defined in Section 54315 of the Government Code of California, which include all charges received for and all other income and receipts derived by PWP from the operation of the Electric System or arising from the Electric System) received by PWP from the services, facilities, energy and distribution of electric energy by PWP, including (i) income from investments, and (ii) for the purposes of determining compliance with the rate covenant in the Fiscal Agent Agreement only, the amounts on deposit in the Stranded Investment Reserve or in any other unrestricted funds of the Electric System designated by the City Council by resolution (or by approval of a budget of the Light and Power Fund providing for such transfer) and available for the purpose of paying Maintenance and Operating Expenses and/or debt service on the Bonds and/or any

Parity Obligations, but excepting therefrom (a) all reimbursement charges and deposits to secure service and (b) any charges collected by any person to amortize or otherwise relating to the payment of the uneconomic portion of costs associated with assets and obligations ("stranded costs") of the Electric System or of any joint powers agency in which the City participates which the City has dedicated to the payment of obligations other than the Bonds or any Parity Obligations then outstanding, the payments of which obligations will be applied to or pledged to or otherwise set aside for the reduction or retirement of outstanding obligations of the City or any joint powers agency in which the City participates relating to such "stranded costs" of the City or of any such joint powers agency to the extent such "stranded costs" are attributable to, or the responsibility of, the City.

"Maintenance and Operating Expenses" is defined in the Fiscal Agent Agreement to mean the amount required to pay the reasonable expenses of management, repair and other costs, of the nature of costs which have historically and customarily been accounted for as such, necessary to operate, maintain and preserve the Electric System in good repair and working order, including but not limited to, the cost of supply and transmission of electric energy under long-term contracts or otherwise and the expenses of conducting the Electric System, but excluding depreciation. "Maintenance and Operating Expenses" includes all amounts required to be paid by the City under contract with a joint powers agency for purchase of capacity, energy, transmission capability or any other commodities or services in connection with the foregoing, which contract requires payments by the City to be made thereunder to be treated as Maintenance and Operating Expenses.

Certain of the City's obligations to joint powers agencies, including obligations with respect to bonds issued by such joint powers agencies, are payable by the City from the Light and Power Fund, prior to the Bonds and all Parity Obligations, as Maintenance and Operating Expenses. See TABLE 9 – "OUTSTANDING DEBT OF JOINT POWERS AGENCIES" herein.

The General Fund of the City is not liable for the payment of any Bonds, any premium thereon upon redemption prior to maturity or their interest, nor is the credit or taxing power of the City pledged for the payment of any Bonds, any premium thereon upon redemption prior to maturity or their interest. The Owner of any Bond shall not compel the exercise of the taxing power by the City or the forfeiture of any of its property. The principal of and interest on any Bonds and any premiums upon the redemption of any thereof prior to maturity are not a debt of the City nor a legal or equitable pledge, charge, lien or encumbrance upon any of its property or upon any of its income, receipts or revenues, except the Net Income and other funds, security or assets which are pledged to the payment of the Bonds, interest thereon and any premiums upon redemption pursuant to the Fiscal Agent Agreement.

#### **Rate Covenant**

The City has covenanted in the Fiscal Agent Agreement to fix the rates for services furnished by the Electric System so as to provide Gross Revenues at least sufficient to pay, as the same become due, the principal of and interest on the Bonds, including the Outstanding Bonds and Parity Obligations and all other obligations and indebtedness payable from the Light and Power Fund (including the payment of any amounts owing to any provider of any surety bond, insurance policy or letter of credit with respect to the Bonds or any Parity Obligations, which amounts are payable from the Light and Power Fund) or from any fund derived therefrom, and also the necessary Maintenance and Operating Expenses, and shall be so fixed that the Net Income of the Electric System will be at least equal to 1.10 times the amount necessary to pay principal and interest (including mandatory sinking account redemption payments) as the same become due on all Bonds, including the Outstanding Bonds and Parity Obligations.

#### The Light and Power Fund

The Charter establishes the Light and Power Fund and permits the establishment by ordinance of such funds as the City Council may deem necessary to facilitate the issuance and sale of the bonds or for the protection or security of the owners of the bonds.

Under the provisions of the Charter, all moneys and property received by the City in payment for electrical energy and for any service rendered in connection therewith, or from the sale, lease and other disposition of any property acquired with funds or property of the Electric System must be deposited in the Light and Power Fund. The Charter further provides that disbursement may be made directly from the Light and Power Fund for the following purposes:

- (a) the necessary or proper expenses of conducting the Electric System, the operation and maintenance of its works, plants and distributing systems; the acquisition and improvement of facilities; and the publishing of reports;
- (b) the payment of interest and principal on bonds issued for the purposes of the Electric System;
- (c) the formation of surplus or reserves for the future needs of the Electric System and for unforeseen emergencies; and
  - (d) the repayment of advances made from other funds of the City.

The City Council shall transfer moneys from the Light and Power Fund not to exceed 16% of gross income received during the preceding Fiscal Year and not exceeding net income to the City's General Fund from the Light and Power Fund each year as follows:

- (1) Pursuant to Section 1407 of the Charter, for the payment of principal and interest on the City's general obligation bonds wholly payable in such Fiscal Year or for municipal improvements, an amount equal to eight percent (8%) of the gross income of the Electric System received during the immediately preceding Fiscal Year from the sale of electric energy at rates and charges fixed by ordinance. The amount so transferred shall not exceed one-half of the net income of the Electric System as shown by the books of account of the power utility, after payment of the maintenance and operating expenses of the Electric System, the expense of conducting the power utility, depreciation and the principal, interest and premiums, if any, upon the redemption thereof, of Electric System revenue bonds.
- (2) Pursuant to Section 1408 of the Charter, in addition to the amounts transferred pursuant to Section 1407, an amount equal to eight percent (8%) of the gross income of the Electric System received during the immediately preceding Fiscal Year from the sale of electric energy at rates and charges fixed by ordinance. The amount so transferred shall not exceed one-half of the net income (as described in subparagraph (1) above) of the Electric System. The amount so transferred may be expended for any municipal purpose.

The amount transferred from the Light and Power Fund to the City's General Fund annually may be adjusted by the City Council as described in subparagraphs (1) and (2) above. The following table sets out the transfers from the Light and Power Fund to the City's General Fund for the five Fiscal Years 2011-12 through 2015-16 and the amount budgeted for the Fiscal Year 2016-17.

# TABLE 2 TRANSFERS TO THE GENERAL FUND (Dollar Amounts in Thousands)

9/0	of Pr	ior	Fisca	l Year	

		, , , , , , , , , , , , , , , , , , , ,		
Fiscal Year	Transfer Amount	<b>Gross Income</b>		
2011-12	\$15,861	10.00%		
2012-13	14,093	9.00		
2013-14	14,544	9.00		
2014-15	15,975	10.00		
2015-16	17,185	10.00		
2016-17	17,936	10.00		

Source: Finance and Administration Business Unit of PWP.

In addition to the transfers authorized pursuant to Sections 1407 and 1408, the Charter provides that whenever the City Council determines that the surplus or reserve in the Light and Power Fund is in excess of reasonable future needs of the power utility, such excess may be appropriated for other municipal purposes, but only by ordinance approved by a two-thirds vote of the electors.

The Charter also provides that any surplus or reserves in the Light and Power Fund may be temporarily used for other municipal purposes if there are insufficient funds in the City Treasury to pay the current expenses of the general government of the City before the collection of taxes levied in any Fiscal Year. Should moneys from said fund be used pending the receipt of taxes, the amount so used shall be repaid not later than February 15 of the same Fiscal Year.

#### **Parity Reserve Fund**

The Fiscal Agent Agreement establishes the Parity Reserve Fund to be held by the City pursuant to the Charter. The Parity Reserve Fund is required to be maintained in an amount equal to the Reserve Fund Requirement so long as any Bonds or Parity Obligations secured by the Parity Reserve Fund remain Outstanding. Upon the issuance of the 2016A Bonds, there will be deposited in the Parity Reserve Fund from the proceeds of the 2016A Bonds an amount sufficient to cause the balance on deposit in or credited to the Parity Reserve Fund to be equal to the Reserve Fund Requirement (\$\_\_\_\_\_\_\_ upon delivery of the 2016A Bonds).

The term "Reserve Fund Requirement" is defined in the Fiscal Agent Agreement to mean, as of any date of determination and excluding therefrom any Parity Obligations for which no reserve fund is to be maintained or for which a separate reserve fund is to be maintained, the least of (a) ten percent (10%) of the initial offering price to the public of each Series of Bonds and Parity Obligations to be secured by the Parity Reserve Fund as determined under the Internal Revenue Code of 1986, as amended, or (b) the maximum Annual Debt Service on all Bonds and Parity Obligations to be secured by the Parity Reserve Fund, or (c) one hundred twenty-five percent (125%) of the Average Annual Debt Service on all Bonds and Parity Obligations to be secured by the Parity Reserve Fund, all as computed and determined by the City; provided that such requirement (or any portion thereof) may be provided by one or more policies of municipal bond insurance or surety bonds issued by a municipal bond insurer if the obligations insured by such insurer have ratings at the time of issuance of such policy equal to "Aaa" assigned by Moody's Investors Service ("Moody's") and "AAA" assigned by Standard & Poor's Ratings Services, a division of the McGraw-Hill Companies (and if such insurance company is rated by A.M. Best & Company, such insurance company is rated in the highest rating category by A.M. Best & Company) or by a letter of credit issued by a bank or other institution if the obligations issued by such bank or other institution have

ratings at the time of issuance of such letter of credit equal to "Aa2" or higher assigned by Moody's or "AA" or higher assigned by Standard & Poor's.

Pursuant to the Eighth Supplement to Electric Revenue Bond Fiscal Agent Agreement, dated as of November 1, 2013 (the "Eighth Supplement"), by and between the City and the Fiscal Agent, upon the earlier to occur of: (i) the first date upon which the City has filed with the Fiscal Agent the written consent of a majority of the aggregate principal amount of Bond Obligations of the Bonds Outstanding as of the effective date of the Eighth Supplement (but excluding the 2013A Bonds for the purposes of such calculation), or any consent in lieu thereof in accordance with the Fiscal Agent Agreement has been obtained, or (ii) the first date upon which all of the Outstanding 2008 Bonds, 2009 Bonds, 2010A Bonds and 2012A Bonds have been defeased, paid or discharged in accordance with their terms and shall no longer be Outstanding for purposes of the Fiscal Agent Agreement, the definition of "Reserve Fund Requirement" shall be amended to mean, as of any date of determination and excluding therefrom any Parity Obligations for which no reserve fund is to be maintained or for which a separate reserve fund is to be maintained, the least of (a) ten percent (10%) of the initial offering price to the public of each Series of Bonds and Parity Obligations to be secured by the Parity Reserve Fund as determined under the Code, or (b) the maximum Annual Debt Service on all Bonds and Parity Obligations to be secured by the Parity Reserve Fund, or (c) one hundred twenty-five percent (125%) of the Average Annual Debt Service on all Bonds and Parity Obligations to be secured by the Parity Reserve Fund, all as computed and determined by the City; provided, that such requirement (or any portion thereof) may be provided by the City delivering to the Fiscal Agent for credit to the Parity Reserve Fund one or more policies of municipal bond insurance or surety bonds issued by a municipal bond insurer if the obligations insured by such insurer have ratings at the time of issuance of such policy is in one of the two highest rating categories of Moody's, Standard & Poor's or Fitch or by a letter or credit issued by a bank or other institution if the obligations issued by such bank or other institution have ratings at the time of issuance of such letter of credit in one of the two highest rating categories of Moody's, Standard & Poor's or Fitch.

Amounts on deposit in or credited to the Parity Reserve Fund is pledged to, and shall be used solely for, the purpose of paying the principal of and interest on the Bonds, including the Outstanding Bonds, and Parity Obligations secured by the Parity Reserve Fund in the event that money in the Parity Obligation Payment Fund is insufficient therefor, and for that purpose money shall be transferred from the Parity Reserve Fund to the Parity Obligation Payment Fund. If and to the extent that the Parity Reserve Fund has been funded with a combination of cash and one or more surety bonds, insurance policies or letters of credit, except as provided below, all cash shall be used (including any investments purchased with such cash, which shall be liquidated and the proceeds thereof applied as required under the Fiscal Agent Agreement) prior to any drawing under a surety bond, insurance policy or letter of credit, and repayment of any amounts owing to any provider of such surety bond, insurance policy or letter of credit shall be made in accordance with the terms thereof prior to any replenishment of any such cash amounts. After first applying all cash and Investment Securities held in the Parity Reserve Fund to pay the principal of and interest on the Bonds and Parity Obligations secured by the Parity Reserve Fund when required, the City or the Fiscal Agent, as applicable shall, on a pro rata basis with respect to the portion of the Parity Reserve Fund held in the form of surety bonds, insurance policies and letters of credit (calculated by reference to the maximum amounts of such surety bonds, insurance policies and letters of credit), draw under each surety bond, insurance policy or letter of credit issued with respect to the Parity Reserve Fund, in a timely manner and pursuant to the terms of such surety bonds, insurance policy or letter of credit to the extent necessary in order to obtain sufficient funds on or prior to the date such funds are needed to pay the Bonds and Parity Obligations secured by the Parity Reserve Fund when due. Notwithstanding anything in the Fiscal Agent Agreement to the contrary, in the event a surety bond, insurance policy, letter of credit or cash deposit has been provided with respect to a specified Series of Bonds only, the Fiscal Agent shall draw on such insurance policy, surety bond or letter of credit in the amount equal to the pro rata amount of deficiency in the Parity Obligation Payment Fund allocable to such Series of Bonds at the same time that the Fiscal Agent applies any cash or Investment Securities held in the Parity Reserve Fund

to the payment of the principal of and interest on any Bonds or Parity Obligations not so secured by such insurance policy, surety bond or letter of credit or with respect to which such cash deposit was not made. All amounts due and owing any provider of any such surety bond, insurance policy or letter of credit shall be paid in accordance therewith prior to any discharge of the Fiscal Agent Agreement pursuant to the defeasance of the Bonds. Amounts on deposit in the Parity Reserve Fund in excess of the Reserve Fund Requirement shall be withdrawn from the Parity Reserve Fund and transferred to the Light and Power Fund. Whenever money is transferred from the Parity Reserve Fund an equal amount of money shall be transferred to the Parity Reserve Fund from the first available money in the Light and Power Fund if required to bring the balance on deposit in the Parity Reserve Fund up to the Reserve Fund Requirement.

#### **Additional Bonds**

Upon the issuance of the 2016A Bonds, in addition to the 2016A Bonds, the City will have of parity indebtedness outstanding, consisting of the Outstanding Bonds.

The Fiscal Agent Agreement provides that (except for bonds issued under Article XIV of the Charter, or otherwise, to refund Bonds or Parity Obligations, payable from the Light and Power Fund issued under Article XIV of the Charter which may be issued at any time without meeting the test set forth below) no additional indebtedness of the City payable out of the Light and Power Fund on a parity with the Bonds and any Parity Obligations (collectively referred to in the Fiscal Agent Agreement as "parity indebtedness") shall be created or incurred unless:

- (1) The Net Income during any twelve (12) consecutive calendar months out of the immediately preceding eighteen (18) calendar month period, plus, at the option of the City, any or all of the items designated in paragraphs (a) and (b) below, shall have amounted to at least equal to one hundred ten percent (110%) of the aggregate of the (i) amount of interest to accrue and (ii) payments of principal required to be made in that one of the Fiscal Years ending thereafter in which such aggregate will be the greatest on all Bonds and such Parity Obligations to be Outstanding immediately subsequent to the incurring of such additional parity indebtedness, as certified by a Certificate of the City; or
- (2) The projected Net Income during the first complete Fiscal Year following issuance of such parity indebtedness when the improvements to the Electric System financed with the proceeds of the parity indebtedness shall be in operation, plus, at the option of the City, any or all of the items designated in paragraphs (a) and (b) below, shall have amounted to at least one hundred ten percent (110%) of the aggregate of the (i) amount of interest to accrue and (ii) payments of principal required to be made in that one of the Fiscal Years ending thereafter in which such aggregate will be the greatest on all Bonds and such Parity Obligations to be Outstanding immediately subsequent to the incurring of such additional parity indebtedness, as certified by a Certificate of the City.

The items any or all of which may be added to such Net Income for the purpose of meeting either of the requirements set forth in clauses (1) or (2) above are the following:

(a) An allowance for any increase in Net Income (including, without limitation, a reduction in Maintenance and Operating Expenses) which may arise from any additions to and extensions and improvements of the Electric System to be made or acquired with the proceeds of such additional parity indebtedness or with the proceeds of bonds previously issued, and also for Net Income from any such additions, extensions or improvements which have been made or acquired with moneys from any source but which, during all or any part of such Fiscal Year or such twelve consecutive calendar month period out of the immediately preceding eighteen calendar month period, were not in service, all in an amount equal to the estimated additional average annual Net Income (or estimated average annual reduction in Maintenance and Operating Expenses) to be derived from such additions, extensions or improvements for

the first thirty-six month period in which each addition, extension or improvement is respectively to be in operation, all as shown by the Certificate of the City.

(b) An allowance for earnings arising from any increase in the charges made for the use of the Electric System which has become effective prior to the incurring of such additional parity indebtedness but which, during all or any part of such Fiscal Year or such twelve consecutive calendar month period out of the immediately preceding eighteen calendar month period, was not in effect, in an amount equal to the amount by which the Net Income would have been increased if such increase in charges had been in effect during the whole of such Fiscal Year or such twelve consecutive calendar month period out of the immediately preceding eighteen (18) calendar month period, as shown by the Certificate of the City.

Nothing in the Fiscal Agent Agreement limits the ability of the City to issue or incur obligations which are junior or subordinate to the payment of the principal, premium, interest and reserve fund requirements for the Bonds and all Parity Obligations and which subordinated obligations are payable as to principal, premium, interest and reserve fund requirements, if any, only out of Net Income after the prior payment of all amounts then due and required to be paid or set aside under the Fiscal Agent Agreement from Net Income for principal, premium, interest and reserve fund requirements for the Bonds and all Parity Obligations, as the same become due and payable and at the times and in the manner as required in the Fiscal Agent Agreement or any documents providing for the issuance or incurrence of Parity Obligations.

#### **Investment of Funds**

All moneys held in the funds and accounts established pursuant to the Fiscal Agent Agreement will be invested solely in Investment Securities, which include:

- (i) any permissible investments of funds of the City as stated in its current investment policy and to the extent then permitted by law;
- (ii) a repurchase agreement with a state or nationally chartered bank or trust company or a national banking association or government bond dealer reporting to, trading with, and recognized as a primary dealer by the Federal Reserve Bank of New York, provided that the following conditions are satisfied:
  - (1) The agreement is secured by any direct obligations of the United States of America (including obligations issued or held in book-entry form on the books of the United States Department of the Treasury) and obligations, the payment and principal of and interest on which are directly or indirectly guaranteed by the United States of America;
  - (2) The underlying securities are required by the repurchase agreement to be held by a bank, trust company, or primary dealer having a combined capital and surplus of at least one hundred million dollars and which is independent of the issuer of the repurchase agreement; and
  - (3) The underlying securities are maintained at a market value, as determined on a market-to-market basis calculated at least weekly, of not less than 104% of the amount so invested; and
- (iii) an investment agreement or guaranteed investment contract with, or guaranteed by, a financial institution the long-term unsecured obligations of which are rated in the top two rating categories by Moody's and Standard & Poor's at the time of initial investment.

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Investment Securities purchased as an investment of moneys in the Parity Reserve Fund are currently limited to maturities not extending beyond five years. Pursuant to the Eighth Supplement, upon the earlier to occur of: (i) the first date upon which the City has filed with the Fiscal Agent the written consent of a majority of the aggregate principal amount of Bond Obligations of the Bonds Outstanding as of the effective date of the Eighth Supplement (but excluding the 2013A Bonds for the purposes of such calculation), or any consent in lieu thereof in accordance with the Fiscal Agent Agreement has been obtained, or (ii) the first date upon which all of the Outstanding 2008 Bonds, 2009 Bonds, 2010A Bonds and 2012A Bonds have been defeased, paid or discharged in accordance with their terms and shall no longer be Outstanding for purposes of the Fiscal Agent Agreement, Investment Securities purchased as an investment of moneys in the Parity Reserve Fund may not have maturities extending beyond 10 years.

For a discussion of the City's current investment policy, practices and investment portfolio see "CITY FINANCIAL INFORMATION – Investment Practices," "– Pooled Investment Portfolio" and "– The Investment Policy" in APPENDIX A – "THE CITY OF PASADENA." The City's investment policy may be changed at any time by the City Council (subject to the State law provisions relating to authorized investments). There can be no assurance, therefore, that the State law and/or the Investment Policy will not be amended in the future to allow for investments which are currently not permitted under State law or the Investment Policy or that the objectives of the City with respect to investments or its investment holdings at any point in time will not change.

#### **Limitations on Remedies**

The ability of the City to comply with its covenants under the Fiscal Agent Agreement and to generate Net Income of the Electric System sufficient to pay principal of and interest on the 2016A Bonds may be adversely affected by actions and events outside of the control of the City. Furthermore, any remedies available to the owners of the 2016A Bonds upon the occurrence of an event of default are in many respects dependent upon judicial actions which are often subject to discretion and delay and could prove both expensive and time consuming to obtain. The rights of the Owners of the 2016A Bonds are subject to the limitations on legal remedies against cities and other public agencies in the State. Additionally, enforceability of the rights and remedies of the Owners of the 2016A Bonds, and the obligations incurred by the City, may become subject to the following: the federal Bankruptcy Code and applicable bankruptcy, insolvency, reorganization, moratorium or similar laws relating to or affecting the enforcement of creditor's rights generally, now or hereafter in effect; equity principles which may limit the specific enforcement under State law of certain remedies; the exercise by the United States of America of the powers delegated to it by the Constitution and the reasonable and necessary exercise, in certain exceptional situations, of the police powers inherent in the sovereignty of the State and its governmental bodies in the interest of serving a significant and legitimate public purpose. Bankruptcy proceedings, or the exercise of powers by the federal or State government, if initiated, could subject the Owners of the 2016A Bonds to judicial discretion and interpretation of their rights in bankruptcy or otherwise, and consequently may entail risks of delay, limitation or modification of their rights.

#### PASADENA WATER AND POWER

#### **Organization**

The City is a charter city of the State. Under the provisions of the California Constitution and Article XIV of the Charter, the City owns and operates both water and electric public utilities for the benefit of its residential and business community. PWP is under the management and control of the City Manager, subject to the powers and duties vested in the City Council, and is supervised by the General Manager who is responsible for design, construction, maintenance and operation of the water and electric utilities. PWP is responsible for the Electric System and the City's water system (the "Water System").

In addition to the Electric System and the Water System divisions, PWP is organized into five separate business units. This structure allows for a higher level of accountability as well as the creation of individual cost centers and profit centers. This information is used for tracking costs and supplying detailed information in rate design decisions. These business units are briefly described as follows:

General Manager's Office-Customer Relations & Legislative Business Unit — This unit is part of the General Manager's Office and is responsible for customer relations, regulatory affairs, and strategic planning and long-term resources. This unit is also responsible for environmental and legislative matters impacting the utility.

Finance, Administration and Customer Service Business Unit – This unit develops and executes PWP's overall financial strategy and ensures its financial integrity. This unit is responsible for the financial resources of PWP and for providing relevant information to the operating units for decision making purposes. This unit plans and oversees the financial aspects, administrative support functions and all cross-functional operations and systems for PWP. The responsibilities of this unit include the operating budget, capital budget and financing, financial analysis and planning, financial management, administration, billing, call center, meter reading and customer care services, risk management, information systems and technology and materials management.

**Power Supply Business Unit** – This unit is responsible for effectively managing PWP's energy portfolio, including strategic long-term resource power generation, long-term power contracts, short-term electric energy and ancillary services transactions and natural gas procurement to provide competitively-priced energy to PWP's electric customers. This unit is also responsible for energy scheduling to ensure reliable delivery of electricity.

**Power Delivery Business Unit** – This unit is responsible for the design, construction, operation and maintenance of the local power distribution system to provide the safe and reliable delivery of electricity, load dispatch operations and is responsible for implementing the Power Distribution System Master Plan described above.

Water Delivery Business Unit — This unit is responsible for the procurement, production and delivery of water as well as the planning, design and construction of the local water distribution system. This unit also operates and maintains the local water supply resources and distribution system.

#### Management

The following are biographical summaries of PWP's senior management:

GURCHARAN BAWA, Interim General Manager overseeing PWP's operation. Prior to the current position, Mr. Bawa was the Assistant General Manager for Power Supply. Mr. Bawa has been with PWP for 23 years working in the Power Production field managing regulatory and environmental issues. He was responsible for evaluating renewable energy resources and incorporating these assets into PWP's overall energy resource portfolio. He was also responsible for managing long term energy resources and contracts. He received his Mechanical Engineering degree from S.V.R. College of Engineering and Technology, Surat, India. He is a licensed Professional Engineer in Mechanical and Civil Engineering in the State of California.

ERIC KLINKNER, Assistant General Manager & Chief Deputy. Mr. Klinkner has been with PWP since 1995. He served as PWP's Manager of Power Resources and Business Unit Director for Power Supply and was appointed to his present position in August 2004. In his current position, he is responsible for regulatory affairs, strategic planning and long-term resource and environmental issues. Mr. Klinkner is also responsible for legislative issues impacting PWP and oversees the customer

relations, marketing and customer communications functions. Mr. Klinkner previously worked at the Los Angeles Department of Water and Power ("LADWP") where he started in power resource planning. He has a master's degree in mechanical engineering from California State University-Northridge and is a state registered professional engineer.

SHARI M. THOMAS, Assistant General Manager for Finance, Administration and Customer Service. Ms. Thomas recently completed an appointment as the Interim General Manager of PWP. Ms. Thomas joined PWP in January 2006. She began her career with the City of Pasadena in 2002 as the Deputy Director of Finance. She previously worked for the City of Riverside for nearly 15 years in various financial positions. Ms. Thomas is currently responsible for financial planning and budgeting, cost of service analysis and rate setting, information technology for PWP and customer service. She is also responsible for risk management and settlements functions related to energy transactions and the materials handling and inventory management activities. She completed her bachelor of science degree with majors in Accounting and Finance in Minnesota and has also completed the University of Wisconsin's Advanced Governmental Finance Institute.

JEFF BARBER, Interim Assistant General Manager for Power Delivery. Mr. Barber joined PWP in May 1986 as a Lineman. He is currently responsible for managing the design and construction of capital improvement and maintenance programs in Power Distribution. In his 37 years of utility experience, he has worked in the capacity of Line Crew Foreman, Power Distribution Section Supervisor, Power Distribution Superintendent and Power Delivery Operations Manager. Mr. Barber has a Liberal Arts degree in Business Management.

SHAN KWAN, Assistant General Manager for Water Delivery. Mr. Kwan has been with PWP since 1985. Prior to his appointment as Assistant General Manager for Water Delivery, Mr. Kwan was a Principal Engineer in the Water Engineering Division. He worked in water distribution, plant and facilities, quality and supply and resource planning. Prior to his employment with PWP, he was a Construction Inspector for Caltrans. Mr. Kwan holds a bachelor of science degree in Civil Engineering (BSCE) from the University of California at Los Angeles and a master's degree in Business Administration (MBA) from Claremont Graduate University.

#### **Employees**

For Fiscal Year 2015-16, 433 City employees were assigned to PWP, including 309 full-time equivalent employees for the Electric System. The Electric System employees represent approximately 15% of the full-time City employees. Most Electric System employees are represented either by the International Brotherhood of Electrical Workers, the International Union of Operating Engineers, the American Federation of State, County and Municipal Employees, the Laborers' International Union of North America or the Pasadena Management Association in all matters pertaining to wages, benefits and working conditions. The labor agreement with the International Brotherhood of Electrical Works has expired and is being negotiated. The other labor agreements will expire through 2019. The City has no history of work interruption by employees maintaining the Electric System. See APPENDIX A – "THE CITY OF PASADENA – Employee Relations."

The Electric System's permanent employees are all covered by the California Public Employees Retirement System ("CalPERS") with respect to pension benefits. CalPERS is an agent multiple-employer plan public employee retirement system which acts as a common investment and administrative agent for participating public employers within the State of California. The plan provides retirement and disability benefits, annual cost-of-living adjustments and death benefits to plan members and their beneficiaries. CalPERS issues a separate publicly available financial report that includes financial statements and required supplemental information of participating public entities within the State of

California. Copies of the CalPERS annual financial report may be obtained from the CalPERS Executive Office, Lincoln Plaza Complex, 400 Q Street, Sacramento, California 95811 or at www.calpers.ca.gov.

The law relating to CalPERS requires that the employer contribution rates for all public employers be determined on an annual basis by the actuary and shall be effective on the July 1 following notice of a change in the rate. Funding contribution for the City's Miscellaneous Plan ("Plan") (which include all Electric System employees) is determined annually on an actuarial basis as of June 30 by CalPERS. The actuarially determined rate is the estimated amount necessary to finance the costs of benefits earned by employees during the year, with an additional amount to finance any unfunded accrued liability. The City is required to contribute the difference between the actuarially determined rate and the contribution rate of employees.

Effective with Fiscal Year 2014-15 financial statements, GASB 27 has been replaced with GASB 68 - Accounting and Financial Reporting for Pensions, with new pension reporting requirement for employers. The City's net pension liability for the Plan is measured as the total pension liability, less the pension plan's fiduciary net position. The net pension liability of the Plan is measured as of June 30, 2014, using an annual actuarial valuation as of June 30, 2013 rolled forward to June 30, 2014 using standard update procedures. The actuarial methods and assumptions used to determine the total pension liability include entry age normal cost method in accordance with the requirements of GASB 68, an inflation rate of 2.75%, salary increase by entry age and service, an investment rate of return (net of administrative expenses) of 7.50%, and a mortality rate table derived using CalPERS' membership data for all funds. The discount rate used to measure the total pension liability was 7.50%. Based on CalPERS stress testing, it was determined that the discount rate is adequate and the use of the municipal bond rate calculation is not necessary. All other actuarial assumptions used in the June 30, 2013 valuation were based on the results of an actuarial experience study for the period from 1997 to 2011, including updates to salary increase, mortality and retirement rates.

Under GASB 68, gains and losses related to changes in total pension liability and fiduciary net position are recognized in pension expense systematically over time. The first amortized amounts are recognized in pension expense for the year the gain or loss occurs. The remaining amounts are categorized as deferred outflows and deferred inflows of resources related to pensions and are to be recognized in future pension expense. Difference between projected and actual earnings uses five year straight-line amortization while all other amounts use straight-line basis over the expected average remaining service lives ("EARSL") of all members that are provided with benefits (active, inactive, and retired) as of the beginning of the measurement period. The EARSL for the 2013-14 measurement periods is 3.4 years for the Plan.

As of the start of the measurement period (July 1, 2013), the net pension liability of the City's Miscellaneous Plan is \$285,716,924. For the measurement period ending June 30, 2014, the City incurred a pension expense of \$14,801,182 for the Plan and the net pension liability balance is \$231,069,163 which is the total pension liability of \$970,629,661 minus the plan fiduciary net position of \$739,560,498. The deferred inflows of the resources related to the Plan at June 30, 2014 is \$50,896,904.

The Electric System's contributions represent a pro rata share of the City's contribution, including the employees' contribution that is paid by the Light and Power Fund, which is based on CalPERS' actuarial determination as of July 1 of the current Fiscal Year. CalPERS does not provide data to participating organizations in such a manner so as to facilitate separate disclosure for the Light and Power Fund's share of the actuarial computed pension benefit obligation, the plan's net assets available for benefit obligation and the plan's net assets available for benefits. The Electric System employees represent approximately 15% of the full-time City employees.

Other than the pension benefits from the applicable retirement system, the City does not provide medical or other post-retirement benefits to its employees beyond the option to continue receiving health insurance benefits at the City's monthly rates, paid by the retired employees.

The City provides a subsidy to retirees of the City who are members of CalPERS or the Pasadena Fire and Police Pension System. Benefit provisions are established and amended through negotiations between the City and the respective unions. Two different levels of subsidy toward the purchase of medical insurance from CalPERS under the Public Employees' Medical and Hospital Care Act are offered.

The City's current contribution requirements have been established at the individual retiree levels of \$125.00 or \$62.50 per month depending on bargaining unit membership and policy enacted by CalPERS pursuant to State Law. These minimum requirements are established by CalPERS and adjusted annually. The prior contribution requirements were \$122.00 or \$54.60 per month depending on the bargaining unit or the unrepresented group of which the employee was a member. The City has historically funded these post-retirement health care benefits on a "pay-as-you-go" basis. For the Fiscal Year ended June 30, 2015, the City's contributions totaled \$623,000 (representing 22.80% of the annual other post-employment benefit ("OPEB") cost (expense)). The City's annual OPEB cost (expense) is calculated based on the annual required contribution ("ARC") of the employer, an amount actuarially determined in accordance with the parameters of GASB Statement 45. The ARC represents a level of funding that, if paid on an ongoing basis, is projected to cover normal cost each year and to amortize any unfunded actuarial liabilities (or funding excess) over a period not to exceed thirty years. The Electric System is allocated its portion of the required contributions. As of June 30, 2015, the City's unfunded actuarial accrued OPEB liability for the citywide post-retirement healthcare benefits (including the portion allocable to Electric System employees) was approximately \$28,619,000, of which about \$4,292,850 or 15 percent represent the share of Light and Power Fund.

See APPENDIX A – "THE CITY OF PASADENA – Employee Relations" and – Post-Retirement Medical Benefits." Further information regarding the City's participation in CalPERS and OPEB may also be found in the City's Comprehensive Annual Financial Report.

# THE ELECTRIC SYSTEM OF PWP

#### General

The Electric System of PWP began generating its own electric energy and distributing power in 1906. Electric service was previously supplied by Edison Electric Company, predecessor to Southern California Edison Company ("SCE"). PWP has continued to expand its electric distribution system to meet the demands of its residential, commercial, industrial and public sector customers. The Electric System provides service to virtually all of the electric customers within the limits of the City. For the Fiscal Year ended June 30, 2016, the customer base was comprised of 56,674 residential customers, 8,629 commercial and industrial customers, 5 street lighting and traffic signals customers and 10 wholesale customers. The service area is approximately 23 square miles, with a current estimated population of approximately 142,000.

The Electric System includes generation, transmission and distribution facilities. The City also purchases power and transmission service mainly from Intermountain Power Agency ("IPA") and Southern California Public Power Authority ("SCPPA"). The Electric System's current resource mix includes local steam and gas turbines (Broadway and Glenarm), small hydroelectric (Azusa Hydroelectric) and long-term purchase contracts (remote generation) from a variety of sources including hydroelectric, coal and nuclear generating units and a variety of renewable energy resources including wind, solar, geothermal and biogas projects. Although these resources are more than sufficient to meet

the City's loads, a portion of the Electric System's energy supply is purchased when it is more economical, on the wholesale hourly, daily and month-ahead spot markets. See "— Purchased Power — Bilateral (Spot Market) Energy Purchases."

Legislation affecting the electric utility industry is routinely introduced or enacted by the federal government and the California Legislature. In recent years, the enacted bills primarily regulate greenhouse gas emissions and provide for greater investment in energy-efficiency and environmentally friendly generation alternatives through more stringent renewable resource portfolio standards. PWP's generation and transmission operating and long-term plans are developed and executed in accordance with existing law and in response to pending legislation. See "DEVELOPMENTS IN THE CALIFORNIA ENERGY MARKETS" and "OTHER FACTORS AFFECTING THE ELECTRIC UTILITY INDUSTRY."

# **Energy Integrated Resource Plan**

On June 22, 2015, the City Council approved the 2015 Update to the Energy Integrated Resource Plan for PWP, a 20-year strategic power resource plan that establishes broad objectives and an overall direction for future policy, program and procurement decisions with respect to PWP's power supply resource portfolio. The 2015 Energy Integrated Resource Plan serves as a 20-year blueprint for PWP to deliver reliable, environmentally responsible electricity service at competitive rates. The 2015 Energy Integrated Resource Plan establishes PWP's preferred resource mix for satisfying its electric power requirements, consisting of energy efficiency, demand side management resources, renewable resources and other clean and efficient supply side resources as needed to ensure reliability over the 20-year planning horizon. Implementation of the identified preferred resource mix would include: (i) eliminating PWP's use of existing coal-based energy by 2027 in order to achieve PWP's greenhouse gas emissions reduction target of 60% from 1990 levels by 2030, (ii) replacing the last aging steam generating unit at the City's Broadway generating facility with a comparably sized, more efficient, new combined cycle plant, (iii) upgrading the City's existing Glenarm generating units in order to extend their operating lives, (iv) implementation of additional energy efficiency and load management programs, (v) increasing PWP's renewable resources consistent with the 40% by 2020 RPS adopted by the City Council and the 50% by 2030 RPS adopted by the State of California (see "- Renewable Resources - General" below), (vi) increasing PWP's customer-owned photovoltaic installations, (vii) establishing a feed-in tariff program in order to procure additional qualifying renewable resources located within the City and (viii) establishing a community solar project. The 2015 Energy Integrated Resource Plan is based on certain assumptions and forecasts and therefore is expected to evolve as it is implemented over the plan's 20-year time frame.

## Valuation of Electric System Facilities

The following table sets forth the valuation of the Electric System facilities during the five Fiscal Years shown.

# TABLE 3 ELECTRIC SYSTEM FACILITIES

	Fiscal Year Ended June 30,				
·	2012	2013	2014 <sup>(1)</sup>	2015	2016 <sup>(2)</sup>
Utility Plant	\$587,915,661	\$597,906,019	\$614,036,657	\$649,295,067	\$670,940,091
Less Accumulated Depreciation	(304,465,739)	(322,006,630)	(338,246,544)	(351,444,505)	(370,287,789)
Construction in Progress	<u>73,525,875</u>	98,392,282	<u>143,121,903</u>	<u> 181,012,915</u>	213,072,676
Total Facilities <sup>(3)</sup>	\$356,975,797	\$374,291,671	\$418,912,016	\$478,863,477	\$513,724,978

<sup>(1)</sup> Restated.

#### Insurance

The insurable property and facilities of the Electric System are covered under the City's general insurance policies. Additional liability coverage for the City's generation facilities is provided by a separate Power Plant Boiler and Machinery Policy. The City does not carry earthquake insurance on the property and facilities of the Electric System. For additional information on the City's insurance, see APPENDIX A – "THE CITY OF PASADENA – Insurance."

#### **Power Supply Resources**

The Electric System's resource mix includes local steam and gas turbines, a hydroelectric plant and long-term purchase contracts from a variety of sources including hydroelectric, gas-fired, coal and nuclear generating units and a variety of renewable energy resources including wind, solar, geothermal and biogas projects. In recent years, PWP has developed its resource mix in response to regional power shortages, energy price volatility, and environmental regulations, including stricter emissions control requirements adopted by the South Coast Air Quality Management District. The Electric System increased its power production for several consecutive years primarily as a result of increased energy sales to the California Independent System Operator ("CAISO") when called upon to meet regional demand.

In Fiscal Year 2015-16, PWP generated approximately 48.5 gigawatt hours ("GWh") from its local resources and purchased approximately 1,099 GWh from long-term contracts and the spot market. PWP's total supply decreased by approximately 0.8% in Fiscal Year 2015-16 compared to the prior year. The system peak demand in Fiscal Year 2015-16 was 307 MW.

<sup>(2)</sup> Fiscal Year ended June 30, 2016 is based on unaudited information.

<sup>(3)</sup> Increases in Total Facilities for Fiscal Years ended June 30, 2014 through June 30, 2016 are mainly due to investments in Glenarm Repowering Project, Power Distribution Capacity and Reliability Program, and 4 kV Distribution System Conversion Project.

Source: Finance and Administration Business Unit of PWP.

The following table sets forth the total power generated and purchased during the five Fiscal Years shown.

TABLE 4 TOTAL POWER GENERATED AND PURCHASED (MWh)

,	Fiscal Year Ended June 30,				
	2012	2013	2014	2015	2016 <sup>(1)</sup>
Generated <sup>(2)</sup>	147,749	168,470	75,838	83,296	48,489
Purchased <sup>(3)</sup>	1,248,368	1,215,779	1,127,617	1,101,285	1,099,525
Total Supply Wholesale Sales <sup>(3)</sup>	1,396,117 (199,045)	1,384,249 (185,361)	1,203,455 (36,811)	1,184,581 (30,969)	1,148,014 (310)
Net System Load System Peak Demand (MW)	1,196,072 307	1,198,888	1,166,644 299	1,153,612 316	1,147,704 307

Fiscal Year ended June 30, 2016 is based on unaudited information.

Reduced local generation in Fiscal Years ended June 30, 2014 through June 30, 2016 was due to lower wholesale energy sales and market

Began netting purchased power and sales with CAISO in Fiscal Year ended June 30, 2014 which resulted in lower purchased power and wholesale sales. Also, energy exchange contract with Bonneville Power Administration ("BPA") expired in April 2015, which further reduced wholesale sales in the Fiscal Year ended June 30, 2016.

Source: Finance and Administration Business Unit of PWP.

The following table sets forth information concerning the City's power supply resources and the energy supplied by each resource during the Fiscal Year ended June 30, 2016.

TABLE 5 POWER SUPPLY RESOURCES

Source	Actual Energy (GWh) <sup>(1)</sup>	Percent of Total Energy
Source Pasadena-Owned Generating Facilities:		
	24.3	2.12%
Steam (Broadway)	24.2	2.11
Combustion Turbines (Glenarm)	24.2	2.11
Joint Power Agency/Remote Ownership Interests:		
Intermountain Power Project (IPP)	412.0	35.89
Palo Verde Nuclear Gen. Station (SCPPA)	84.1	7.33
Magnolia Power Project (SCPPA)	58.2	5.07
Magnolla Power Floject (SCITA)	42.4	3.69
Magnolia Power Project (SCPPA) - Green BioMethane		15.78
Renewable Resources	181.1	13.70
Purchased Power <sup>(2)</sup>		
Market	272.8	23.76
Hoover Project	48.9	4.26
•	1,148.0	100.00%
Total	(0.30)	(0.03)
Wholesale Sales	<u>`</u>	99.97%
Net System Load	1,147.7	99.9770

Preliminary data; gigawatt hours provided during the twelve-month period ended June 30, 2016.

# **City-Owned Generating Facilities**

Currently, PWP owns and operates one natural gas steam generating unit (Broadway 3) at the Broadway facility, and four gas-fired combustion turbines ("GTs") located at the adjacent Glenarm facility. In addition to the Broadway 3 and Glenarm facilities, the City owns the Azusa Hydroelectric

Entitlements, firm allocations and contract amounts. Source: Finance and Administration Business Unit of PWP.

Plant, which is interconnected to the SCE power system. Each of these resources is more fully described below.

Broadway Power Plant. The Broadway Power Plant consists of one steam generating unit at the facility, Broadway 3. This unit is connected to the CAISO control center via remote intelligent gateway and is certified to provide spin, non-spin, and replacement reserves. The current Broadway 3 generator is approximately 51 years of age and will be retired by the end of 2016 when replacement generation, the Repowering Project, is placed into service. See "Repowering Project" below.

Glenarm Power Plant. The Glenarm Power Plant includes four natural gas-fired combustion turbine units. Two of the units, designated as Glenarm 1 and 2 generators ("GT1" and "GT2"), are identical 22 MW (rated net CAISO output) gas-fired combustion turbine units built in 1975. Historically, operation of these units has been limited to high peak or emergency conditions.

In October 2012, the GT2 power turbine was severely damaged by mechanical failure and a subsequent fire. The incident destroyed the power turbine and severely damaged the enclosure. There were no injuries to PWP personnel.

Investigations and inspections of GT2 have been completed and a final determination has not been reached whether the unit will be repaired or replaced. An agreement has been reached with the insurance provider(s) that provided a reimbursement of approximately \$7.9 million to PWP for the "Actual Cash Value" (replacement value less depreciation) of the damaged unit. PWP is conducting a feasibility study regarding options to repair or replace GT2.

The Glenarm Power Plant also includes two simple-cycle combustion turbines located on PWP's Glenarm property (adjacent to Broadway) and designated as Gas Turbine Unit 3 ("GT3") with a net rated CAISO output of 44.83 MW and Gas Turbine Unit 4 ("GT4") with a net rated CAISO output of 42.42 MW. These units are primarily scheduled to economically meet PWP's intermediate and peaking loads. Excess capacity, operating under the CAISO Participating Generator Agreement, provides ancillary services and energy to the CAISO market. See "– Inter-Utility Sales Transactions – CAISO-Participating Generator Agreement." When imports are limited due to tie-line outages, or when loads reach about 257 MW, at least one unit is put on line for reliability purposes. Due to their relatively high cost of generation, utilization of these units is typically limited to periods when energy and ancillary service prices are economically favorable to support such utilization. The value provided by these units is in their "optionality." "Optionality" refers to the ability to quickly adjust operating levels to changing market and load conditions.

**Repowering Project**. As noted above, a key feature of the 2015 Energy Integrated Resource Plan is the replacement of Broadway 3 with the Glenarm 5 Repowering Project (the "Repowering Project"). The Repowering Project will be located adjacent to GT3 and GT4 on the site of the City's existing Glenarm Power Plant.

The objectives of the Repowering Project include the following:

- Maintain the City's ability to generate power locally when needed, to ensure sufficient power supply, and in order to make up for any shortfall due to import or distribution system constraints;
- Replace the 51-year old steam generating Broadway 3 unit that has achieved and exceeded its design life and provide for mandated capacity (i.e., guarantee of availability) to generate power when required by CAISO;

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- Provide a means to operate the Electric System efficiently and reliably by managing excessive generation and compensate for the intermittency of renewable resources; and
- Balance reliable electricity service and competitive and stable rates with consideration of environmental concerns, and reduced dependence on coal power.

The Repowering Project consists of a new combined cycle natural gas-fired generating plant with a full load rating of 71 MW (gross) and appurtenant facilities located in the City. The plant consists of a combustion turbine, once-thru steam generator capable of running dry, a selective catalytic reduction pollution control system, a steam turbine, two electric generators, control and administrative facilities, wet mechanical draft cooling towers, electric driven gas compressors, and a three-winding step-up transformer. The new unit will use the existing gas-insulated breaker of the existing steam unit after it is retired. The gas turbine was manufactured by General Electric, the steam turbine by Shin-Nippon, and the once-thru steam generator by Innovated Steam Technology. The Repowering Project utilizes water injection with selective catalytic reduction for NOx control and an oxidizing catalyst for carbon monoxide control as required by SCAQMD in order to meet the best available control technology/lowest achievable emission requirements. The air permit received for the Repowering Project allows the unit to operate at 8,760 hours per year with 750 starts per year, 155 starts per month, and 5 starts per day. The existing Broadway 3 unit will be retired once the Repowering Project is commercially operable. Construction of the Repowering Project commenced in June 2014 and commercial operation is expected by late 2016.

The Repowering Project will be fueled entirely by natural gas. The Southern California Gas Company provides transportation of natural gas to the generating plant site. The Repowering Project will utilize the existing gas metering station located near the existing facility for its fuel supply.

PWP's Water Division is the source of water supply for the Repowering Project. Water infrastructure serving the site consists of water mains located in the adjacent streets. Currently, there is a twelve-inch PWP-owned water main on East State Street, Fair Oaks Avenue and Glenarm Street. The existing water supply infrastructure provides water supplies for plant operation, domestic uses and fire-fighting purposes.

Wastewater from the Repowering Project will be discharged to a local sewer line for conveyance to the Los Angeles County Sanitation District's ("LACSD") 16-inch Arroyo Seco Trunk Sewer, located in Garfield Avenue at the Pasadena Freeway. The wastewater will be treated at the LACSD Whittier Narrows Water Reclamation Plant located near the City of El Monte, or the Los Coyotes Water Reclamation Plant in the City of Cerritos. The Repowering Project will operate under the existing LACSD Wastewater Discharge Permit.

The Repowering Project is currently under the commissioning and testing phase. The combined cycle power plant is undergoing several adjustments to meet the emission guarantee. Based on the latest schedule, the commercial operation date is scheduled for [December 18, 2016.] [The Repowering Project has obtained all material permits, licenses and approvals for commercial operation.] [The wastewater discharge permit and certificate of occupancy are expected to be approved before commercial operation.]

Azusa Hydroelectric Plant. The Azusa Hydroelectric Plant is a 3 MW hydroelectric plant located in the San Gabriel River Basin. The Azusa Hydroelectric Plant is interconnected to the SCE power system. Energy is accumulated and delivered to the City by SCE through an agreement which provides for deliveries at rates up to 15 MW. The Azusa Hydroelectric Plant has historically delivered approximately 3 GWh of energy to the City annually for the past 15 years. Generation in recent years has decreased to minimal volumes due to regional drought conditions. In August 2013, PWP completed the seismic retrofit of the penstock and by-pass pipe making these structures compliant with current seismic code.

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#### Joint Powers Agency Generation and Fuel Resources/Remote Ownership Interests

#### General

The City purchases power from the coal-fired Intermountain Power Project ("IPP"), which is owned and operated by the Intermountain Power Agency, a political subdivision of the State of Utah. In addition, the City and other public agencies in Southern California are members of the Southern California Public Power Authority, a joint powers agency created for planning, financing, developing, acquiring, constructing, operating and maintaining electric generating and transmission projects for participation by some or all of its members. The City is a participant in the SCPPA portion of the Palo Verde Nuclear Generating Station ("PVNGS"), in the SCPPA Magnolia Power Project, in the SCPPA Milford Wind Corridor Phase I Project and in connection with its fuel supply, the SCPPA Prepaid Natural Gas Project and the SCPPA Natural Gas Project. In most cases, staff unrelated to the City's bargaining units provide operating, maintenance, engineering, energy management and administrative services for such projects. Labor and related costs are charged to the related joint powers agency or other public agency. The City is informed that labor agreements are in place with each respective bargaining group but cannot give any assurances as to future agreements or the status of negotiations. Each of these resources is briefly described below.

#### Intermountain Power Agency

Certain of the information under this subheading "Intermountain Power Agency" regarding the IPA, the IPP and its operations has been obtained from the IPA and sources that the City believes to be reliable, but the City takes no responsibility for the accuracy of such information obtained from sources other than the City.

IPA Intermountain Power Project Interest. The IPA has constructed and placed into commercial operation the IPP. The City has entered into certain power purchase contracts with the IPA and others to purchase certain entitlements of IPP and related facilities. The IPP consists of (a) a two unit, 1,800 MW net coal-fired, steam electric generation station and a switchyard located near Lynndyl, Utah; (b) the Southern Transmission System (see "— Transmission Resources" below); (c) two 50-mile 345 kilovolt alternate current ("kV AC") transmission lines from the generation station to a switchyard in the vicinity of Mona, Utah and a 144-mile 230 kV AC transmission line from the generation station to a switchyard near Ely, Nevada (collectively, the "Northern Transmission System"); (d) a railcar service center; (e) a microwave communications system; and (f) certain water rights and coal supplies.

There are 36 utilities (collectively, the "IPP Purchasers") that purchase the output of the IPP generating station, consisting of the City, and the California cities of Los Angeles, Anaheim, Burbank, Glendale and Riverside (the "IPP California Participants"), PacifiCorp (which merged with Scottish Power), as successor to the obligations of Utah Power & Light Company, 23 Utah municipal members of IPA and six rural electric cooperatives serving loads in the States of Utah, Arizona, Colorado, Nevada and Wyoming. Pursuant to a Construction Management and Operation Agreement between IPA and LADWP, IPA appointed LADWP as project manager and operating agent responsible for, among other things, administering, operating and maintaining the IPP. The facilities of the IPP have been in commercial operation since May 1, 1987.

The City has two separate contracts with the IPA and certain Utah participants (the power sales entitlement contract and the excess sales contract, respectively, as further described below) which currently provide the City with a 107 MW (5.9%) entitlement in the facility. Approximately 750 GWh of

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energy are delivered to the City from IPP each year. See "TABLE 5 – POWER SUPPLY RESOURCES."

Transmission of the output from IPP to the City and the other IPP California Participants is provided by the Southern Transmission System (see "- Transmission Resources" below).

IPP has been financed entirely with debt issued by IPA, of which approximately \$1.2 billion principal amount was outstanding as of June 30, 2016, with a final maturity date of June 30, 2024. Debt service, net of projected investment earnings, constitutes in excess of 50% of IPA's total annual costs of owning, operating and maintaining IPP and is the major factor in IPP's power and energy costs. PWP is currently responsible for approximately \$73.6 million principal amount or 5.9% of the IPA IPP outstanding debt. The City is a the payee of a subordinate note receivable from IPA in the approximate amount of \$37 million as of June 30, 2016 due to the City's prepayment of a portion of its share of IPA's debt. See TABLE 9 – "OUTSTANDING DEBT OF JOINT POWERS AGENCIES" herein for details of the City's share of this debt.

Details of the contracts relating to the IPP are as follows:

Power Sales Entitlement. The City has contracted with IPA to purchase a 79 MW (4.409%) entitlement to the power of the IPP plant. This contract obligates the City to pay its proportional share of the plant costs (including debt and other fixed expenses), regardless of the amount of energy scheduled to the City, for the life of the IPP bonds. Originally, the City had an entitlement contract with IPA and a layoff which it entered into on February 1, 1983 with Scottish Power (now PacifiCorp), whereby the City purchased a 16 MW share from Scottish Power, which allocation was subsequently increased to 18 MW. Thereafter, in 1991, the layoff contract and the power sales entitlement contract with IPA were combined into one contract resulting in the City's current 79 MW capacity entitlement. The term of the combined contract extends until all bonds issued by IPA to finance the IPP are retired. PacifiCorp is no longer an IPP power purchaser, its shares having been transferred to LADWP.

Excess Sales Contract. The City and the cities of Burbank and Glendale and LADWP (the "California Excess Sales Purchasers") contracted with 27 sellers (the "Utah Participants") and IPA (acting as agent for the sellers) to purchase a 273 MW (17.057%) entitlement of the IPP plant which was deemed in excess of the sellers' needs. The California Excess Sales Purchasers agreed to split the excess among themselves in proportion to their original entitlements. The City's current share of the excess is 29 MW (7.556%). This contract also provides for access to the Northern Transmission System, which was built with IPA funds in order to deliver power from the IPP to the Utah Participants. The term of this contract extends until the IPA bonds are defeased or the sellers' load requirements meet certain specified conditions; however, the Utah Participants have the unilateral right to recall their original entitlements at any time.

IPP Coal Requirement. The annual coal requirement for the IPP generating station is approximately 5.5 million tons. LADWP, in its role as operating agent of IPP, buys coal under contracts to fulfill this supply requirement of the IPP. Coal is purchased under a diversified portfolio of fixed price contracts that are of short-, medium- and long-term in duration, with pricing based on such factors as the fixed priced, the market and cost of production. LADWP has reported that from now through 2017, coal presently under contract is sufficient, with the exercise of available options, to meet the IPP's annual coal requirements, with lesser amounts of coal under contract for an additional two years thereafter. The average cost of coal delivered at the IPP generating station in Fiscal Year 2014-15 was approximately \$47.16 per ton. During the prior Fiscal Year, the average cost of coal delivered was approximately \$48.04 per ton. LADWP has reported that it expects the costs to fulfill IPP's annual coal supply requirements after 2017 may be higher than its current contract costs due to the continual turnover of mining properties in Utah, difficult mining conditions at the remaining mines, increased mining costs due

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to regulatory oversight, and the continued increase in rail transportation costs, among other things. To be able to continue to operate the IPP in the event of a coal supply disruption, IPA attempts to maintain a coal stockpile at the IPP generating station that is sufficient to operate the plant at the IPP's current plant capacity factors for a minimum of 60 days. Transportation of coal to the IPP generating station is provided primarily by rail under agreements between IPA and the Utah Railway and the Union Pacific Railroad companies, and the coal is transported in IPA-owned railcars. Coal is also transported to IPP, to some extent, in commercial trucks. [DESCRIPTION OF \$100M LINE OF CREDIT WITH BANK OF AMERICA TO COME]

IPP Water Supply. IPA owns off-site water rights that yield approximately 45,000 acre-feet per year. This amount exceeds the annual water requirements of the IPP generating station and the Intermountain Converter Station. A reservoir at the IPP generating station, in combination with groundwater wells, can provide sufficient water to operate for approximately three months at average plant loads.

**Permits, Licenses and Approvals.** According to the IPA, the IPP has been designed, constructed and operated in compliance with all applicable federal, state and local regulations, codes, standards and laws, and all principal permits, licenses and approvals required to construct and operate the IPP have been acquired, including permits relating to air quality and rights-of-way on federally-owned land.

Emissions. The IPP generating station's boiler and flue-gas cleaning facilities have been designed and constructed to meet applicable federal and state emission regulations. The boilers have been designed to meet stringent regulatory emission limits for oxides of nitrogen. The flue-gas desulfurization equipment (scrubber) for each unit consists of a wet scrubber system using a limestone reagent designed and constructed to remove at least 90% of the sulfur dioxide before discharge to the atmosphere from a chimney 710 feet in height. The flue-gas particulate control (baghouse) equipment for each unit consists of three modular fabric filters utilizing reverse air for cleaning. The equipment has been designed and constructed to remove at least 99.75% of the particulate material.

Waste Management. Substantial federal, state and local legislation and regulations regarding various aspects of waste management are in effect. Federal laws as set forth in acts such as the Federal Resource Conservation and Recovery Act and the Comprehensive Environmental Response, Compensation and Liability Act, as amended by the Superfund Amendments and Reauthorization Act, impose strict liability for cleanup costs and damages regardless of time or location on generators, transporters, storers and disposers of hazardous waste. Many day-to-day activities connected with the generation and transmission of electricity generate both non-hazardous and hazardous wastes. Intermountain Power Service Corporation, under the direction of LADWP, has established a waste management plan for the IPP. The plan is designed to assure that the IPP's present and future operations conform to applicable waste disposal regulations. LADWP has also assessed IPP properties for potential liability arising from past, latent contamination. LADWP has indicated that its waste management program complies with all federal, state and local statutes and guidelines and all applicable permit requirements.

Operating Experience. The IPP facilities have operated to date with a high degree of availability, exceeding the average of coal-fired generating units of comparable size. During the Fiscal Year ended June 30, 2016, the IPP operated at a net capacity factor of 63.59%. In the Fiscal Year ended June 30, 2016, the IPP generating station provided 412,001 MWh of energy to the City at an average cost for delivered power of \$71.57 per MWh (excluding transmission costs).

Intermountain Generating Station upon termination of the IPP Contract. The current power purchase contracts with the IPA are in effect until June 15, 2027. In order to preserve the benefits of IPP, the IPA Board issued the Second Amendatory Power Sales Contract, which would supersede the current

power sales contracts and allow the plant to replace the coal units with combined cycle natural gas units by 2025. The Second Amendatory Power Sales Contract has been executed by all of the IPP Purchasers and IPA, and will become effective once all parties have certified that they have all necessary regulatory approvals, included acceptance of an Emission Performance Standard compliance filing by the California Energy Commission as required under California Senate Bill 1368. The IPP Purchasers, including the City, are considering potential configurations for the new gas-fired power plant and possible alternative uses at the facility location. The City Council has authorized PWP to enter into a Renewal Contract with IPA for a reduced share (up to 40 MW) in the new gas-fired project, with the understanding that the City will have an option to terminate its participation in the gas-fired renewal project in 2019.

# Southern California Public Power Authority

Certain of the information under this subheading "Southern California Public Power Authority" regarding SCPPA, the SCPPA projects in which the City participates and their operations has been obtained from SCPPA and sources that the City believes to be reliable, but the City takes no responsibility for the accuracy of such information obtained from sources other than the City.

scppa Palo Verde Nuclear Generating Station ("PVNGS") Interest. The City has contracted with SCPPA for a 9.9 MW (4.4%) entitlement of 225 MW SCPPA PVNGS Interest (as defined herein). This resource provides the City with approximately 65-75 GWh of baseload energy annually. The City has entered into a power sales agreement with SCPPA which obligates the City to pay the cost of its share of capacity and energy on a "take-or-pay" basis. SCPPA has issued bonds for PVNGS of which \$12,410,000 aggregate principal amount was outstanding as of September 1, 2016. SCPPA has undertaken certain actions, including collections of amounts in excess of operating and maintenance expenses and current debt service on its bonds for PVNGS to reduce the cost of power from this project. See "– Indebtedness and Joint Agency Obligations" below and TABLE 9—"OUTSTANDING DEBT OF JOINT POWERS AGENCIES." The City, as well as the Cities of Azusa, Banning, Burbank, Colton, Glendale, Los Angeles, Riverside and Vernon and the Imperial Irrigation District ("IID") are PVNGS project participants.

The SCPPA PVNGS Interest consists of a 5.91% ownership interest in the Palo Verde Nuclear Generating Station, Units 1, 2 and 3, and certain associated facilities and contractual rights relating thereto, a 5.44% ownership interest in the Arizona Nuclear Power Project ("ANPP") High Voltage Switchyard and contractual rights relating thereto and a 6.55% share of the rights to use certain portions of the Arizona Nuclear Power Project Valley Transmission System. PVNGS is located on an approximately 4,000-acre site about 50 miles west of Phoenix, Arizona. PVNGS consists of three nuclear electric generating units (numbered 1, 2 and 3), with a design electrical rating of 1,333 MWs (unit 1), 1,336 MWs (unit 2) and 1,334 MWs (unit 3) and a dependable capacity of 1,311 MWs (unit 1), 1,314 MWs (unit 2) and 1,312 MWs (unit 3). PVNGS's combined design capacity is 4,003 MWs and its combined dependable capacity is 3,937 MWs. PVNGS Units 1, 2 and 3 achieved firm operation in January 1986, September 1986 and December 1987, respectively. Each PVNGS generating unit has been operating under 40-year Full-Power Operating Licenses granted by the Nuclear Regulatory Commission (the "NRC"). In April 2011, the NRC approved PVNGS's license renewal application, allowing the three units to extend operation for an additional 20 years until 2045, 2046 and 2047, respectively. Arizona Public Service Company ("APS") is the operating agent for PVNGS. Transmission is accomplished through agreements with Salt River Project Agricultural Improvement and Power District ("Salt River Project"), LADWP and SCE.

The owners of PVNGS have created external trusts in accordance with the PVNGS participation agreement and NRC requirements to fund the costs of decommissioning PVNGS. SCPPA's direct share of costs is \$160 million, of which the City's portion is \$7 million or 4.4%. Under the current funding plan, which was established based on the license expiration in 2047, the City estimates that its share of the

decommissioning costs are fully funded. Such estimates assume 7% per annum in future investment returns and a 5% per annum cost escalation factor. No assurance or guarantee can be given that investment earnings will fully fund the City's remaining decommissioning obligations at current estimated costs or that the decommissioning costs will not exceed current estimates.

The NRC has broad authority under federal law to impose licensing and safety-related requirements for the operation of nuclear generation facilities. Events at nuclear facilities of other operators or impacting the industry generally may lead the NRC to impose additional requirements and regulations on existing and new facilities. As a result of the March 2011 earthquake and tsunami that caused significant damage to the Fukushima Daiichi Nuclear Power Plant in Japan, various industry organizations are working to analyze information from the Japan incident and develop action plans for U.S. nuclear power plants. Additionally, the NRC is performing its own independent review of the events at Fukushima Daiichi, including a review of the agency's processes and regulations in order to determine whether the agency should promulgate additional regulations and possibly make more fundamental changes to the NRC's system of regulation.

On March 12, 2012, the NRC issued the first regulatory requirements for all 104 operating reactors located in the United States based on the task force evaluations. The NRC issued three orders that modify operating licenses by requiring the following safety enhancements: (1) mitigation strategies to respond to extreme natural events resulting in the loss of power at plants; (2) ensuring reliable hardened containment vents; and (3) enhancing spent fuel pool instrumentation. The orders require prompt implementation of the safety enhancements and to complete implementation within two refueling outages or by December 31, 2016, whichever comes first. On January 4, 2013, the NRC issued guidance to enable U.S. nuclear power plant operators to perform the seismic and flooding hazard assessments. The City does not yet know the extent to which the changes in the regulations, programs, and processes of the NRC as a result of the recommendations of the task force will affect PVNGS operations. The financial and/or operational impacts on PVNGS may be significant.

In the event of noncompliance with its requirements, the NRC has the authority to impose monetary civil penalties or a progressively increased inspection regime that could ultimately result in the shut-down of a unit, or both, depending upon the NRC's assessment of the severity of the situation, until compliance is achieved.

Magnolia Power Project. The City is a participant in the Magnolia Power Project, a gas-fired generating facility with a nominally rated net capacity of 242 MW and auxiliary facilities located in Burbank, California. Through a contract with SCPPA, the City is entitled to a 6.1% (14.8 MW base capacity and up to about 19 MW peaking capacity) entitlement in the project through a long-term power purchase agreement with SCPPA. SCPPA has entered into power sales agreements with the City and the Cities of Anaheim, Burbank, Cerritos, Colton, Glendale and Pasadena pursuant to which SCPPA has sold its entitlement to capacity and energy in the Magnolia Project to the applicable participants on a "take-orpay" basis. The Magnolia Power Project commenced commercial operation on September 22, 2005. SCPPA issued bonds to finance the construction of the Magnolia Power Project, of which \$304,075,000 aggregate principal amount was outstanding as of September 1, 2016 (of which \$11,315,000 relates exclusively to the City of Cerritos). PWP has entered into a power sales agreement with SCPPA for an approximate 6.1% participation share in the Magnolia Power Project and is therefore responsible for 6.1% of the costs of the Magnolia Power Project.

Milford Wind Corridor Phase I Project The City entered into a power sales agreement with SCPPA for 2.5% (approximately 5 MW) of the output (including capacity, energy and associated environmental attributes) of Milford Wind Corridor Phase I Project, a 203.5 MW nameplate capacity wind farm comprised of 97 wind turbines located near Milford, Utah. The facility is owned by Milford Wind Corridor Phase I, LLC, a limited liability company organized and existing under the laws of the

State of Delaware. The facility went into commercial operation on November 16, 2009. Energy from the facility is delivered over an approximately 88-mile, 345 kV, transmission line extending from the wind generation site to the IPP Switchyard in Delta, Utah, an ownership interest in which transmission line, together with certain structures, facilities, equipment, fixtures, improvements and associated real and personal property interests and other rights and interests necessary for the ownership and operation of the generation facility and the sale of power therefrom, comprise a part of the Milford facility. The City is able to accept the delivered facility energy utilizing its capacity rights in the IPP Switchyard that are provided under agreements relating to the IPP. The facility energy is then delivered over the Southern Transmission System of IPP to the Adelanto or Marketplace terminal in California utilizing the City's capacity rights in the IPP Southern Transmission System and other transmission systems. See "-Transmission Resources - Existing Transmission Resources - Southern Transmission System" below. The facility energy delivered at Adelanto or Marketplace is then transmitted to the City under certain transmission arrangements between LADWP or the CAISO and the City and certain transmission arrangements between the City and SCE. The City has entered into a power sales agreement with SCPPA that obligates the City to pay its share of capacity and energy on a "take-or-pay" basis. As of September 1, 2016, SCPPA had outstanding \$187,200,000 aggregate principal amount of bonds issued primarily for the purpose of prepaying for a guaranteed annual quantity of energy from the facility for approximately 20 years.

In addition to being a participant in the above-described SCPPA projects, the City has acquired certain of its other renewable resources through SCPPA. See also "Renewable Resources – Current Renewable Projects" below.

**Prepaid Natural Gas Project.** In 2007, SCPPA undertook the Prepaid Natural Gas Project, in which the City is a participant. The Prepaid Natural Gas Project provides, through Gas Sales Agreements with the participants in the Prepaid Natural Gas Project, for a secure and long-term supply of natural gas. The original agreement provided the City with a supply of approximately 2,000 MMBtu daily or 730,000 MMBtu annually at a discounted price below spot market price (the SoCal Index) for a 30-year term. The projected discount of approximately 90 cents per MMBtu was expected to result in savings of approximately \$657,000 annually, or approximately \$19.7 million over the 30-year term.

On October 22, 2009, the Gas Sales Agreement with SCPPA was restructured to provide an acceleration of a portion of the long-term savings over the succeeding three years, reduce the remaining volumes of gas to be delivered and shorten the overall duration of the agreement. The restructured agreement provided additional savings of approximately \$2,700,000 to the participants through 2012 with the remainder to be realized over the new term of the transaction. Total expected savings from the project are not impacted by the restructuring. The restructured agreement will terminate in 2035 compared to the original termination year of 2038. The volumes of gas to be delivered are reduced from approximately 2,000 MMBtu to 1,340 MMBtu daily at a projected discount of approximately 98 cents per MMBtu. As a result of this restructuring, approximately \$165,000,000 worth of outstanding aggregate principal bonds were retired. On September 19, 2013, SCPPA entered into a second restructuring of the Prepaid Natural Gas Project. Although the terms of certain agreements to which SCPPA is a party were amended as part of this restructuring, the terms of the City's Gas Sales Agreement were not amended. As part of the restructuring, SCPPA received a payment of approximately \$3,400,000 from the gas supplier, of which \$561,000 was remitted to the City. As of September 1, 2016, SCPPA had outstanding \$305,540,000 aggregate principal amount of bonds issued for the Prepaid Natural Gas Project. SCPPA will bill the City for actual quantities of natural gas delivered each month. PWP expects that these costs will be recovered through the energy charge component of the electric rates as they are incurred, just as costs for natural gas purchases are currently recovered.

Natural Gas Project. The Natural Gas Project includes SCPPA's leasehold interests in (i) certain natural gas resources, reserves, fields, wells and related facilities located near Pinedale, Wyoming and

(ii) certain natural gas resources, reserves, fields, wells and related facilities in (or near) the Barnett Shale geological formation in Texas. The capital costs of the entitlement shares purchased by certain participants were financed through SCPPA by the issuance of project revenue bonds. The City and the City of Glendale contributed capital to SCPPA for the payment of their respective shares of the capital costs of the Natural Gas Project. SCPPA has sold the entire production capacity of its member-related leasehold interests, on a "take-or-pay" basis (with the City and the City of Glendale having no obligation to pay any debt service). The City does not currently take physical delivery of gas from the natural gas resources. Currently, the City receives proceeds from the sale of the gas at the production facilities. However, the City's agreement for sale of the gas can be rescinded at any time.

#### **Purchased Power**

In addition to City-owned resources and interests in the joint-venture generation projects described above, the City has long-term contractual arrangements for Electric System firm purchases, as well as enabling agreements, including Western Systems Power Pool ("WSPP") membership, which allow short-term power transactions in markets throughout the Western United States, Canada and Mexico. Each of these resources is briefly described below.

Hoover Hydroelectric Project Interest. The City has two cost-based power purchase agreements with the United States Department of Energy Western Area Power Administration for a combined total of up to 20 MW capacity from the generating units at the hydroelectric power plant of the Boulder Canyon Project at Hoover Dam (the "Hoover Project"), located approximately 25 miles from Las Vegas on the Nevada/Arizona border. These contracts expire in September of 2017. The City's capacity entitlement is comprised of an 11 MW renewal contract and a contract for 9 MW resulting from the uprating of the Hoover Project. The actual capacity available from the Hoover Project varies, depending on hydrologic conditions, maintenance scheduling and other outages. Under normal hydrologic conditions, the City receives approximately 60 GWh of annual energy deliveries. On December 20, 2011, President Obama signed the Hoover Power Allocation Act of 2011 providing for the distribution of power from the Hoover Project from 2017 through 2067. The Hoover Power Allocation Act of 2011 also mandated that each of then current power users give up 5% of its Hoover Project power resource so that a pool is set aside for new allottees in the Hoover Project region. In the Fiscal Year ended June 30, 2016, the Hoover Project provided 48.9 GWh of energy to the City at an average cost for delivered power of \$13.37 per MWh. The City Council has authorized the signing of the post-2017 Energy Services Agreement to preserve the benefits of the Hoover Project through 2067.

Renewable Resource Purchases. The City has also entered into certain other power purchase agreements in furtherance of its adopted renewable resource portfolio standard. See "- Renewable Resources" below.

Bilateral (Spot Market) Energy Purchases. Approximately 13-26% of PWP's annual energy needs are met through economic purchases of spot market power through short-term bilateral transactions. These transactions, which range in duration from one hour to one year, are made pursuant to the WSPP, of which the City has been a member since 1995. The WSPP is governed by a master enabling agreement with over 175 member utilities and power marketers. PWP's risk policy allows short-term transactions of one year or less for capacity, energy or both at negotiated market prices under the WSPP Agreement. In addition, the WSPP recently added a new schedule to the agreement to allow bilateral purchases of bundled or unbundled Renewable Energy Credits ("REC").

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#### Renewable Resources

#### General

In March 2009, the City adopted an Integrated Resource Plan ("IRP") that included a Renewable Portfolio Standard ("RPS") goal of 40% renewable energy to meet the City's load by 2020. In order to meet the City's RPS, the City continues to procure additional renewable resources through SCPPA as well as independent negotiations with renewable resources providers. The IRP was most recently updated during Fiscal Year 2014-15. The update affirmed the goals originally established and clarified that the City will procure renewable energy to meet the greater of the previously established local target of 40% by 2020, or the State mandated RPS of 50% by 2030. The update of the IRP was approved by the City Council on June 22, 2015. In September of 2015, the State of California passed SB350 – The Clean Energy and Pollution Reduction Act of 2015. SB350 increases the statewide RPS to 50% by 2030. See "DEVELOPMENTS IN THE CALIFORNIA ENERGY MARKETS – State Legislation."

# **Current Renewable Projects**

The following is a description of the City's currently contracted renewable projects. It is expected that approximately 30% of PWP's energy portfolio will be supplied from renewable resources by December 31, 2016. Additional contracts with proposed renewable energy facilities are being negotiated to support the RPS in future years.

Milford Wind Corridor Phase I Wind Generation Project. As described above, the City is a participant in SCPPA's Milford Wind Corridor Phase I Project, a 200 MW wind generating facility located in Millard County, Utah and a power sales agreement with SCPPA for an approximately 5 MW (2.5%) share of the project. The project began commercial operation in November 2009.

High Winds Wind Generation Facility. In 2003, the City Council approved a 25-year power sales agreement with SCPPA for the purchase of wind-powered electrical energy associated with a 6 MW (or approximately 17,500 MWh per year) share of the PPM Energy, Inc. (now Iberdrola Renewables ("Iberdrola")) High Winds wind generation facility. The High Winds Project is a 145.6 MW wind generation facility located in Solano County, California. Iberdrola is responsible for scheduling the wind energy as it is produced at the High Winds Project into the CAISO. Iberdrola re-delivers the associated energy on a firm 2 MW basis to a delivery point in Southern California, providing PWP with a constant, reliable source of energy.

Chiquita Canyon Landfill Gas-to-Energy. In 2004, the City Council approved a 20-year power sales agreement with SCPPA for the purchase of 6.67 MW of landfill gas-generated electrical energy from the Ameresco, LLC, Chiquita Canyon Landfill Gas to Electricity generation project located in Valencia, California. The project began operation in 2010 and produced approximately 48,557 MWh in Fiscal Year 2015-16.

**Puente Hills Landfill Gas-to-Energy.** On June 23, 2014, the City Council approved a 14-year power sales agreement with SCPPA for approximately 30% of the output from the Puente Hills landfill gas-to-energy project, starting January 1, 2017. The Puente Hills project is an existing 43 MW project located near Whittier, California. The output from Puente Hills is sold to SCE through December 31, 2016.

Heber South Geothermal Project. In 2005, the City Council approved a 25-year power sales agreement with SCPPA for the purchase of 3.0 MW of geothermal-generated electrical energy from the Ormat geothermal generating project. Due to uncontrollable operational constraints, the project and agreement were subsequently revised to a 2.1 MW share of the geothermal project producing

approximately 17,500 MWh per year. The Ormat geothermal project is located in the service area of Imperial Irrigation District ("IID") in the Imperial Valley, California. The energy is delivered to the CAISO over the IID transmission system. This project generated approximately 15,257 MWh of energy in Fiscal Year 2015-16.

Windsor Reservoir Solar Project. On March 30, 2010, PWP issued a Request for Proposals for a rooftop photovoltaic solar project to be installed on City facilities. Of the 24 responses received, PWP chose to proceed with a 0.564 MW project to be installed by Martifer Solar, Inc. atop the PWP Water Division's Windsor Reservoir. Completed and operational on May 31, 2011, the project generated approximately 872 MWh, or 0.08% of the Department's annual RPS requirements, of solar energy in Fiscal Year 2015-16. Through internal agreements, the renewable energy generated is purchased by the Power Division through bill credits to the Water Division thereby reducing PWP's customers' water bills. These savings benefit PWP's water customers through reduced operating costs of the Water Division.

Columbia II Solar Project. In December 2014, the City scheduled the first MWhs of energy from the Columbia II Solar project, owned and operated by Dominion Resources, Inc. The Columbia II Solar Project is a 15 MW solar plant located in Mojave, California. This project was procured through the 2013 SCPPA open Request for Proposal process. The City purchases 17.143% (approximately 2.6 MW) of the output from Columbia II through a power sales agreement with SCPPA dated September 13, 2013.

Kingbird Solar Project. On September 9, 2013, the City Council approved a contract for 100% of the production from the 20 MW Kingbird Solar project in Rosamond, California. The Kingbird project achieved commercial operations on April 30, 2016 and is operated by First Solar. The Kingbird contract has a twenty year term which may be extended by the City in its sole discretion for an additional five contract years. The contract also includes an option for the City to purchase the project at various points during the term. The Kingbird project generated approximately 18,035 MWh of energy in Fiscal Year 2015-16.

**Painted Hills Project.** The City has contracted to purchase 100% of the production from Painted Hills, a 19.5 MW Wind project in Desert Hot Springs, California, from April 2016 through December 31, 2017. The project generated approximately 11,610 MWh of energy in Fiscal 2015-16.

**Summer Solar Project.** The City executed a contract dated November 15, 2012 with SCPPA to purchase 32.5% of the output from the 20 MW Summer Solar project located near Lancaster, California. The contract was amended on March 10, 2014. Summer Solar achieved commercial operation on July 25, 2016.

Antelope Big Sky Ranch Solar Project. The City executed a contract dated November 15, 2012 with SCPPA to purchase 32.5% of the output from the 20 MW Antelope Big Sky Ranch solar project located near Lancaster, California. The contract was amended on March 10, 2014. Antelope Big Sky Ranch achieved commercial operation on August 19, 2016.

**Powerex Renewable Energy Contract**. On July 18, 2016, the City Council approved a four-year contract with Canadian firm Powerex Corp. for the purchase of 17,500 MWh per year of Category 1 and 35,000 MWh per year of Category 2 bundled renewable energy and RECs beginning January 1, 2017. The products will be supplied from Powerex's existing fleet of California RPS-certified renewable resources in British Columbia and Washington state.

Falls Creek Category 3 Contract. On July 18, 2016, the City Council approved a ten-year contract with Falls Creek H.P., L.P. for the purchase of 35,000 to 69,000 Category 3 RECs per year

beginning January 1, 2017. The RECs will be generated by a group of existing California RPS-certified small hydroelectric projects located in Oregon and Idaho.

# **Solar Initiative and Photovoltaic Program**

PWP's solar program has been in existence since 1999 and has provided rebates to residential and nonresidential customers for the installation of grid-tied photovoltaic ("PV") systems. Annual funding for legacy customer PV programs between 1999-2007 averaged \$100,000 and was focused on small residential systems due to the availability of state-funded incentives for systems larger than 30 kW. Typical residential PV systems range from 2-3 kW and provide 30%-80% of the customer's energy needs. Since 2008, the Pasadena Solar Initiative ("PSI") program has offered incentives for PV systems up to 1 MW. Between 2008 and 2015, PWP provided 699 rebates to residential customers and 48 rebates to nonresidential customers, for a combined installed capacity of 6.9 MW. PWP's current incentives are based on either the expected performance (ranges from \$0.30-\$1.20 per watt) or actual performance (ranges from \$0.096-\$0.384 per kWh). The following table sets forth the Expected Performance Based Buydown ("EPBB") rates per watt and Performance Based Incentive ("PBI") rates per kWh for different customer classes, effective August 1, 2016.

<b>Customer Class</b>	EPBB Rate (\$/Watt)	PBI Rate (\$/kWh)
Residential	\$0.30	\$0.096
Commercial	0.30	0.096
Non-Profit	0.60	0.192
Low-Income	1.20	0.384

Source: Finance and Administration Business Unit of PWP.

# **Energy Efficiency Goals and Programs**

As required by State law, the City Council is charged with approving ten-year energy efficiency and peak demand reduction goals for PWP. The City Council adopted such goals in 2007, 2010 and 2013. PWP currently offers a wide range of residential and business customer energy efficiency ("EE") programs that are funded from PWP's Public Benefit Charge ("PBC") revenues. See "— Electric Rates and Charges" below. PWP leverages its funding for PBC programs through joint action with SCPPA that is coordinated through the SCPPA Public Benefits Committee. This has been particularly effective in procuring cost-effective efficient product and program services and consulting. The SCPPA Public Benefits Committee meets monthly to share information, develop and compare programs, prepare requests for proposals, and assess pending and new legislation or regulations.

PWP's EE programs yielded annual energy savings of 17,787 MWh and 1.9 MW of peak demand reduction during Fiscal Year 2014-15 at a cost of \$2.8 million. Based on preliminary Fiscal Year 2015-16 data, these programs yielded annual energy savings of 14,036 MWh and 1.6 MW of peak demand reduction at a cost of \$2.9 million. EE programs for nonresidential customers, including the Energy Efficiency Partnering (EEP) Program, the Pasadena Express Efficiency Rebate (PEER) Program, and Water and Energy Direct Install Program (WE-DIP) have encouraged EE conservation through incentives and direct installation of energy and water saving measures.

The City's energy efficiency goals adopted in 2013 seek to achieve additional annual energy savings of 12,750 MWh and 2.3 MW demand reduction for each program year from Fiscal Year 2013-14

through Fiscal Year 2022-23, representing about 1% of annual energy sales and 0.7% of average annual peak demand forecast for the ten-year period. Compared to the goals adopted in 2010, the 2013 goal for energy savings is 23% lower and the 2013 goal for demand reduction is 40% lower on average over the respective ten year periods. As state and Federal codes and standards have become more stringent, PWP has needed to modify existing programs, create new programs and increase incentive levels in order to meet annual energy efficiency savings goals. PWP anticipates that total energy efficiency program expenditures will average \$3.5 million to \$4.5 million per year to achieve these goals, or about 1.8% to 2.3% of annual retail electric revenues.

# **Future Power Supply Resources**

IPP Renewal Project. In 2015, the City joined the other IPP participants in executing an amendatory agreement that would facilitate the repowering of the IPP coal-fired generation with a smaller natural gas-fired facility by 2025. If the gas project goes forward, the City's share of generation from IPP between 2025 and the contract expiration in 2027 will be supplied by the repowered project. The City Council has authorized the renewal of the power purchase agreement with IPP to purchase power from the repowered natural gas-fired project and receive associated transmission rights through 2077. The City will have an option to terminate participation in the renewal project in 2019. The City is negotiating contracts to preserve certain of its IPP-related transmission rights regardless of its participation in the renewal project. See "THE ELECTRIC SYSTEM OF PWP – Joint Powers Agency Generation and Fuel Resources/Remote ownership Interests" for additional information regarding IPP.

Additional Renewable Projects. The City continues to procure additional renewable resources through SCPPA and directly with renewable resources providers to meet its projected RPS requirements.

# **Fuel Supply**

PWP's local generating units are primarily fueled by natural gas, with average daily consumption of approximately 6,000 MMBtu during summer months. During peak months, gas requirements in excess of firm deliveries and long-term supply contracts are purchased at the Southern California Gas Company Citygate. The Southern California Gas Company provides intra-state delivery of PWP's natural gas supplies.

As noted above, the City is a participant in SCPPA's prepaid natural gas project which provides approximately 1,415 MMBtu of natural gas daily.

PWP also has access to Canadian gas via firm transportation on the Nova, Transcanada, and Pacific Gas & Electric ("PG&E") expansion into the Southern California Gas Company system, with net capacity of approximately 3,989 MMBtu/day at Kern River Station in Kern County, California.

In addition, the City is a participant in SCPPA's Natural Gas Project, consisting of leasehold interests in natural gas fields located in Wyoming and Texas. These supplies are expected to account for an average of approximately 700 MMBtu/day or approximately 16% of PWP's average daily natural gas consumption. The City is currently selling the gas produced by its interests in the SCPPA Natural Gas Project rather than utilizing it in energy production at the Magnolia Power Plant or its local generation. Such sale is rescindable at any time. See "– Joint Powers Agency Generation and Fuel Resources/Remote Ownership Interests – Southern California Public Power Authority – *Prepaid Natural Gas Project*" and "– *Natural Gas Project*."

In 2011, the City entered into three separate bio-methane contracts with EDF Trading North America, LLC ("EDF"), WMRE of Ohio-American, LLC ("WMRE") and Sequent Energy Management, L.P. ("Sequent") for bio-methane to be burned at the Magnolia Power Project and the City's local

generation in order to generate renewable energy. The EDF contract was terminated for non-performance in January 2015. By mutual agreement, deliveries under the WMRE Base Contract for Sale and Purchase of Natural Gas and Bio-methane dated August 15, 2011 were suspended on April 1, 2016 and the contract will ultimately be terminated. Similarly, by mutual agreement, deliveries under the Sequent contract [were suspended on September 1, 2016], and that contract will also ultimately be terminated. The biomethane burned at the Magnolia Power Project and local generation facilities produced approximately 42,362 MWh or 27.4% of the City's renewable energy portfolio for purposes of satisfying its RPS in Fiscal Year 2014-15. PWP has executed and is negotiating contracts with other renewable energy projects to replace the bio-methane produced renewable energy at lower cost.

In October 2015, a leak was detected at Southern California Gas Company's Aliso Canyon storage facility. The California Public Utilities Commission ("CPUC") ordered that the Aliso Canyon inventory levels be reduced to 15 billion cubic feet and ordered Southern California Gas Company ("SoCal Gas") to stop injections into the facility and only allowed further withdraws of natural gas from the facility under emergency situations. Aliso Canyon is used by SoCal Gas as a tool to balance supply and demand and not being able to use it for normal business has caused operational challenges for SoCal Gas's daily operations. SoCal Gas has developed changes in the management and operation of its delivery system.

As a result of the Aliso Canyon gas storage situation, there is a possibility of disruptions to the normal natural gas supply for power plants in Southern California, including PWP's local Glenarm and Broadway power plants. Effective June 1, 2016, the SoCal Gas implemented strict limitations and high penalties regarding scheduling and use of natural gas by these power plants. PWP purchases/sells natural gas in the wholesale market and schedules deliveries to its power plants through the SoCal Gas pipelines. PWP now manages its natural gas supply on a seven day a week basis (compared to Monday through Friday) and makes adjustments to natural gas deliveries several times during the day as needed. PWP is exploring possible sources of alternative natural gas supplies that would not rely upon SoCal Gas's system in order have a backup source should SoCal Gas curtail deliveries to PWP's generation. Natural gas fired generation makes up approximately 10% of PWP's resource portfolio. The full impacts are not certain; however, the impacts on PWP energy supply are expected to be small.

#### **Transmission Resources**

#### General

In January 2005, the City became a Participating Transmission Owner ("PTO") in the CAISO and placed certain transmission facilities and entitlements to transmission service on certain facilities under the CAISO's operational control. Pursuant to the CAISO Tariff and applicable Federal Energy Regulatory Commission ("FERC") precedent, FERC approved a Base Transmission Revenue requirement ("TRR") and a Transmission Revenue Balancing Account Adjustment ("TRBAA") for the City to recover the costs of these facilities and entitlements.

The City has been filing annual updates to its TRBAA with FERC since becoming a PTO. The TRBAA is the mechanism by which transmission revenue credits associated with transmission service from the CAISO are flowed through to transmission customers. The TRBAA amount is used as an offset to the Transmission Revenue Requirement of a PTO. The TRBAA does not change the Base TRR nor does it flow through transmission cost increases to PTOs. Any change to the Base TRR requires that a petition must be filed with FERC.

In August 2011, the City filed a petition with FERC to revise its Base TRR to recover the cost increases the City has been experiencing since FERC approved its initial Base TRR. In December 2011,

FERC approved the City's petition and increased the City's TRR by approximately \$2.0 million effective October 1, 2011.

# **Existing Transmission Resources**

Transmission resources are an integral component of the City's plan to provide economical and reliable electric service to its customers. The City currently has several firm capacity transmission agreements to deliver over 200 MW of remote generation to the T.M. Goodrich Receiving Station in the City, and to provide access to major hubs of the western wholesale power market. The transmission network allows the City to obtain low-cost energy supplies when available, enable bulk sales and exchanges of energy during low-load periods, and take advantage of price differentials between various locations on the Western Electricity Coordinating Council ("WECC") power grid through wheeling, arbitrage sales and energy swaps. Depending on the generation source, the energy is transmitted through a combination of the transmission resources listed in the following table.

TABLE 6
FIRM TRANSMISSION SERVICE AGREEMENTS

Transmission Line Path	Owner/Party	Capacity <sup>(2)</sup>
Calman T.M. Caadhish	SCE/CAISO <sup>(1)</sup>	336 MW
Sylmar-T.M. Goodrich Pacific-Northwest DC Intertie	Pasadena	72 MW
Northern Transmission System (NTS)	IPA/Utah	98 MW
Southern Transmission System (STS)	SCPPA	136 MW
Adelanto/Victorville-Sylmar	LADWP	136 MW
Mead-Phoenix	SCPPA	49 MW
Mead-Adelanto	SCPPA	75 MW
McCullough-Victorville	Pasadena	25 MW
Victorville-Sylmar	LADWP	26 MW
Hoover-Sylmar	LADWP	26 MW

<sup>(1)</sup> The CAISO became the control area operator and scheduling agent for this line commencing with CAISO operations.

Source: Power Supply Business Unit of PWP.

Southern California Edison Company. The City has a transmission contract with SCE for rights to firm transfer capacity from LADWP's Sylmar Substation to the T. M. Goodrich Receiving Station in the City through SCE, as well as an agreement with SCE for interconnection of the T.M. Goodrich Receiving Station to the SCE system. Beginning on March 31, 1998, the CAISO became the scheduling agent for the transmission contract. The City joined the CAISO in 2005 as a Participating Transmission Owner and as a PTO, and the City continues to have full access to this transmission at the CAISO tariff rate. A successor to the City's interconnection agreement with SCE for interconnection of the T.M. Goodrich Receiving Station to the SCE system was put into place on August 3, 2010, resulting in increased capacity rights to 336 MW from 200 MW.

California Independent System Operator (CAISO). The City has a 336 MW transmission contract with the CAISO to transfer capacity and energy from LADWP's Sylmar Substation to the T. M. Goodrich Receiving Station in the City through facilities owned by SCE. The City also has an agreement with SCE for interconnection of the T.M. Goodrich Receiving Station to the CAISO system.

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<sup>(2)</sup> Transmission lines with different import/export ratings.

Pacific Northwest DC Intertie. Spanning 850 miles from Celilo in northern Oregon to Sylmar, California, the Pacific Northwest DC Intertie ("PDCI") is a double-pole, ±500 kV transmission line. The PDCI conveys energy to the City from the Bonneville Power Administration and other Pacific Northwest utilities. PWP is entitled to 72 MW (2.32%) of the total 3,100 MW capacity of the southern portion (south of the point where the line crosses the Nevada-Oregon Border ("NOB") of the PDCI). Because of the load diversity and excess hydroelectric energy in the spring, the PDCI provides the City many opportunities for energy imports and will provide access to a broader market when excess renewable energy production results in over-generation in California in the future.

**Northern Transmission System.** The Northern Transmission System consists of two 50-mile long 345 kV AC transmission lines which connect the IPP to the Mona Substation in Utah and the Gonder Substation in Nevada. The City currently has entitlements of 98 MW of capacity on these transmission lines as a result of the IPP Excess Sales Contract with the Utah Participants. IPA allocates 2.4735% of its outstanding debt to the Northern Transmission System. As of September 1, 2016, this allocation was approximately \$28.6 million. The City's maximum share of this obligation is 7.6%.

Southern Transmission System. The Southern Transmission System ("STS") is a double-pole, ±500 kV DC transmission line spanning 488 miles from IPP in central Utah to the Adelanto Substation in Southern California, together with an AC/DC converter station at each end. It is operated and maintained by the LADWP under contract with IPA. In connection with its entitlement to the IPP, the City acquired a contractual entitlement to 136 MW (5.9%) of the total 2,400 MW capacity of the STS. To facilitate financing of the STS, the City assigned its contractual transmission rights to SCPPA, and has its STS transmission system contract with SCPPA. As the result of an upgrade to the STS which was completed in December 2010, the capacity of the STS was increased from the previous 1,920 MW to 2,400 MW. The term of the City's contractual transmission right extends until the expiration of the IPP contract in June of 2027. The terms of the SCPPA transmission service contract also extend to June 2027, or until all SCPPA bonds issued to finance the STS are paid or defeased if later. The City's transmission service contract with SCPPA obligates the City to pay the cost of its share of the transfer capability on a "take-or pay" basis. As of September 1, 2016, SCPPA had outstanding \$553,990,000 principal amount of bonds relating to the STS.

Adelanto-Sylmar Transmission Line. The City has a contract with LADWP for 136 MW of transmission capacity from the STS at either Adelanto or Victorville through the LADWP system to the CAISO at Sylmar.

Mead-Phoenix Transmission Project. The Mead-Phoenix Transmission Project consists of a 256-mile, 500 kV AC transmission line, which was placed into commercial operation on April 15, 1996, extending between a southern terminus at the existing Westwing Substation (in the vicinity of Phoenix, Arizona) and a northern terminus at Marketplace Substation, a substation located approximately 17 miles southwest of Boulder City, Nevada. The line is looped through the 500-kV switchyard constructed in the existing Mead Substation in southern Nevada with a transfer capability of 1,923 MW (as a result of certain upgrades completed in 2009). By connecting to Marketplace Substation, the Mead-Phoenix Transmission Project interconnects with the Mead-Adelanto Transmission Project (as described below) and with the existing McCullough Substation. The Mead-Phoenix Transmission Project is owned by SCPPA, Arizona Public Service Company, Western Area Power Administration ("Western") and Startrans IO, L.L.C. The Mead-Phoenix Transmission Project is comprised of three project components. SCPPA executed an ownership agreement providing it with an 18.3077% member-related ownership share in the Westwing-Mead project component, a 17.7563% member-related ownership share in the Mead Substation project component, and a 22.4082% member-related ownership share in the Mead-Marketplace project component (collectively, the "Authority Interest (Members)") in the project. The City entered into a transmission service contract with SCPPA which provides to the City an entitlement to 49 MW of transfer capability on of the Mead-Phoenix Transmission Project and obligates the City to pay

its share (13.8%) of the transfer capability on a "take-or-pay" basis with respect to the Authority Interest (Members) in the project. The term of this contract extends for the life of the facility, or until all SCPPA bonds issued to finance the related portion of the project are defeased. As of September 1, 2016, SCPPA had outstanding \$22,180,000 principal amount of its bonds issued to finance the Authority Interest (Members) in the project.

Mead-Adelanto Transmission Project. This arterial line consists of a 202-mile, 500 kV AC transmission line extending between a southwest terminus at the existing Adelanto Substation in Southern California and a northeast terminus at Marketplace Substation, located approximately 17 miles southwest of Boulder City, Nevada. By connecting to Marketplace Substation, the line interconnects with the Mead-Phoenix Transmission Project and the existing McCullough Substation in southern Nevada. The line has a transfer capability of 1,291 MW. The Mead-Adelanto Transmission Project is owned by SCPPA, Western and Startrans IO, L.L.C. SCPPA executed an ownership agreement providing it with a total of a 67.9167% member-related ownership share ("SCPPA's Authority Interest (Members)") in the project. The commercial operation date for the project was April 15, 1996, which coincided with the completion of the Mead-Phoenix Transmission Project. The City entered into a transmission system contract with SCPPA which provides to the City an entitlement to 75 MW of SCPPA's Authority Interest (Members) in the Mead-Adelanto Transmission Project and obligates the City to pay its share (8.6%) of the transfer capability on a "take-or-pay" basis with respect to SCPPA's Authority Interest (Members) in the project. The term of this contract extends for the life of the facility, or until all SCPPA bonds issued to finance the related portion of the project are defeased. As of September 1, 2016, SCPPA had outstanding \$73.110.000 principal amount of its bonds issued to finance SCPPA's Authority Interest (Members) in the project.

*McCullough-Victorville Transmission Line*. The City acquired a 25 MW equity entitlement from LADWP in the 180-mile, 500 kV AC McCullough-Victorville No. 2 Transmission Line. Originally utilized to import the City's PVNGS power, this line provides a parallel path to the Mead-Adelanto transmission line into the critical Mead Substation.

*Victorville-Sylmar*. The City contracts with LADWP for 26 MW of firm transmission service from the Victorville Substation to the Sylmar Substation as a continuation of the McCullough-Victorville Line.

**Hoover-Sylmar Transmission Agreements.** The City has executed contracts for transmission service to transfer its Hoover renewal (11 MW), its uprating entitlement (9 MW), and an additional 6 MW for other uses, concurrent with the terms of the Hoover entitlement. As a result of these contracts, the City's total Hoover transmission entitlement is 26 MW.

### **Future Transmission Resources**

As a PTO CAISO member, PWP has rights to transmission resources throughout the west to deliver contractual and spot market supplies into the City through the CAISO grid through the Sylmar interconnection with LADWP, about 10 miles from the City, to PWP's CAISO interconnection point at PWP's TM Goodrich Substation. All of PWP's external resources use this interconnection. In August 2010, PWP renewed and renegotiated an Interconnection Agreement with SCE increasing the interconnection from 200 MW to 336 MW and formally establishing operation and maintenance policies. The updated Interconnection Agreement provides for an evergreen agreement with Pasadena's unilateral right to terminate with 24 months' notice.

# **Inter-Utility Sales Transactions**

General. In addition to making market purchases when economical, PWP also sells excess electric and gas commodity and transmission capacity when the City does not need it. The City has entered into a number of long-term capacity sales, and energy schedulers and dispatchers also respond to opportunities to market excess power when conditions warrant. The additional net revenues from these transactions help keep electricity rates down by offsetting fixed energy costs.

**CAISO** – **Participating Generator Agreement**. Under this agreement, the City sells capacity and energy from its local generation resources at Broadway and Glenarm into the CAISO's ancillary service markets on a day-ahead and hour-ahead basis. Due to the short-term nature of the market, these ancillary service capacity and energy revenues are extremely volatile and difficult to predict; however, it is estimated that they will range from approximately \$3 million to \$10 million in future years.

# **Interconnections and Distribution Facilities**

PWP owns facilities for the distribution of electric power within the city limits of the City (approximately 23 square miles). These facilities include approximately 80 miles of 34 kV subtransmission circuits, 402.4 miles of 17 kV distribution circuits, 281.1 miles of 4 kV distribution circuits, 3 receiving stations and 11 substations. For Fiscal Year 2015-16, the City's system experienced approximately 33.14 minutes of outage time per customer. PWP's benchmark for this metric is currently 120 minutes. Distribution infrastructure investments and mild weather contributed to this improved measure of performance when compared to this metric.

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# **Electric Rates and Charges**

The City is obligated by its Charter and by its rate ordinance to establish rates and collect charges in an amount sufficient to meet its expenses of operation and maintenance and debt service requirements (with specific requirements as to priority and coverage). See "SECURITY AND SOURCES OF PAYMENT FOR THE 2016A BONDS – Rate Covenant." Electric rates are subject to approval by the City Council. Electric rates are not subject to regulation by the CPUC or by any other State agency. Although its rates are not subject to approval by any federal agency, the City is subject to certain ratemaking provisions of the federal Public Utility Regulatory Policies Act of 1978 ("PURPA"). The City believes that it is operating in compliance with PURPA. See "RATE REGULATION."

PWP's electric rate structure is unbundled into distribution, customer, energy, transmission and PBC. The PWP rate structure is cost-based and does not provide for cross subsidies among customer classes. The PWP electric rates include variable components which are designed to recover from customers increased costs to the utility associated with energy and transmission. The City provides no free electric service. The following table sets forth rates for each customer class as of June 30, 2012 through June 30, 2016.

TABLE 7
FIVE-YEAR HISTORY OF ELECTRIC RATES
Dollars Per Kilowatt Hour

Fiscal Year Ended June 30,

<b>Customer Class</b>	2012	2013	2014	2015	2016(1)
Residential	\$0.1570	\$0.1613	\$0.1614	\$0.1784	\$0.1827
Small Commercial and Industrial	0.1517	0.1540	0.1545	0.1659	0.1683
Medium Commercial and Industrial	0.1427	0.1451	0.1471	0.1575	0.1610
Large Commercial and Industrial	0.1374	0.1397	0.1386	0.1498	0.1517
Street Lighting and Traffic Signals	0.1396	0.1313	0.1428	0.1514	0.1505

Note: Rates above include Public Benefit Charge.

(1) Fiscal Year ended June 30, 2016 is based on unaudited information.

Source: Finance and Administration Business Unit of PWP.

Effective July 1, 2014, following the completion of an electric cost of service and rate design study, PWP increased the distribution and customer charge, PBC, and the energy charge component of its electric rate to offset increased operational and energy costs. This rate change represents an increase of approximately 8.3% in system average rates.

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# **Customers, Energy Sales and Revenues**

The average number of customers, energy sales and revenues derived from sales, by classification of service, during the past five Fiscal Years, are listed below.

TABLE 8
CUSTOMERS, ENERGY SALES AND REVENUES

Fiscal Year Ended June 30,

· · · · · · · · · · · · · · · · · · ·				<del>.</del>	
	2012	2013	2014	2015	2016 <sup>(1)</sup>
Number of Customers				. ,	
Residential	56,311	56,393	56,491	56,645	56,674
Small Commercial & Industrial	7,483	7,508	7,507	7,557	7,610
Medium Commercial & Industrial	891	859	. 868	890	. 864
Large Commercial & Industrial	147	. 161	163	162	155
Public Street & Highway Lighting	4	5	5	. 5	5
Wholesale Sales to Other Utilities	. <u>4</u>	5	5	10	10
Total	64,840	64,931	65,039	65,269	65,318
Megawatt-hour Sales:	·				
Residential	316,084	334,179	316,631	324,656	326,023
Small Commercial & Industrial	148,686	150,762	147,689	149,097	149,036
Medium Commercial & Industrial	261,815	264,162	258,141	263,559	261,189
Large Commercial & Industrial	372,795	361,892	378,048	356,079	345,285
Public Street and Highway Lighting	15,598	. 15,683	13,678	13,423	13,384
Other (Misc.)	(867)	574	(4,299)	<u>22,803</u>	0
Total Retail Energy Sales	1,114,111	1,127,252	1,109,888	1,129,617	1,094,917
Wholesale Sales to Other Utilities	<u> 199,045</u>	<u> 185,361</u>	<u>36,811</u>	<u>30,969</u>	310
Total Energy Sales	1,313,156	1,312,613	1,146,699	1,160,586	1,095,227
Revenues from Sale of Energy:					
Residential	\$ 49,664,926	\$53,937,015	\$51,095,171	\$57,904,418	\$59,634,283
Small Commercial & Industrial	22,570,151	23,233,848	22,824,437	24,728,258	25,109,230
Medium Commercial & Industrial	37,484,591	38,431,043	37,964,409	41,522,097	42,089,694
Large Commercial & Industrial	51,271,082	50,577,688	52,382,225	53,352,051	52,425,815
Wholesale Sales to Other Utilities	8,963,006	6,522,304	4,021,379	3,763,555	2,396,577
Public Street & Highway Lighting	2,087,863	1,969,456	1,953,835	2,031,654	2,016,163
Other <sup>(2)</sup>	13,908,981	<u> 15,399,551</u>	17,932,785	20,446,194	15,149,052
Total Energy Revenue	\$185,950,600	\$190,070,905	\$188,174,241	\$203,748,227	\$198,820,814

<sup>(1)</sup> Fiscal Year ended June 30, 2016 is based on unaudited information.

Within PWP, "commercial and industrial" customers are principally educational and healthcare institutions and office buildings, as well as a wide range of businesses. These businesses include postal service, engineering, telecommunications, healthcare, property development, insurance, office products and packaging and chemical products. No single commercial industrial customer currently accounts for more than 3% of total annual electrical sales revenue. The top 10 commercial and industrial customers typically represent approximately 13% of PWP's annual electric sales revenue.

# **Indebtedness and Joint Agency Obligations**

Upon the issuance of the 2016A Bonds and the refunding of the Refunded 2008 Bonds, in addition to the 2016A Bonds, the City will have outstanding \$133,805,000\* aggregate principal amount of

<sup>(2)</sup> Other revenue includes PTO – TRR revenues, Cap and Trade revenues, unbilled revenue and miscellaneous governmental revenue. Source: Finance and Administration Business Unit of PWP.

<sup>\*</sup> Preliminary; subject to change.

Bonds which are payable from the Light and Power Fund and secured by a pledge of the Net Income of the Electric System. See "SECURITY AND SOURCES OF PAYMENT FOR THE 2016A BONDS."

As previously discussed, the City participates in the SCPPA joint powers agency. SCPPA provides for the financing and construction of electric generating and transmission projects for participation by some or all of its members. The City is a participant in the following SCPPA projects: PVNGS, Magnolia Power Project and Milford Wind Corridor Phase I Project, with respect to generation, is a participant in the Mead-Phoenix Transmission Project, the Mead-Adelanto Transmission Project and the Southern Transmission System, with respect to transmission, and is a participant in the Prepaid Natural Gas Project and the Natural Gas Project, with respect to fuel supply. To the extent the City participates in projects developed by SCPPA, the Electric System is obligated for its proportionate share of the cost of the particular project, including in most cases, the costs of debt service on indebtedness incurred by SCPPA to finance the costs of such projects. See TABLE 9 – "OUTSTANDING DEBT OF JOINT POWERS AGENCIES."

In addition, the City has entered into certain power sales contracts with IPA and others for the delivery of electric power from IPP. The Electric System's share of IPP power is equal to 6.0% of the generation output of IPP, IPA's 1,800 MW coal-fueled generating station, located in central Utah. The contracts constitute an obligation of the Electric System to make payments solely from revenues from the Light and Power Fund. The power sales contracts also require the Electric System to pay certain minimum charges that are based on debt service requirements.

Obligations of the City under the agreements with IPA and SCPPA constitute Maintenance and Operating Expenses of the City payable prior to any of the payments required to be made on the Bonds. Agreements between the City and SCPPA (other than the agreement relating to SCPPA's Natural Gas Prepaid bonds) and the City and IPA are on a "take-or-pay" basis, which requires payments to be made whether or not applicable projects are operating or operable, or whether the output from such projects is suspended, interfered with, reduced, curtailed or terminated in whole or in part. In addition, all of these agreements (other than the agreement relating to SCPPA's Natural Gas Prepaid bonds and the agreement relating to SCPPA's Natural Gas Project in which the City contributed its share of capital costs and did not participate in the related financing) contain "step-up" provisions obligating the City to pay a share of the obligations of a defaulting participant. Such payments represent the Electric System's share of current and long-term obligations. Payment for these obligations will be made from operating revenues received during the year that payment is due. The City's participation and share of debt service obligations (without giving effect to interest due on the obligations or any "step up" provisions) for each of the joint powers agency projects in which it participates are shown in the following table.

# TABLE 9 OUTSTANDING DEBT OF JOINT POWERS AGENCIES As of September 1, 2016 (Dollars in Millions)

	Outstanding Debt	City's Participation <sup>(1)</sup>	City's Share of Outstanding Debt <sup>(2)</sup>
IPA			
Intermountain Power Project <sup>(3)</sup>	\$1,155.847	6.0%	\$69.351 <sup>(3)</sup>
SCPPA		`	
Palo Verde Project	12.410	4.4	0.546
Southern Transmission System	553.990	5.9	32.685
Mead-Adelanto Transmission Project	73.110	8.6	6.287
Mead-Phoenix Transmission Project	22.610	13.8	3.120
Magnolia Power Project <sup>(4)</sup>	292.760	6.1	17.858
Milford Wind Corridor Phase I Project	187.200	2.5	4.680
Natural Gas Prepaid <sup>(5)</sup>	305.540	16.5	50.414
TOTAL	\$2,603.467	-	\$184.941

Participation obligation is subject to increase upon default of another project participant (other than with respect to SCPPA's Natural Gas Prepaid bonds). The City has no obligation for debt service costs (and no "step-up" obligation) in connection with SCPPA's Natural Gas Project. See "— Joint Powers Agency Generation and Fuel Resources/Remote Ownership Interests — Southern California Public Power Authority — Natural Gas Project" and "— Fuel Supply" above.

(2) Principal only. Number shown does not include interest on the debt.

4) Excludes bonds relating solely to City of Cerritos.

Sources: Finance and Administration Business Unit of PWP, SCPPA and IPA.

For the Fiscal Year ended June 30, 2016, the City's payments of debt service on its joint powers agency obligations aggregated approximately \$26.1 million. A portion of the joint powers agency obligation debt service is variable rate debt. Unreimbursed draws under liquidity arrangements supporting joint powers agency variable rate debt obligations bear interest at rates well in excess of the current variable rate on such bonds. Moreover, in certain circumstances, the failure to reimburse draws on the liquidity agreements may result in the acceleration of scheduled payment of the principal of such variable rate joint powers agency obligations. In addition, swap agreements entered into by the joint powers agencies in connection with certain of such obligations are subject to early termination under certain circumstances, in which event the joint powers agency could owe substantial termination payments to the applicable swap provider (an allocable portion of such payments the project participants would be obligated for).

#### **Reserve Policies**

During the past few years PWP has, in practice, had cash balances that exceeded 60 days of operating expenses on hand in accordance with reserve policies formalized in May 2006 as a matter of policy and not pursuant to any bond indenture or agreement. PWP was as of June 30, 2016, and currently is, in compliance with such policies. These funds represent moneys required for unanticipated operational expenses, as well as approved capital expenditures, unexpended PBC moneys and reserves for energy and

<sup>(3)</sup> Includes commercial paper, subordinate notes and full accreted value at maturity for all capital appreciation bonds. Includes IPP bonds defeased with funds provided by the City for which the City is the payee of a subordinate note receivable from IPA of approximately \$35,510,000 outstanding as of September 1, 2016.

<sup>(5)</sup> City payment obligation is with respect to actual quantity of natural gas delivered each month on a take-and-pay basis. Responsibility for bond repayment is non-recourse to the City. See "Joint Powers Agency Generation and Fuel Resources/Remote Ownership Interests – Southern California Public Power Authority – Prepaid Natural Gas Project" above.

transmission cost increases. The following table sets forth reserves at June 30, 2016 based on unaudited information, for each fund. Reserve levels are calculated in accordance with PWP's reserve policy.

Reserves <sup>(1)</sup>	( <u>\$ million</u> )
Operating Reserve	\$ 29.0
Energy Reserve	43.9
Contingency Reserve	0.5
Bond Service Reserve	14.8
PBC Reserve	1.9
General Fund Transfer Reserve	17.9
Stranded Investment Reserve	69.5
Capital Reserve	<u>48.1</u>
Total	\$225.6

<sup>(1)</sup> Based on unaudited information.

Source: Finance and Administration Business Unit of PWP.

*Operating Reserve.* This reserve account provides for 60 days of operations and maintenance expenses.

Energy Reserve. This reserve account is available to mitigate energy cost volatility and unexpected plant outages, which have to be covered by power purchased in the energy markets. The reserve amount is driven mainly by a periodic assessment of PWP's load forecast, the amount of power required to be purchased in the energy markets to supplement power already secured through long-term commitments and past purchases, and the estimated near-term forecast of natural gas and power costs.

Contingency Reserve. This reserve account is designated for equipment replacement and/or emergency work due to natural disasters.

**Bond Service Reserve.** This reserve account is a depository account for bond debt service reserves funds held by the City for PWP bonds.

**Public Benefit Charge (PBC) Reserve.** This reserve account is a depository account for balancing costs and revenues associated with the PBC Program and it is used exclusively to fund PBC-related expenditures.

General Fund Transfer Reserve. This reserve account is designated to provide funding to complete the General Fund transfer from the Light and Power Fund according to the schedule determined in the City Charter. The schedule provides for 75% of the transfer to be made in July of the succeeding fiscal year with the remaining 25% to be made upon delivery of the audited financial statements. This reserve account is built up in the applicable fiscal year and depleted in the following fiscal year.

**Stranded Investment Reserve.** This reserve account was established in 1997 to mitigate the difference between the costs associated long-term contracts with IPA and SCPPA, and the anticipated energy costs in a deregulated energy market.

Capital Reserve. This reserve account is designated to fund the design and construction costs of near-term committed capital projects. PWP generally maintains a cash flow budget for key capital projects and ensures that it has on hand sufficient funds to cover its current year ongoing capital projects. Currently, PWP is utilizing the Capital Reserve to cover its pay-as-you-go portion of the financing required for its near-term capital investments.

# Historical Operating Results and Debt Service Coverage

The following table shows the historical operating results and debt service coverage during the past five Fiscal Years on PWP's parity obligations payable from PWP's Light and Power Fund.

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TABLE 10
HISTORICAL OPERATING RESULTS AND DEBT SERVICE COVERAGE
(Dollar Amounts in Thousands)

Fiscal	Vear	Ended	June	30.

		riscai Teai Ended June 30,			
•	2012	2013	2014(1)	2015	2016(2)
Revenues:		÷			
Base Rate Operating Revenues	\$ 49,855	\$ 53,788	\$ 52,811	\$ 58,082	\$ 61,955
Recovered Energy and	,		•		
Transmission Costs	106,868	107,311	107,757	117,174	111,758
PTO – TRR Revenues	13,753	14,003	13,898	13,608	13,528
Public Benefit Charge Revenues	6,490	6,551	6,471	7,689	7,562
Sales to Other Utilities	8,963	6,522	4,021	3,764	2,397
Other Operating Revenues	22	<u>1,896</u>	3,216	3,431	1,621
Total Operating Revenues	\$185,951	\$190,071	\$188,174	\$203,748	\$198,821
Expenses:				•	
Energy Costs – Fuel					
Retail	\$ 7,294	\$ 10,807	\$ 8,029	\$7,636	\$5,236
Wholesale	4,066	3,740	2,131	2,012	1,046
Purchased Power				,	
Retail	88,050	95,058	94,441	87,701	85,066
Wholesale	461	1,021	1,072	963	1,137
Direct Operating Expenses	23,396	23,192	52,789	22,327	23,532
General, Administrative and		•			
Commercial	26,060	25,533	39,478	27,171	29,573
Interest Expense	5,955	7,723	13,707	4,556	7,919
Depreciation	18,109	18,295	18,279	18,656	18,843
Pension Expense – GASB 68			(50,276)		
Total Expenses <sup>(3)</sup>	\$173,391	\$185,369	\$179,650	\$171,022	\$172,352
Earnings from Operations	\$ 12,560	\$ 4,702	\$ 8,524	\$ 32,726 <sup>(4)</sup>	\$ 26,469
Non-Operating Income	10,106	<u> 18,333</u>	<u>13,513</u>	16,085	11,011
Net Income	\$ 22,666	\$ 23,035	\$ 22,037	\$ 48,811	\$ 37,480
Cash Flow and Debt Service Calculation	· .	, J			
Add Back Interest Expense	\$ 5,955	\$ 7,723	\$ 13,707	\$ 4,556	\$ 7,919
Add Back Depreciation	<u> 18,109</u>	<u> 18,295</u>	<u> 18,279</u>	<u> 18,656</u>	<u> 18,843</u>
Available for Debt Service	\$ 46,730	\$ 49,053	\$ 54,023	\$ 72,023 <sup>(4)</sup>	\$ 64,242
Debt Service	\$ 14,126	\$ 14,945	\$ 15,885	\$ 17,665	\$ 17,825(5)
Debt Service Coverage	3.31x	3.28x	3.40x	4.08x	3.60x
Amount Available After Debt Service	\$ 32,604	\$ 34,108	\$ 38,138	\$ 54,358	\$ 46,417
· · · · · · · · · · · · · · · · · · ·					

Restated for Fiscal Year ended June 30, 2014 following the implementation of GASB Statement No. 68, "Accounting and Financial Reporting for Pensions – an amendment of GASB Statement No. 27." This statement requires the recognition of net pension liabilities and pension expense. As a result, an adjustment of \$50,275,624 for the period prior to Fiscal Year 2015 was made to the Direct Operating Expenses and the General, Administrative and Commercial for Fiscal Year ended June 30, 2014 for accounting purposes. For the purpose of calculating debt service coverage ratio for Fiscal Year ended June 30, 2014, the adjustment was excluded. See APPENDIX B for additional information regarding GASB Statement No. 68.

Source: Finance and Administration Business Unit of PWP.

Fiscal Year ended June 30, 2016 is based on unaudited information.

<sup>(3)</sup> Total Expenses for Fiscal Years ended June 30, 2012, 2013 and 2014 exclude pension expenses.

<sup>(4)</sup> Earnings from Operations increased in Fiscal Year ended June 30, 2015 as a result of the implementation of rate increases and reduction in purchased power costs due to lower energy market prices. This also increased available cash for debt service.

<sup>(5)</sup> Includes interest paid on Line of Credit.

#### **Condensed Balance Sheet**

The following Condensed Balance Sheet has been prepared by the City. The information for the Fiscal Years ended June 30, 2012 through June 30, 2015 has been prepared based upon audited financial statements. The information for the Fiscal Year ended June 30, 2016 is based on unaudited information.

# TABLE 11 CITY OF PASADENA ELECTRIC UTILITY FUND CONDENSED BALANCE SHEET (Dollar Amounts in Thousands)

Fiscal Year Ended June 30,

	2012	2013	2014(1)	2015	2016 <sup>(2)</sup>
Current & Non-Current Assets	\$249,209	\$231,961	\$207,443	\$213,641	\$248,586
Restricted Assets	70,581	71,560	146,220	102,360	85,287
Net Property, Plant and Equipment	356,976	374,292	418,912	478,863	513,725
Total Assets	676,766	677,813	<u>_772,575</u>	794,864	<u>847,598</u>
Deferred Outflow of Resources			<u>2,051</u>	6,250	5,849
Current Liabilities	19,376	24,020	. 33,656	34,709	78,735
Long-Term Liabilities	136,209	123,039	253,749	236,917	224,928
Total Liabilities	155,585	147,059	<u>287,405</u>	271,626	303,663
Deferred Inflow of Resources		612		9,578	9,578
Total Net Position	\$521,181	\$530,142	\$487,221	\$519,910 <sup>(3)</sup>	\$540,206 <sup>(3)</sup>

<sup>(1)</sup> Restated for Fiscal Year ended June 30, 2014 primarily due to the implementation of GASB Statement No. 68. See APPENDIX B for additional information regarding GASB Statement No. 68.

### RATE REGULATION

The City sets rates, fees and charges for electric service. The authority of the City to impose and collect rates and charges for electric power and energy sold and delivered is not subject to the general regulatory jurisdiction of the CPUC and presently neither the CPUC nor any other regulatory authority of the State of California nor the FERC approves such rates and charges. Although the retail rates of the City for electric service are not subject to approval by any federal agency, the City is subject to certain ratemaking provisions of PURPA and Sections 211-213 of the Federal Power Act ("FPA"). It is possible that future legislative and/or regulatory changes could subject the rates and/or service area of the City to the jurisdiction of the CPUC or to other limitations or requirements.

FERC could potentially assert jurisdiction over rates of licensees of hydroelectric projects and customers of such licensees under Part I of the Federal Power Act, although it has not as a practical matter exercised or sought to exercise such jurisdiction to modify rates that would legitimately be charged.

Under Sections 211, 211A, 212 and 213 of the FPA, FERC has the authority, under certain circumstances and pursuant to certain procedures, to order any utility (municipal or otherwise) to provide transmission access to others at FERC-approved rates. In addition, the Energy Policy Act of 2005 expanded FERC's jurisdiction to require municipal utilities that sell more than eight million MWhs of energy per year to pay refunds under certain circumstances for sales into organized markets. To date, it is unclear when, if ever, the City would meet this threshold requirement.

Fiscal Year ended June 30, 2016 is based on unaudited information.

<sup>(3)</sup> Changes in Total Net Position are primarily due to favorable operating results during Fiscal Years ended June 30, 2015 and June 30, 2016. Source: Finance and Administration Business Unit of PWP.

The California Energy Commission (the "CEC") is authorized to evaluate rate policies for electric energy as related to the goals of the Energy Resources Conservation and Development Act and to make recommendations to the Governor, the Legislature and publicly owned electric utilities.

#### DEVELOPMENTS IN THE CALIFORNIA ENERGY MARKETS

# State Legislation

A number of bills affecting the electric utility industry have been introduced or enacted by the California Legislature in recent years. In general, these bills regulate greenhouse gas emissions and provide for greater investment in energy efficiency and environmentally friendly generation and storage alternatives, principally through more stringent renewable resource portfolio standard requirements. The following is a brief summary of certain of these bills that have been enacted.

Greenhouse Gas Emissions – Executive Orders. On June 1, 2005, then Governor Arnold Schwarzenegger signed Executive Order S-3-05, which placed an emphasis on efforts to reduce greenhouse gas emissions by establishing statewide greenhouse gas reduction targets. The targets are: (i) a reduction to 2000 emissions levels by 2010; (ii) a reduction to 1990 levels by 2020; and (iii) a reduction to 80% below 1990 levels by 2050. The Executive Order also called for the California Environmental Protection Agency to lead a multi-agency effort to examine the impacts of climate change on California and develop strategies and mitigation plans to achieve the targets. On April 25, 2006, then Governor Schwarzenegger also signed Executive Order S-06-06 which directs the State of California to meet a 20% biomass utilization target within the renewable generation targets of 2010 and 2020 for the contribution to greenhouse gas emission reduction.

On April 29, 2015, Governor Jerry Brown signed Executive Order B-30-15, which establishes a new interim statewide greenhouse gas emission reduction target to reduce greenhouse gas emissions to 40% below 1990 levels by 2030. The Executive Order indicates that the new interim target is aimed at ensuring that California meets the target established by Executive Order S-3-05 of reducing greenhouse gas emission to 80% below 1990 levels by 2050. The Executive Order also directs the California Natural Resources Agency to update the State's climate adaptation strategy every three years and to ensure that its provisions are fully implemented. Among other requirements, the Executive Order provides that the State's adaptation strategy must identify a lead agency or agencies that are responsible for adaptation efforts in at least the following sectors: water, energy, transportation, public health, agriculture, emergency services, forestry, biodiversity and habitat, and ocean and coastal resources. The Executive Order required that the lead agencies for each sector outline the actions in their sector that will be taken as identified in the State's adaptation strategy and report back to the California Natural Resources Agency by June 2016.

Greenhouse Gas Emissions – Global Warming Solutions Act. Then Governor Schwarzenegger signed Assembly Bill 32, the Global Warming Solutions Act of 2006 (the "GWSA"), which became effective as law on January 1, 2007. The GWSA prescribed a statewide cap on global warming pollution with a goal of returning to 1990 greenhouse gas emission levels by 2020. In addition, the GWSA established an annual mandatory reporting requirement for all investor-owned utilities ("IOUs"), local publicly-owned electric utilities ("POUs") and other load-serving entities (electric utilities providing energy to end-use customers) to inventory and report greenhouse gas emissions to the California Air Resources Board ("CARB"), required CARB to adopt regulations for significant greenhouse gas emission sources (allowing CARB to design a "cap-and-trade" system) and gave CARB the authority to enforce such regulations beginning in 2012.

On December 11, 2008, CARB adopted a "scoping plan" to reduce greenhouse gas emissions. The scoping plan set out a mixed approach of market structures, regulation, fees and voluntary measures.

On October 20, 2011, CARB adopted a regulation implementing its cap-and-trade program. The California Office of Administrative Law ("OAL") approved the regulation on December 13, 2011. The cap-and-trade regulation became effective on January 1, 2012. Emission compliance obligations under the regulation began on January 1, 2013. The cap-and-trade program covers sources accounting for 85% of California's greenhouse gas emissions, the largest program of its type in the United States.

The cap-and-trade program is being implemented in phases. The first phase of the program (January 1, 2013 to December 31, 2014) introduced a hard emissions cap covering emissions from electricity generators, electricity importers and large industrial sources emitting more than 25,000 metric tons of carbon dioxide-equivalent greenhouse gases ("CDE") per year. In 2015, the program was expanded to cover emissions from transportation fuels, natural gas, propane and other fossil fuels. The cap will decline each year until the end of the program currently scheduled for 2020 unless otherwise extended.

The cap-and-trade program includes the distribution of carbon allowances equal to the annual emissions cap. Each allowance is equal to one metric ton of CDE. As part of a transition process, initially, most of the allowances were distributed for free. Additional allowances are being auctioned quarterly (auctions began in November 2012). Utilities can acquire more allowances at these auctions or on the secondary market. IOUs are required to auction the allowances they received for free from CARB. This requirement also applies to POUs that sell electricity into the CAISO markets, other than sales of electricity from resources funded by municipal tax-exempt debt where the POU makes a matched purchase to serve its traditional retail customers. Utilities required to sell their allowances in the auctions are then required to purchase allowances to meet their compliance obligations, and use any remaining proceeds from the sale of their allocated allowances for the benefit of their ratepayers and to meet the goals of the GWSA. POUs that do not sell into the CAISO markets, and those that sell into the CAISO markets only electricity from resources funded by municipal tax-exempt debt, have three options (which are not mutually exclusive) once their allocated allowances are distributed to them. They can (i) place allowances in their compliance accounts to meet compliance obligations, (ii) place allowances in the compliance account of a joint powers agency or public power utility that generates power on their behalf, and/or (iii) auction the allowances and use the proceeds to benefit their ratepayers and meet the goals of the GWSA.

The cap-and-trade program also allows covered entities to use offset credits for compliance (not exceeding 8% of a covered entity's compliance obligation). Offsets can be generated by emission reduction projects in sectors that are not regulated under the cap-and-trade program. CARB has approved the following types of offset projects: urban forest projects, reforestation projects, destruction of ozone-depleting substances, livestock methane management projects, destruction of fugitive coal mine methane and rice cultivation practices. CARB will continue to consider additional and updated offset protocols, including international, sector-based offsets.

On April 25, 2014, CARB adopted various changes to the cap-and-trade program, including provisions relating to the electricity sector such as "safe harbor" provisions under the "resource shuffling" prohibition. These changes became effective on July 1, 2014.

The California cap-and-trade program is linked to the equivalent program in Quebec, Canada. The link took effect on January 1, 2014, although the first joint auction was delayed until November 25, 2014 in order to resolve certain technical issues. California's program may be linked to additional Canadian provincial cap-and-trade programs, and possibly other U.S. state cap-and-trade programs, in later years as part of the Western Climate Initiative. The Western Climate Initiative is a regional effort consisting of California and four Canadian provinces (Quebec, British Columbia, Ontario and Manitoba), which have established a greenhouse gas reduction trading framework.

CARB held an October 2, 2015 workshop to begin work towards developing 2016 cap-and-trade program amendments. The proceeding is underway. CARB has four stated objectives: (i) to extend the program beyond 2020; (ii) to improve programmatic efficiencies (including for auctions and data reporting); (iii) updates to better reflect the latest technical data on global warming potential and experiences with other emissions trading programs; and (iv) to maintain the environmental and market integrity of California's program. Additional workshops and comment periods are continuing in what is expected to be a year-long rulemaking proceeding. On July 12, 2016, CARB released proposed amendments to the cap-and trade program to extend major provisions of the program to 2030. Under the draft proposal, new emissions caps would be established for 2021 through 2030. contemplates that the emissions cap would decline by approximately 3.5% per year between 2021 and 2030 (steeper than the approximately 2% decline under the current program). As is the case with the current program, under the draft proposal, entities with compliance obligations would be required to acquire and surrender carbon allowances or offset credits equal to annual emissions. The draft proposal also seeks to set initial emissions allowance budgets for 2031 through 2050, although staff noted that annual caps would be required to be refined in the post-2030 period. Under the proposed amendments, the linkage of California's cap-and trade program to the equivalent Quebec cap-and-trade system would continue, and a new linkage with province of Ontario would be established beginning in 2018. The draft proposal also includes several amendments that will allow the State to use the cap-and-trade program to comply with the federal Clean Power Plan (which is currently stayed during the pendency of ongoing litigation as discussed below). See "OTHER FACTORS AFFECTING THE ELECTRIC UTILITY INDUSTRY - Environmental Issues - Greenhouse Gas Regulations under the Clean Air Act." The proposed amendments will be subject to a formal comment period, as well as review by the OAL. CARB has indicated that initial consideration of the proposed amendments by CARB is planned for [September 2016], with a final vote on the proposed amendments by the CARB Board expected in March of 2017. As noted above, CARB is also working on the 2030 Target Scoping Plan Update. CARB staff has indicated that it intends for the CARB Board to act on the scoping plan update prior to final action of the proposed cap-and-trade program amendments.

While CARB is moving forward in developing regulations beyond 2020, a California Third District Court of Appeals case is pending (awaiting oral arguments) against CARB seeking review of the constitutionality of the State of California's sale of allowances in the cap-and-trade auctions as an unconstitutional tax, since the legislation authorizing cap-and-trade (Assembly Bill 32) was not passed with a 2/3 supermajority vote of the California Legislature. Should it be determined that a 2/3 supermajority vote was necessary to pass AB 32, future legislation to ratify and extend the cap-and-trade program beyond 2020 would require a supermajority vote.

The City is unable to predict at this time the full impact of the cap-and-trade program over the long-term on the Electric System or on the electric utility industry generally or the likelihood or impact of any additional changes to the program. However, the City could be adversely affected in the future if CARB changes the allowance allocation methodology, or if the greenhouse gas emissions of its resource

portfolio is in excess of the allowances administratively allocated to it and it is required to purchase compliance instruments on the market to cover its emissions. The City may also be adversely affected depending on how the federal Clean Power Plan affects the State's cap-and-trade program. See "OTHER FACTORS AFFECTING THE ELECTRIC UTILITY INDUSTRY – Environmental Issues – *Greenhouse Gas Regulations under the Clean Air Act*" for a brief description of the federal Clean Power Plan.

Greenhouse Gas Emissions – Emissions Performance Standard. Senate Bill 1368 ("SB 1368") became effective as law on January 1, 2007. It provides for an emission performance standard ("EPS"), restricting new investments in baseload fossil fuel electric generating resources that exceed the rate of greenhouse gas emissions for existing combined-cycle natural gas baseload generation. SB 1368 allows the CEC to establish a regulatory framework to enforce the EPS for POUs such as the City. The CPUC has a similar responsibility for the IOUs. The regulations promulgated by the CEC were approved by the OAL on October 16, 2007. The CEC regulations prohibit any investment in baseload generation that does not meet the EPS of 1,100 pounds of carbon dioxide ("CO<sub>2</sub>") per MWh of electricity produced, with limited exceptions for routine maintenance, requirements of pre-existing contractual commitments, or threat of significant financial harm.

In January 2012, the CEC initiated a review of the regulations for enforcement of the EPS for POUs to ensure there is adequate review of investments in facilities that do not meet the EPS. On March 19, 2014, the CEC issued its Final Conclusions in the EPS proceeding. The CEC proposed to expand the public notice requirement so that a POU would have to post a notice of a public meeting at which its governing board would consider any expenditure over \$2.5 million to meet environmental regulatory requirements at a non-EPS compliant baseload facility. The CEC further proposed to require each POU to file an annual notice identifying all investments over \$2.5 million that it anticipates making during the subsequent 12 months on non-EPS compliant baseload facilities to comply with environmental regulatory requirements. This requirement would be waived for any POU that has entered into a binding agreement to divest within five years of all baseload facilities exceeding the EPS. The CEC did not propose to lower the EPS. Further, by letter from the CPUC to the CEC, the CPUC expressed its view that the EPS not be lowered. A final regulatory package was unanimously adopted at the CEC's June 18, 2014 business meeting. The adopted regulations had limited changes to the proposed POU reporting requirements. CEC staff has also since confirmed that the \$2.5 million threshold applies to an individual investment by each utility - not the combined investment of all participants in a project. These changes and any future changes to the EPS regulations may impact the City.

Energy Procurement and Efficiency Reporting. Senate Bill 1037 ("SB 1037") was signed by then Governor Schwarzenegger on September 29, 2005. It requires that each POU, including the City, prior to procuring new energy generation resources, first acquire all available energy efficiency, demand reduction, and renewable resources that are cost-effective, reliable and feasible. SB 1037 also requires each POU to report annually to its customers and to the CEC its investment in energy efficiency and demand reduction programs. The City has complied with such reporting requirements.

California Assembly Bill 2021 ("AB 2021"), signed by then Governor Schwarzenegger on September 29, 2006, requires that the POUs establish, report, and explain the basis of the annual energy efficiency and demand reduction targets by June 1, 2007 and every three years thereafter for a ten-year horizon. A subsequent bill has changed the time interval for establishing annual targets to every four years. The City has complied with this reporting requirement under AB 2021. Future reporting requirements under AB 2021 include: (i) the identification of sources of funding for the investment in energy efficiency and demand reduction programs; (ii) the methodologies and input assumptions used to determine cost-effectiveness; and (iii) the results of an independent evaluation to measure and verify energy efficiency savings and demand reduction program impacts. The information obtained from the POUs is being used by the CEC to present the progress made by the POUs towards the State of California's goal of reducing electrical consumption by 10% within ten years and the greenhouse gas

targets presented in Executive Order S-3-05. In addition, the CEC will provide recommendations for improvement to assist each POU in achieving cost-effective, reliable, and feasible savings in conjunction with the established targets for reduction. Governor Brown signed Assembly Bill 802 into law on October 8, 2015 that allows savings to bring buildings up to code to count (rather than only "above code" savings to count) towards energy efficiency and demand reduction targets while setting new benchmarking requirements for building owners and usage disclosure for California utilities.

California Senate Bill 350 ("SB 350"), signed by Governor Brown in October 2015, requires the CEC to establish a statewide goal of a cumulative doubling of statewide energy efficiency savings in electricity by retail customers by January 1, 2030. See "— Clean Energy and Pollution Reduction Act of 2015" below.

Renewables Portfolio Standard. Senate Bill X1-2 ("SBX1-2"), the "California Renewable Energy Resources Act," was signed into law by Governor Brown on April 12, 2011. SBX1-2 codifies the Renewables Portfolio Standard ("RPS") target for retail electricity sellers to serve 33% of their loads with eligible renewable energy resources by 2020 as provided in Executive Order S-14-08 (signed by Governor Brown in November 2008). As enacted, SBX1-2 makes the requirements of the RPS program applicable to POUs (rather than just prescribing that POUs meet the intent of the legislation as under previous statutes). However, the governing boards of POUs are responsible for implementing the requirements, rather than the CPUC, as is the case for the IOUs. In addition, the CEC is given certain enforcement authority for POUs and CARB is given the authority to set penalties.

SBX1-2 requires each POU to adopt and implement a renewable energy resource procurement plan. As set out in more detail in the CEC's RPS enforcement regulation, noted below, the plan must require the utility to procure at least the following amounts of electricity products from eligible renewable energy resources, which may include RECs, as a proportion of total kilowatt hours sold to the utility's retail end-use customers: (i) over the 2011-2013 compliance period, an average of 20% of retail sales from January 1, 2011 to December 31, 2013, inclusive; (ii) over the 2014-2016 compliance period, a total equal to 20% of 2014 retail sales, 20% of 2015 retail sales, and 25% of 2016 retail sales; and (iii) over the 2017-2020 compliance period, a total equal to 27% of 2017 retail sales, 29% of 2018 retail sales, 31% of 2019 retail sales, and 33% of 2020 retail sales. More recently, SB 350 increased the statewide RPS to 50% by 2030. See "— Clean Energy and Pollution Reduction Act of 2015" below.

SBX1-2 grandfathers any facility approved by the governing board of a POU prior to June 1, 2010 as satisfying renewable energy procurement obligations adopted under prior law if the facility is a "renewable electrical generation facility" as defined in the bill (subject to certain restrictions). Renewable electrical generation facilities include certain out-of-state renewable energy generation facilities if such facility: (i) will not cause or contribute to any violation of a California environmental quality standard or requirement, (ii) participates in the accounting system to verify compliance with the RPS program requirements, and (iii) either (a) commenced initial commercial operation after January 1, 2005 or (b) either (x) the electricity generated by the facility is from incremental generation resulting from expansion or repowering of the facility or (y) the electricity generated by the facility was procured by a retail seller or POU as of January 1, 2010. The percentage of a retail electricity seller's RPS requirements that may be met with unbundled RECs from generating facilities outside California declines over time, beginning at 25% through 2013 and declining to a level of 10% in 2017 and beyond.

The CEC has developed detailed rules to implement SBX1-2. On June 12, 2013, the CEC adopted regulations for the enforcement of the RPS program requirements for POUs. In connection with the implementation of SBX1-2, the CEC is also responsible for certifying electric generation facilities as "eligible renewable energy resources" for purposes of the RPS program, and has adopted guidelines that identify the requirements, conditions and process for certification of facilities as eligible renewable energy resources. These guidelines are revised periodically, including to reflect changes in statute and

market conditions, and were most recently updated on June 10, 2015 by the adoption by the CEC of its Renewables Portfolio Standard Eligibility Guidebook, 8th Edition. Certain amendments to the RPS Enforcement Procedures regulations were approved by the CEC on October 14, 2015 that clarify and expand certain eligibility definitions. On March 17, 2016, CEC staff held a scoping workshop to solicit public comment from interested parties on staff proposed revisions to the Renewables Portfolio Standard Eligibility Guidebook in connection with the development of the next edition. The current guidelines identify bio-methane as an eligible renewable energy resource in certain circumstances. Under these guidelines, utilities that procure bio-methane were required to reapply for certification of the generating facilities that use the bio-methane.

Clean Energy and Pollution Reduction Act of 2015. SB 350, the "Clean Energy and Pollution Reduction Act of 2015," was signed into law by Governor Brown on October 7, 2015. SB 350, as enacted, establishes an RPS target of 50% by December 31, 2030 for the amount of electricity generated and sold to retail customers from eligible renewable energy resources for retail sellers and POUs, including interim targets of (i) 40% by the end of the 2021-2024 compliance period, (ii) 45% by the end of the 2025-2027 compliance period and (iii) 50% by the end of the 2028-2030 compliance period.

SB 350 requires each retail seller of electricity (including IOUs, most POUs above a certain size threshold, community choice aggregators and energy service providers) to provide a renewable energy procurement plan on an annual basis, and to file an integrated resource plan ("IRP"), and a schedule for periodic updates to the plan, for approval. This includes addressing how affected utilities plan to meet the 2030 interim emissions reductions goal set by CARB. IRPs for retail sellers other than POUs will be reviewed by the CPUC. For POUs, the governing body of the POU is responsible for adopting the IRP, subject to review by the CEC, which can recommend modifications to correct any shortcomings.

The CEC adopted an order instituting a new rulemaking proceeding on January 13, 2016 to implement the RPS and IRP provisions of SB 350. CARB has begun a public comment process to determine how best to set utility-specific greenhouse gas emissions reduction goals for those utilities that meet the IRP size threshold (*i.e.*, local publicly-owned electric utilities with an annual electrical demand exceeding 700 gigawatt hours, as determined on a three-year average commencing January 1, 2013).

SB 350 specifies the factors that must be considered in proposed procurement plans and provides that the goals must be balanced by the need to have just and reasonable rates, to ensure system and local reliability, to preserve the resilience of the electric grid, and to enhance distribution system management. The bill specifically requires the CPUC to identify a "balanced portfolio of resources" to ensure "reliability" and "optimal integration" of renewables, and requires that utilities include in their procurement plans a "strategy for procuring best-fit and least cost resources" to meet the portfolio needs the CPUC identifies.

SB 350 further requires the CEC to establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas final end uses of retail customers by January 1, 2030. The CPUC is required to establish energy efficiency targets for electrical and gas corporations consistent with this goal, and specifies programs that may be used to achieve the goal. POUs are required to establish annual targets for energy efficiency savings and demand reduction consistent with the goal and to report those targets to the CEC every four years for the next 10-year period. The bill provides guidance as to what measures qualify and requires an evaluation of feasibility and cost effectiveness in setting annual targets for those savings. SB 350 also requires the CEC to adopt a responsible contractor policy and establish consumer protection guidelines.

SB 350 requires the CAISO to prepare proposed governance modifications to facilitate the transformation of the CAISO into a regional organization but provides that such governance

modifications will not take effect prior to completion of a specified process for review and study of the impacts of a regional market and the enactment by the Legislature of future legislation implementing the proposed governance changes by 2019. Stakeholder and public review of the study results and potential governance structure are ongoing and are expected to last throughout the year.

In July 2016, the CAISO released a revised set of proposed principles for regional governance of the CAISO, which were presented at a joint state agency workshop on July 26, 2016. Following further input from stakeholders, the proposed principles are expected to be refined for transmittal to the Governor, who may choose to present them to the Legislature as a proposed modification of the CAISO's governance, pursuant to SB 350. The principles, if approved, could then be incorporated into state legislation that, if enacted, would provide for the proposed changes to the CAISO governance structure necessary prior to any transformation of the CAISO to a regional organization. Governor Brown has indicated that such legislation is not likely to be considered by the legislature until next year.

In addition, in furtherance of the potential transformation of the CAISO into a regional organization, the CAISO and PacifiCorp have been studying the feasibility, costs and benefits of full participation by PacifiCorp in the CAISO. These activities are ongoing. Approval from the California legislature and Governor for the CAISO to become a regional organization as described above would be required before full integration of the PacifiCorp and CAISO balancing authority areas could occur, which is currently not expected prior to 2019.

Solar Power. On August 21, 2006, then Governor Schwarzenegger signed into law California Senate Bill 1 (also known as the "California Solar Initiative"). This legislation requires POUs, including the City, to establish a program supporting the stated goal of the legislation to install 3,000 MW of photovoltaic energy in California. POUs are also required to establish eligibility criteria in collaboration with the CEC for the funding of solar energy systems receiving ratepayer-funded incentives. The legislation gives a POU the choice of selecting an incentive based on the installed capacity or based on the energy produced by the solar energy system, measured in kilowatt-hours. Incentives would be required to decrease at a minimum average rate of 7% per year. POUs also have to meet certain reporting requirements regarding the installed capacity, number of installed systems, number of applicants, amount of awarded incentives and the contribution toward the program's goals. The City has established a program in accordance with the requirements of the California Solar Initiative.

# **Future Regulation**

The electric industry is subject to continuing legislative and administrative reform. States routinely consider changes to the way in which they regulate the electric industry. Historically, both further deregulation and forms of additional regulation have been proposed for the industry, which has been highly regulated throughout its history. While there is no current proposal to further deregulate the industry, there still are additional regulations or legislative mandates being proposed or considered for the industry such as higher reliance on renewable energy and tighter regulations for greenhouse gas emission reductions. The City is unable to predict at this time the impact any such proposals will have on the operations and finances of the Electric System or the electric utility industry generally.

# Impact of Developments on the City

The effect of the developments in the California energy markets described above on the Electric System cannot be fully ascertained at this time. Also, volatility in energy prices in California may return due to a variety of factors that affect both the supply and demand for electric energy in the western United States. These factors include, but are not limited to, the adequacy of generation resources to meet peak demands, the availability and cost of renewable energy, the impact of economy-wide greenhouse gas emission legislation and regulations, fuel costs and availability, weather effects on customer demand,

transmission congestion, the strength of the economy in California and surrounding states and levels of hydroelectric generation within the region (including the Pacific Northwest). See "OTHER FACTORS AFFECTING THE ELECTRIC UTILITY INDUSTRY." This price volatility may contribute to greater volatility in the revenues of the Electric System from the sale (and purchase) of electric energy and, therefore, could materially affect the City's financial condition. The City undertakes resource planning and risk management activities and manages its resource portfolio to mitigate such price volatility and spot market rate exposure.

# OTHER FACTORS AFFECTING THE ELECTRIC UTILITY INDUSTRY

# **Federal Policy on Cybersecurity**

On February 13, 2013, President Obama issued the Executive Order "Improving Critical Infrastructure Security" ("Executive Order"). Among other things, the Executive Order calls for improved information sharing and processing of security clearances for owners and operators of critical infrastructure. The Executive Order further requires the Secretary of Commerce to direct the National Institute of Standards and Technology ("NIST") to lead the development of a framework ("Framework") to reduce cyber risks to critical infrastructure. NIST released the first version of the voluntary Framework on February 12, 2014. NIST has indicated that it intends for the Framework to be a living document that will continue to be updated and improved as industry provides feedback on implementation.

The Executive Order could result in substantive changes to policy, regulatory, and compliance issues that will affect the electric industry. The City will continue to monitor this issue in order to help ensure that the Framework continues to recognize the existing cybersecurity efforts in the electric sector, and does not undermine them by creating duplicative or inconsistent processes.

The Cybersecurity Information Sharing Act of 2015 was signed into law on December 18, 2015 as part of the year-end Omnibus Appropriations Act. It creates an industry-supported, voluntary cybersecurity information sharing program that will encourage both public and private sector entities to share cyber-related threat information.

# Federal Energy Legislation

Energy Policy Act of 2005. Under the federal Energy Policy Act of 2005 ("EPAct 2005"), FERC was given refund authority over POUs if they sell into short-term markets, like the CAISO markets, and sell eight million MWhs or more of electric energy on an annual basis. In addition, FERC was given authority over the behavior of market participants. Under FERC's authority it can impose penalties on any seller for using a manipulative or deceptive device, including market manipulation, in connection with the purchase or sale of energy or of transmission service. The Commodity Futures Trading Commission also has jurisdiction to enforce certain types of market manipulation or deception claims under the Commodity Exchange Act.

EPAct 2005 authorized FERC to issue permits to construct or modify transmission facilities located in a national interest electric transmission corridor if FERC determines that the statutory conditions are met. EPAct 2005 also required the creation of an electric reliability organization ("ERO") to establish and enforce, under FERC supervision, mandatory reliability standards ("Reliability Standards") to increase system reliability and minimize blackouts. Failure to comply with such Reliability Standards exposes a utility to significant fines and penalties by the ERO.

**NERC Reliability Standards.** EPAct 2005 required FERC to certify an ERO to develop mandatory and enforceable Reliability Standards, subject to FERC review and approval. The Reliability Standards apply to users, owners and operators of the Bulk-Power System, as more specifically set forth

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in each Reliability Standard. On February 3, 2006, FERC issued Order 672, which certified the North American Electric Reliability Corporation ("NERC") as the ERO. Many Reliability Standards have since been approved by FERC. Such standards pertain not only to the planning, operations, and maintenance of Bulk-Power System facilities, but also to the cyber and physical security of certain critical facilities.

The ERO or the entities to which NERC has delegated enforcement authority through an agreement approved by FERC ("Regional Entities"), such as WECC, may enforce the Reliability Standards, subject to FERC oversight, or FERC may independently enforce them. Potential monetary sanctions include fines of up to \$1 million per violation per day. FERC Order 693 further provided the ERO and Regional Entities with the discretion necessary to assess penalties for such violations, while also having discretion to calculate a penalty without collecting the penalty if circumstances warrant.

# Federal Regulation of Transmission Access

EPAct 2005 authorizes FERC to compel "open access" to the transmission systems of certain utilities that are not generally regulated by FERC, including municipal utilities if the utility sells more than four million MWhs of electricity per year. Under open access, a transmission provider must allow all customers to use the system under standardized rates, terms and conditions of service.

FERC Order No. 888 requires the provision of open access transmission services on a nondiscriminatory basis by all "jurisdictional utilities" (which, by definition, does not include municipal entities like the City) by requiring all such utilities to file Open Access Transmission Tariffs ("OATTs"). Order No. 888 also requires "non-jurisdictional utilities" (which, by definition, does include the City) that purchase transmission services from a jurisdictional utility under an open access tariff and that owns or controls transmission facilities to provide open access service to the jurisdictional utility under terms that are comparable to the service that the non-jurisdictional utility provides itself. Section 211A of the EPAct 2005 authorizes, but does not require, FERC to order unregulated transmission utilities to provide transmission services. Specifically, FERC may require an unregulated transmitting utility to provide access to their transmission facilities (1) at rates that are comparable to those that the unregulated transmitting utility charges to itself; and (2) on terms and conditions (not relating to rates) that are comparable to those under which the unregulated transmitting utility provides transmission services to itself that are not unduly discriminatory or preferential.

On February 16, 2007, FERC issued Order 890, which concluded that reform of its pro forma OATT was necessary to reduce the potential for undue discrimination and provide clarity in the obligations of transmission providers and customers. Significantly, in Order 890 FERC stated that it will implement its authority under Section 211A with respect to unregulated transmitting utilities on a case-by-case basis and retain the current reciprocity provisions.

On July 21, 2011, FERC issued Order 1000, which among other things requires public utility (jurisdictional) transmission providers to participate in a regional transmission planning process that produces a regional transmission plan and that incorporates a regional and inter-regional cost allocation methodology. Further, FERC states that it has the authority to allocate costs to beneficiaries of transmission services, even in the absence of a contractual relationship between the owner of the transmission facilities and the beneficiary. Under EPAct 2005, FERC may not require municipal utilities to join regional transmission organizations, in which participating utilities allow an independent entity to oversee operation of the utilities' transmission facilities. FERC has stated, however, that FERC expects such utilities to participate in the regional processes for transmission planning and that FERC will pursue associated complaints against such utilities on a case-by-case basis.

# **Other Federal Legislation**

Congress has considered and is considering numerous bills addressing domestic energy policies and various environmental matters, including bills relating to energy supplies and development (such as a federal energy efficiency standard and expedited permitting for natural gas drilling projects), global warming and water quality. Many of these bills, if enacted into law, could have a material impact on the Electric System and the electric utility industry generally. In light of the variety of issues affecting the utility sector, federal energy legislation in other areas such as reliability, transmission planning and cost allocation, operation of markets and environmental requirements is also possible. However, the City is unable to predict the outcome or potential impacts of any possible legislation on the Electric System at this time.

#### **Environmental Issues**

General. Electric utilities are subject to continuing environmental regulation. Federal, State and local standards and procedures which regulate the environmental impact of electric utilities are subject to change. These changes may arise from continuing legislative, regulatory and judicial action regarding such standards and procedures. Consequently, there is no assurance that any City facility or project will remain subject to the laws and regulations currently in effect, will always be in compliance with future laws and regulations or will always be able to obtain all required operating permits. An inability to comply with environmental standards could result in additional capital expenditures, reduced operating levels or the shutdown of individual units not in compliance. In addition, increased environmental laws and regulations may create certain barriers to new facility development, may require modification of existing facilities and may result in additional costs for affected resources.

Greenhouse Gas Regulations Under the Clean Air Act. The United States Environmental Protection Agency (the "EPA") has taken steps to regulate greenhouse gas emissions under existing law. In 2009, the EPA issued a final "endangerment finding," in which it declared that the weight of scientific evidence requires a finding that six identified greenhouse gases, namely, CO2, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, cause global warming, and that global warming endangers the public health and welfare. The final rule for the "endangerment finding" was published in the Federal Register on December 15, 2009. As a result of this finding, the EPA determined that it was authorized to issue regulations limiting CO2 emissions from, among other things, motor vehicles and stationary sources, such as electric generating facilities, under the federal Clean Air Act. The EPA subsequently issued the "Tailoring Rule," published in the Federal Register on June 3, 2010, which regulates greenhouse gas emissions from large stationary sources, including electric generating facilities, if the sources emit more than the specified threshold levels of tons per year of CO2. Large sources with the potential to emit in excess of the applicable threshold will be subject to the major source permitting requirements under the Clean Air Act, including the EPA's Prevention of Significant Deterioration ("PSD") permit program and its Title V operating permit program. Permits would be required in order to construct, modify and operate facilities exceeding the emissions threshold. Examples of such permitting requirements include, but are not limited to, the application of Best Available Control Technology (known as BACT) for greenhouse gas emissions, and monitoring, reporting, and recordkeeping for greenhouse gases.

Legislation and joint disapproval resolutions have been introduced in the United States Congress that would repeal the EPA's endangerment finding or otherwise prevent the EPA from regulating greenhouse gases as air pollutants. The endangerment finding and the Tailoring Rule have also been challenged in court, but were upheld on June 26, 2012 in a decision by the United States Court of Appeals for the District of Columbia Circuit in Coalition for Responsible Regulation, Inc., et al. v. EPA. A petition for rehearing was denied on December 20, 2012. In October 2013, several petitions for review relating to these findings were consolidated in the United States Supreme Court case Utility Air

Regulatory Group v. EPA, dealing with the issue of whether the EPA permissibly determined that its regulation of greenhouse gas emissions from new motor vehicles triggered permitting requirements under the Clean Air Act for stationary sources that emit greenhouse gases. On June 23, 2014, the U.S. Supreme Court issued its decision in the Utility Air Regulatory Group v. EPA case. In the decision, the Court invalidated substantial portions of the Tailoring Rule, which purported to modify the emissions thresholds set forth in the Clean Air Act (governing when PSD and Title V permitting would be triggered) to account for greenhouse gases, while preserving various aspects of the EPA's ability to regulate greenhouse gas emissions from most new major sources. The decision holds that, for facilities that are otherwise subject to PSD permitting obligations (by virtue of their emissions of conventional pollutants), the EPA may regulate greenhouse gases from those facilities through the PSD BACT standards (without approving the EPA's current approach to BACT regulation of greenhouse gases, or any other approach that may be adopted).

In December 2010, the EPA announced two settlements with a number of states and environmental groups. Pursuant to one settlement agreement dated December 23, 2010, the EPA on April 13, 2012 proposed establishing New Source Performance Standards limiting CO<sub>2</sub> emissions from fossil-fuel fired electric generating units. In response to a June 25, 2013 Presidential memorandum (the "Presidential Memorandum"), the EPA proposed revised, generally more stringent standards on September 20, 2013 and simultaneously rescinded the April 13, 2012 proposal. The EPA stated that the revised standards would apply only to new facilities, not reconstructed or modified facilities. The Presidential Memorandum required the EPA to propose by June 1, 2014, and to finalize by June 1, 2015, standards, regulations, or guidelines that address carbon pollution from existing and modified or reconstructed power plants.

The proposed rule for new power plants was published in the Federal Register on January 8, 2014 for public comment. At the close of the comment period on May 9, 2014, the EPA had received approximately two million comments on the proposed rule.

As contemplated by the Presidential Memorandum, on June 2, 2014, the EPA concurrently released both its "Clean Power Plan" proposal for existing power plants and its proposed revised standards for modified or reconstructed power plants. The proposed rules for existing, and modified or reconstructed, power plants were published in the Federal Register on June 18, 2014; comments on the proposed rules were accepted until December 1, 2014 and October 16, 2014, respectively.

On August 3, 2015, President Obama and the EPA announced the final version of the Clean Power Plan for existing power plants. The EPA further released its final new source performance standards for emissions of CO<sub>2</sub> for newly constructed, modified, and reconstructed power plants.

The final version of the Clean Power Plan is designed to reduce CO<sub>2</sub> emissions from the power sector by 32% on average nationwide by 2030, from a 2012 baseline. Under the final rule, the EPA will set different interim and final emissions targets for each state based on overall CO<sub>2</sub> emissions and the amount of electricity generated in the State and revised the proposed rule to encourage greater regional cooperation (through WECC for California). Under the final rule, States would have until [September] 2016 to design their state implementation plans to reach the emissions target or could request an extension until September 2018 either alone or in cooperation with other states while working on multi-state plans (however, implementation of the Clean Power Plan is currently stayed as discussed below). Under the Clean Power Plan, states may choose between two plan types in order to comply with the program: a source-based "emission standards" plan type, including source-specific requirements ensuring all affected power plants within the state meet their required emissions performance rates or state-specific rate based or mass-based goal, and a "state measures" plan type, including a mixture of measures implemented by the state, such as renewable energy standards and programs to improve residential energy efficiency, that result in affected power plants meeting the state's mass-based goal. In both cases, states will have to

demonstrate that their plan will meet the CO<sub>2</sub> emission performance rates, the state rate-based goal or the state mass-based goal by 2030. Interim standards are to be phased in from 2022 to 2029 prior to the final standards being reached in 2030. Progress towards meeting the target rates may be measured in one of three ways: (i) a rate-based state emissions goal measured in pounds per MWh; (ii) a mass-based state emissions goal measured in total short tons of CO2; and (iii) a mass-based state goal with a new source complement measured in total short tons of CO2. Under the rule, state emission targets may be met in a combination of ways, with emissions targets set based on three "building blocks" identified by the EPA as reflecting a "Best System of Emissions Reduction," which may include improved efficiency at power plants, switching generation from higher-emitting coal to lower-emitting natural gas, and shifting generation to zero-emitting renewable or nuclear energy. In the event a state fails to develop a satisfactory implementation plan, the EPA may impose a federal implementation plan instead. On August 2, 2016, California became the first state in the country to release to the public a draft of its state implementation plan. CARB will take public comments on the draft plan until September 19, 2016, or may provide comments at a public hearing on the plan which CARB has scheduled for September 22, 2016. Under the draft state implementation plan for California, CARB is using the "state measures" approach, applying the mass-based state emissions limit for the total affected power plant and has proposed to use the state cap-and-trade program as its state measure. CARB has indicated that it expects to present the final plan for approval by the CARB board in the spring of 2017, in coordination with other proposed measures. See also "DEVELOPMENTS IN THE CALIFORNIA ENERGY MARKETS - State Legislation - Greenhouse Gas Emissions - Global Warming Solutions Act."

Concurrently with the release of the final Clean Power Plan for existing power plants, on August 3, 2015, the EPA also set standards to limit CO<sub>2</sub> emissions from new, modified and reconstructed power plants. These new final carbon pollution standards will apply to: (i) any newly constructed fossil fuel-fired power plant that commenced construction on or after January 8, 2014; (ii) existing power plants subject to modification, which includes a physical or operational change that increases the source's maximum achievable hourly rate of emissions, which modification occurs on or after June 18, 2014; and (iii) reconstructed power plants, which includes any unit on which the replacement of components occurs on or after June 18, 2014 and to such an extent that the fixed capital costs of the new components exceeds 50% of the fixed capital costs that would be required to construct a comparable entirely new facility. In the final standards, the EPA is establishing separate standards for two types of fossil fuel-fired sources: (a) stationary combustion turbines, generally firing natural gas, and (b) electric utility steam generating units, generally firing coal. The new standards reflect the degree of emissions limitation achievable through the application of the "Best System of Emissions Reduction," that the EPA has determined has been adequately demonstrated for each type of unit. Under the final standards, new and reconstructed baseload natural gas-fired electricity generating units would be required to meet an emissions limit of 1,000 pounds of CO2 per MWh. Non-base load units would need to meet a clean fuels input-based standard. New coal-fired facilities would be required to meet an emissions limit of 1,400 pounds of CO2 per MWh-gross. Coal-fired electricity generating units subject to modifications resulting in an increase of hourly CO<sub>2</sub> emissions of more than 10% relative to the emissions of the most recent five years from that unit would be required to meet a unit-specific emission limit that is consistent with the unit's best historical annual CO<sub>2</sub> emissions rate since 2002. Such standard would be in the form of an emissions limit in pounds of CO2 per MWh on a gross-output basis. Reconstructed coal-fired power plants with a heat input of greater than 2,000 MMBtu/h would be required to meet an emissions limit of 1,800 pounds of CO<sub>2</sub> per MWh-gross. Smaller coal-fired units would be required to meet an emission limit of 2,000 pounds of CO2 per MWh-gross. These emissions limits are based on the use of the most efficient generating technology at the affected source.

The final Clean Power Plan and the carbon pollution standards for new, modified and reconstructed power plants became effective on October 23, 2015; the carbon pollution standards for existing power plants became effective on December 22, 2015. A number of lawsuits have been filed challenging the final rules and seeking to prevent the EPA from moving forward to implement the Clean

Power Plan. On October 23, 2015, a group of 24 state attorneys general filed an action in the U.S. Court of Appeals for the District of Columbia Circuit seeking a stay of the Clean Power Plan deadlines while its legality is reviewed by the courts. Additional legal and legislative challenges were filed and then consolidated into one case by the U.S. Court of Appeals for the District of Columbia (State of West Virginia, et al. v. EPA). On January 21, 2016, the D.C. Circuit Court denied the request for stay of implementation of the Clean Power Plan and a number of applications for stay were made to the U.S. Supreme Court by parties challenging the Clean Power Plan. On February 9, 2016, the U.S. Supreme Court granted the emergency stay applications filed by opponents of the Clean Power Plan. The orders issued by the Court prevent the EPA from implementing the Clean Power Plan not only until the D.C. Circuit Court issues a judgment on its legality, but also until the U.S. Supreme Court reviews an expected appeal of that ruling. (The D.C. Circuit Court has now delayed oral arguments in the case from June 20 until September 27, 2016 and will have all judges on the panel hear the case instead of a three-judge panel.) Given the complexity and various approaches available to states towards implementing the final Clean Power Plan, it is too early to determine the impact of the final rule with any degree of certainty in the event it is ultimately upheld. Further, the City is unable to predict at this time the outcome of any ongoing legal challenges to other EPA rulemaking with respect to greenhouse gas emissions or the effect that any final rules promulgated by the EPA regulating greenhouse gas emissions from electric generating units will have on the City's projects or the Electric System. The City is unable to predict the outcome of the legal and legislative challenges to the EPA's endangerment finding and subsequent rulemaking, or the effect that any future final rules promulgated by the EPA regulating electric generating units and other stationary sources would have on the City or the Electric System.

Air Quality - National Ambient Air Quality Standards. The Clean Air Act requires that the EPA establish National Ambient Air Quality Standards ("NAAQS") for certain air pollutants. When a NAAQS has been established, each state must identify areas in its state that do not meet the EPA standard (known as "non-attainment areas") and develop regulatory measures in its state implementation plan to reduce or control the emissions of that air pollutant in order to meet the applicable standard and become an "attainment area." The EPA periodically reviews the NAAQS for various air pollutants and has in recent years increased, or proposed to increase, the stringency of the NAAQS for certain air pollutants. The EPA revised the NAAQS for particulate matter on December 14, 2012, the NAAQS for sulfur dioxide on June 22, 2010, and the NAAQS for nitrogen dioxide on February 9, 2010, and in each case made the NAAQS more stringent. Based on the revised standards for particulate matter, nitrogen dioxide and sulfur dioxide, some areas may be designated as non-attainment. On December 18, 2014, the EPA issued a final rule making initial area designations for the 2012 NAAQS for fine particulate matter ("PM2.5"), designating 14 areas in six states as non-attainment, including the Los Angeles - San Bernardino Counties and the South Coast Air Basin. These PM2.5 designations became effective on April 15, 2015. These developments may result in stringent permitting processes for new sources of emissions and additional state restrictions on existing sources of emissions, such as power plants. On September 2, 2011, President Obama directed the EPA to withdraw a proposal advanced by the EPA to lower the NAAQS for ozone. As a result of this withdrawal, the EPA resumed the process of issuing nonattainment designations for the ozone NAAQS under the standard set in 2008. On April 30, 2012, the EPA issued ozone non-attainment designations for areas in California, including the Los Angeles - San Bernardino Counties and the South Coast Air Basin. Additional non-attainment areas for ozone have been and may continue to be designated. On May 29, 2013, the EPA proposed a rule to implement the 2008 ozone NAAQS. Comments on the proposed rule were due to the EPA by August 5, 2013. While implementing the 2008 ozone NAAQS, the EPA is continuing its review of this standard. In January 2014, the EPA released draft risk and exposure assessment documents and a draft policy assessment document relating to this review; comments were due by March 24, 2014. In addition, the U.S. Supreme Court found in its review of EPA v. EME Homer City Generation, LP that the EPA has authority to impose a Cross-State Air Pollution Rule (the "Transport Rule") which curbs air pollution emitted in upwind states to facilitate downwind attainment of three NAAQS. On November 26, 2014, the EPA proposed to strengthen the stringency of the NAAQS for ozone by lowering the existing ozone standard

of 75 parts per billion ("ppb") to between 65 and 70 ppb, although the EPA also sought public comment on a standard as low as 60 ppb. On October 1, 2015, the EPA issued its final rule, lowering the ozone standard to 70 ppb. The final rule was published in the Federal Register on October 26, 2015 and became effective on December 28, 2015. The EPA has until October 1, 2017 to make final non-attainment designations; the South Coast Air Basin is expected to once again have additional time to come into compliance with the new standard given the unique challenges the area faces in meeting ozone standards. Legal challenges have been filed by five states and industry groups.

Mercury and Air Toxics Standards. On December 16, 2011, the EPA signed a rule establishing new standards to reduce air pollution from coal- and oil-fired power plants under sections 111 (new source performance standards, or "NSPS") and 112 (toxics program) of the Clean Air Act. The final rule was published in the Federal Register on February 16, 2012. The EPA updated the Mercury and Air Toxics Standards ("MATS") emission limits on November 30, 2012 and again on March 28, 2013. The EPA is currently reconsidering certain aspects of the regulation. Under section 111 of the Clean Air Act, MATS revises the standards that new and modified facilities, including coal- and oil-fired power plants, must meet for particulate matter, sulfur dioxide, and nitrogen oxide. Under section 112, MATS sets new toxics standards limiting emissions of heavy metals, including mercury, arsenic, chromium, and nickel; and acid gases, including hydrochloric acid and hydrofluoric acid, from existing and new power plants larger than 25 MW that burn coal or oil. Power plants have up to four years to meet these standards. While many plants already meet some or all of these new standards, some plants will be required to install new equipment to meet the standards. On November 25, 2014, the U.S. Supreme Court agreed to review the MATS rule following the filing of petitions for writ of certiorari from 23 states and industry groups. On June 29, 2015, the U.S. Supreme Court issued its decision in the case, finding that the EPA interpreted the Clean Air Act improperly because it did not consider the costs of emissions reductions prior to crafting the MATS rules, and remanded the case back to the District of Columbia Circuit Court. On December 15, 2015, the District of Columbia Circuit Court determined to leave the MATS rule in place while it is being revised on remand as ordered by the U.S. Supreme Court. The EPA issued a final finding on April 14, 2016. On March 3, 2016, the U.S. Supreme Court denied an application filed by several states to stay the rule during the litigation. The City currently purchases power from coal-fired power stations that may be affected by these new rules, and in the event the MATS standards are ultimately upheld, the City may be exposed to increased costs.

Regulation of Coal Combustion Residuals. On June 21, 2010, the EPA proposed to regulate coal combustion residuals ("CCR") such as ash. The EPA proposed to list these residuals as a special waste and regulate them as a hazardous waste. This would require a federal or state permitting program covering the storage, treatment, transport, disposal, and other activities related to residuals. The EPA also proposed an alternative regulation that would classify residuals as nonhazardous solid waste. Under the alternative regulation, plants could dispose of residuals in surface impoundments or landfills if they comply with national minimum standards. The disposal standards would address location, liner requirements, groundwater monitoring and other issues, but permits would not be required under the alternative regulation. The EPA solicited additional public comments on its proposed coal combustion residual regulation on October 12, 2011 and again on August 2, 2013. The EPA released its final CCR rule on December 19, 2014, adopting the industry-preferred alternative regulation classifying CCRs as nonhazardous solid waste. Legislation is pending before the U.S. Congress to further change the final rule, though its prospects remain uncertain given the threat of a presidential veto.

Effluent Limitations Guidelines and Standards. On June 7, 2013, the EPA proposed to set technology-based effluent limitations guidelines and standards for metals and other pollutants in wastewater discharged from steam electric power plants. The proposal would cover wastewater associated with several types of equipment and processes, including flue gas desulfurization, fly ash, bottom ash, flue gas mercury control and gasification of fuels. The EPA is also considering best management practices for surface impoundments containing CCRs. The EPA proposed four preferred

alternatives for regulating wastewater discharges. The stringency of controls, types of waste streams covered, and the costs vary between the four alternatives. The public comment period on this proposal ended on September 20, 2013. The EPA was expected to issue a final rule in May 2014 but in December 2013 it announced that it would need additional time to finalize this rule. To the extent that the City purchases power from steam electric power plants, the proposed regulation could increase the cost of such power. On September 30, 2015, the EPA announced its final Steam Electric Effluent Limitation Guidelines to update the federal limits on toxic metals in discharge wastewater. The EPA will provide the industry more time to coordinate compliance with this and the coal ash rule.

The City currently purchases power from coal-fired power stations that may be affected by the regulations described above; compliance with such new rules could therefore result in an increase in the cost of power that the City purchases from such units.

#### **Other Factors**

The electric utility industry in general has been, or in the future may be, affected by a number of other factors which could impact the financial condition and competitiveness of many electric utilities and the level of utilization of generating and transmission facilities. In addition to the factors discussed above, such factors include, among others, (a) effects of compliance with rapidly changing environmental, safety, licensing, regulatory and legislative requirements other than those described above (including those affecting nuclear power plants or potential new energy storage requirements), (b) changes resulting from conservation and demand-side management programs on the timing and use of electric energy, (c) changes resulting from a national energy policy, (d) effects of competition from other electric utilities (including increased competition resulting from a movement to allow direct access or from mergers, acquisitions, and "strategic alliances" of competing electric and natural gas utilities and from competitors transmitting less expensive electricity from much greater distances over an interconnected system) and new methods of, and new facilities for, producing low-cost electricity, (e) the repeal of certain federal statutes that would have the effect of increasing the competitiveness of many IOUs, (f) increased competition from independent power producers and marketers, brokers and federal power marketing agencies, (g) "self-generation" or "distributed generation" (such as microturbines and fuel cells) by industrial and commercial customers and others, (h) issues relating to the ability to issue tax-exempt obligations, including severe restrictions on the ability to sell to nongovernmental entities electricity from generation projects and transmission service from transmission line projects financed with outstanding tax-exempt obligations, (i) effects of inflation on the operating and maintenance costs of an electric utility and its facilities, (j) changes from projected future load requirements, (k) increases in costs and uncertain availability of capital, (1) shifts in the availability and relative costs of different fuels (including the cost of natural gas and nuclear fuel), (m) sudden and dramatic increases in the price of energy purchased on the open market that may occur in times of high peak demand in an area of the country experiencing such high peak demand, such as has occurred in California, (n) inadequate risk management procedures and practices with respect to, among other things, the purchase and sale of energy and transmission capacity, (o) other legislative changes, voter initiatives, referenda and statewide propositions, (p) effects of the changes in the economy, (q) effects of possible manipulation of the electric markets, (r) natural disasters or other physical calamities, including, but not limited to, earthquakes and floods, (s) terrorist attacks and (t) changes to the climate. Any of these factors (as well as other factors) could have an adverse effect on the financial condition of any given electric utility and likely will affect individual utilities in different ways.

The City is unable to predict what impact such factors will have on the business operations and financial condition of the Electric System, but the impact could be significant. This Official Statement includes a brief discussion of certain of these factors. This discussion does not purport to be comprehensive or definitive, and these matters are subject to change subsequent to the date hereof. Extensive information on the electric utility industry is available from the legislative and regulatory

bodies and other sources in the public domain, and potential purchasers of the 2016A Bonds should obtain and review such information.

# CONSTITUTIONAL LIMITATIONS ON GOVERNMENTAL SPENDING

# **Constitutional Limitations on Governmental Spending**

Article XIIIA of the California Constitution limits the taxing powers of California public agencies. Article XIIIA provides that the maximum ad valorem tax on real property cannot exceed one percent of the "full cash value" of the property, and effectively prohibits the levying of any other ad valorem property tax except for taxes above that level required to pay debt service on voter-approved general obligation bonds. "Full cash value" is defined as "the County Assessor's valuation of real property as shown on the 1975/76 tax bill under 'full cash value' or, thereafter, the appraisal value of real property when purchased, newly constructed, or a change in ownership has occurred after the 1975 assessment." The "full cash value" is subject to annual adjustment to reflect inflation at a rate not to exceed two percent or a reduction in the consumer price index or comparable local data, or declining property value caused by damage, destruction or other factors.

The foregoing limitation does not apply to *ad valorem* taxes or special assessments to pay the interest and redemption charges on any indebtedness approved by the voters before July 1, 1978 or any bonded indebtedness for the acquisition or improvement of real property approved by two-thirds of the votes cast by the voters voting on the proposition.

Under Article XIIIB of the California Constitution, state and local government entities have an annual "appropriations limit" which limits their ability to spend certain moneys called "appropriations subject to limitation," which consist of tax revenues, certain state subventions and certain other moneys, including user charges to the extent they exceed the costs reasonably borne by the entity in providing the service for which it is levying the charge. The City believes that the electric service and use charges imposed by the City do not exceed the costs the City reasonably bears in providing electric service. In general terms, the "appropriations limit" is to be based on certain 1978/79 expenditures, and is to be adjusted annually to reflect changes in the consumer price index, population, and services provided by these entities. Among other provisions of Article XIIIB, if an entity's revenues in any year exceed the amount permitted to be spent, the excess would have to be returned by revising tax rates or fee schedules over the subsequent two years.

# **Proposition 218**

Proposition 218, a State ballot initiative known as the "Right to Vote on Taxes Act," was approved by the voters of the State of California on November 5, 1996. Proposition 218 added Articles XIIIC and XIIID to the State Constitution. Article XIIID creates additional requirements for the imposition by most local governments (including the City) of general taxes, special taxes, assessments and "property-related" fees and charges. Article XIIID explicitly exempts fees for the provision of electric service from the provisions of such article. Nevertheless, Proposition 218 could indirectly affect some California municipally-owned electric utilities. For example, to the extent Proposition 218 reduces a city's general fund revenues, such city could seek to increase the transfers from its electric utility to its general fund.

Article XIIIC expressly extends the people's initiative power to reduce or repeal previously authorized local taxes, assessments, and fees and charges. The terms "fees" and "charges" are not defined in Article XIIIC, although the California Supreme Court held in *Bighorn-Desert View Water Agency v. Verjil*, 39 Cal.4th 205 (2006), that the initiative power described in Article XIIIC may apply to a broader category of fees and charges than the property-related fees and charges governed by Article XIIID.

Moreover, in the case of *Bock v. City Council of Lompoc*, 109 Cal.App.3d 52 (1980), the Court of Appeal determined that electric rates are subject to the initiative power. Thus, electric service charges (which are expressly exempted from the provisions of Article XIIID) may be subject to the initiative provisions of Article XIIIC, thereby subjecting such fees and charges imposed by the City to reduction by the electorate. The City believes that even if the electric rates of the City are subject to the initiative power, under Article XIIIC or otherwise, the electorate of the City would be precluded from reducing electric rates and charges in a manner materially and adversely affecting the payment of the 2016A Bonds by virtue of the "impairments clause" of the United States Constitution.

# **Proposition 26**

Proposition 26 was approved by the electorate at the November 2, 2010 election and amended California Constitution Articles XIIIA and XIIIC. Proposition 26 imposes a majority voter approval requirement on local governments such as the City with respect to certain fees and charges for general purposes, and a two-thirds voter approval requirement with respect to certain fees and charges for special purposes, unless the fees and charges are expressly excluded. Proposition 26 was designed to supplement tax limitations imposed by the voters in California Constitution Articles XIIIA, XIIIC and XIIID pursuant to Proposition 13, approved in 1978, Proposition 218, approved in 1996, and other measures. Proposition 26 expressly excludes from its scope a charge imposed for a specific government service or product provided directly to the payor that is not provided to those not charged, and which does not exceed the reasonable cost to the local government of providing the service or product.

Proposition 26 is subject to interpretation by California courts. Proposition 26 may be interpreted to limit fees and charges for electric utility services charged by governmental entities such as the City to preclude future transfers of electric utility generated funds to a local government's general fund, if applicable, and/or to require stricter standards for the allocation of costs among customer classes. In Citizens for Fair REU Rates v. City of Redding (filed on January 20, 2015 and modified on February 19, 2015), for example, the California Court of Appeal considered a ratepayer challenge to a "payment in lieu of taxes" (or "PILOT") imposed by the City of Redding on its electric utility without voter approval. The city's PILOT was designed to be equivalent to the ad valorem taxes the electric utility would have had to pay if the electric utility were privately owned. The PILOT is passed through to the city's electric utility customers as part of the rates and charges for electric service. The Court of Appeal determined that a charge for electric service could be an "imposed charge," and therefore subject to Proposition 26, if the purchaser has no realistic alternative power source. Therefore, the Court held that the PILOT constituted an unconstitutional "tax" under Proposition 26 unless the city proves that the amount collected is necessary to cover the reasonable costs to the city of providing various governmental services to the city's electric utility. The Court of Appeal stated that even if the rates charged by the city are lower than those paid by others in California, they must not exceed the city's reasonable cost of providing electric service or be approved by the voters. In addition, the Court of Appeal noted that Proposition 26 has no retrospective effect as to local taxes that existed prior to November 3, 2010, but found that since the PILOT was subject to the City Council's recurring discretion, the PILOT did not escape the purview of Proposition 26. On April 29, 2015, the California Supreme Court granted review of the decision of the Court of Appeal. As a result of the California Supreme Court's grant of review, the decision of the Court of Appeal in Citizens for Fair REU Rates v. City of Redding is no longer considered published and may not be cited or relied on as precedent in the courts of the State.

The City is unable to predict at this time how Proposition 26 will be ultimately interpreted by the courts or what its future impact will be.

#### **Future Initiatives**

Article XIIIA, Article XIIIB and Articles XIIIC and XIIID were each adopted as measures that qualified for the ballot pursuant to the State's initiative process. From time to time, other initiatives have been, and could be, proposed, and if qualified for the ballot, could be adopted affecting the City's revenues or the City's ability to expend revenues. The City is unable to predict either the likelihood of qualification for ballot or passage of these measures or the nature and impact of these measures on the finances or operations of the Electric System.

#### **RATINGS**

Fitch Ratings, Inc. ("Fitch") and S&P Global Ratings have assigned their municipal bond ratings of "\_\_\_\_\_\_," respectively, to the 2016A Bonds. Such ratings reflect only the views of such organizations and any desired explanation of the significance of such ratings may be obtained from the rating agency furnishing the same, at the following addresses: Fitch Ratings, Inc., One State Street Plaza, New York, New York 10004; and S&P Global Ratings, 55 Water Street, New York, New York 10041. Generally, a rating agency bases its rating on the information and materials furnished to it and on investigations, studies and assumptions of its own. There is no assurance that any of such ratings will continue for any given period of time or that such ratings will not be revised downward or withdrawn entirely by the applicable rating agency, if in the judgment of such rating agency circumstances so warrant. Any such downward revision or withdrawal of such ratings may have an adverse effect on the 2016A Bonds.

#### TAX MATTERS

The Internal Revenue Code of 1986 (the "Code") imposes certain requirements that must be met subsequent to the issuance and delivery of the 2016A Bonds for interest thereon to be and remain excluded pursuant to section 103(a) of the Code from the gross income of the owners thereof for federal income tax purposes. Noncompliance with such requirements could cause the interest on the 2016A Bonds to be included in the gross income of the owners thereof for federal income tax purposes retroactive to the date of issuance of the 2016A Bonds. The City has covenanted in the Fiscal Agent Agreement to maintain the exclusion of the interest on the 2016A Bonds from the gross income of the owners thereof for federal income tax purposes.

In the opinion of Norton Rose Fulbright US LLP, Bond Counsel, under existing law interest on the 2016A Bonds is exempt from personal income taxes of the State of California and, assuming compliance with the aforementioned covenant, interest on the 2016A Bonds is excluded pursuant to section 103(a) of the Code from the gross income of the owners thereof for federal income tax purposes. Bond Counsel is of the further opinion that the 2016A Bonds are not "specified private activity bonds" within the meaning of section 57(a)(5) of the Code and, therefore, the interest on the 2016A Bonds is not treated as an item of tax preference for purposes of computing the alternative minimum tax imposed by section 55 of the Code; however, the receipt or accrual of interest on the 2016A Bonds owned by a corporation may affect the computation of its alternative minimum taxable income. A corporation's alternative minimum taxable income is the basis on which the alternative minimum tax imposed by section 55 of the Code will be computed. In rendering the foregoing opinions, Bond Counsel will rely upon representations and certifications of the City made in a Tax Certificate dated the date of delivery of the 2016A Bonds pertaining to the use, expenditure, and investment of the proceeds of the 2016A Bonds.

The initial public offering price of certain 2016A Bonds (the "Discount Bonds") may be less than the amount payable on such 2016A Bonds at maturity. An amount equal to the difference between the initial public offering price of a Discount Bond (assuming that a substantial amount of the Discount Bonds of that maturity are sold to the public at such price) and the amount payable at maturity constitutes

original issue discount to the initial purchaser of such Discount Bond. A portion of such original issue discount allocable to the holding period of such Discount Bond by the initial purchaser will, upon the disposition of such Discount Bond (including by reason of its payment at maturity), be treated as interest excludable from gross income, rather than as taxable gain, for federal income tax purposes, on the same terms and conditions as those for other interest on the 2016A Bonds described above. Such interest is considered to be accrued actuarially in accordance with the constant interest method over the life of a Discount Bond, taking into account the semiannual compounding of accrued interest, at the yield to maturity on such Discount Bond and generally will be allocated to an initial purchaser in a different amount from the amount of the payment denominated as interest actually received by the initial purchaser during the tax year.

However, such interest may be required to be taken into account in determining the alternative minimum taxable income of a corporation, for purposes of calculating a corporation's alternative minimum tax imposed by Section 55 of the Code, and the amount of the branch profits tax applicable to certain foreign corporations doing business in the United States, even though there will not be a corresponding cash payment. In addition, the accrual of such interest may result in certain other collateral federal income tax consequences to, among others, financial institutions, life insurance companies, property and casualty insurance companies, S corporations with subchapter C earnings and profits, individual recipients of Social Security or Railroad Retirement benefits, individuals otherwise qualifying for the earned income tax credit, owners of an interest in a financial asset securitization investment trust, and taxpayers who may be deemed to have incurred or continued indebtedness to purchase or carry, or who have paid or incurred certain expenses allocable to, tax-exempt obligations. Moreover, in the event of the redemption, sale or other taxable disposition of a Discount Bond by the initial owner prior to maturity, the amount realized by such owner in excess of the basis of such Discount Bond in the hands of such owner (adjusted upward by the portion of the original issue discount allocable to the period for which such Discount Bond was held) is includable in gross income. Owners of Discount Bonds should consult with their own tax advisors with respect to the determination of accrued original issue discount on Discount Bonds for federal income tax purposes and with respect to the state and local tax consequences of owning and disposing of Discount Bonds.

The purchase price of certain 2016A Bonds (the "Premium Bonds") paid by an owner may be greater than the amount payable on such 2016A Bonds at maturity. An amount equal to the excess of a purchaser's tax basis in a Premium Bond over the amount payable at maturity constitutes premium to such purchaser. The basis for federal income tax purposes of a Premium Bond in the hands of such purchaser must be reduced each year by the amortizable bond premium, although no federal income tax deduction is allowed as a result of such reduction in basis for amortizable bond premium. Such reduction in basis will increase the amount of any gain (or decrease the amount of any loss) to be recognized for federal income tax purposes upon a sale or other taxable disposition of a Premium Bond. The amount of premium that is amortizable each year by a purchaser is determined by using such purchaser's yield to maturity (or, in some cases with respect to a callable bond, the yield based on a call date that results in the lowest yield on the bond). Purchasers of the Premium Bonds should consult with their own tax advisors with respect to the determination of amortizable bond premium on Premium Bonds for federal income tax purposes and with respect to the state and local tax consequences of owning and disposing of Premium Bonds.

Bond Counsel has not undertaken to advise in the future whether any events after the date of issuance of the 2016A Bonds may affect the tax status of interest on the 2016A Bonds or the tax consequences of the ownership of the 2016A Bonds. No assurance can be given that future legislation, or amendments to the Code, if enacted into law, will not contain provisions that could directly or indirectly reduce the benefit of the exemption of interest on the 2016A Bonds from personal income taxation by the State of California or of the exclusion of the interest on the 2016A Bonds from the gross income of the owners thereof for federal income tax purposes. Furthermore, Bond Counsel expresses no opinion as to

any federal, state or local tax law consequences with respect to the 2016A Bonds, or the interest thereon, if any action is taken with respect to the 2016A Bonds or the proceeds thereof upon the advice or approval of other bond counsel.

Although Bond Counsel is of the opinion that interest on the 2016A Bonds is exempt from California personal income tax and excluded from the gross income of the owners thereof for federal income tax purposes, an owner's federal, state or local tax liability may be otherwise affected by the ownership or disposition of the 2016A Bonds. The nature and extent of these other tax consequences will depend upon the owner's other items of income or deduction. Without limiting the generality of the foregoing, prospective purchasers of the 2016A Bonds should be aware that (i) section 265 of the Code denies a deduction for interest on indebtedness incurred or continued to purchase or carry the 2016A Bonds and the Code contains additional limitations on interest deductions applicable to financial institutions that own tax-exempt obligations (such as the 2016A Bonds), (ii) with respect to insurance companies subject to the tax imposed by section 831 of the Code, section 832(b)(5)(B)(i) reduces the deduction for loss reserves by 15% of the sum of certain items, including interest on the 2016A Bonds, (iii) interest on the 2016A Bonds earned by certain foreign corporations doing business in the United States could be subject to a branch profits tax imposed by section 884 of the Code, (iv) passive investment income, including interest on the 2016A Bonds, may be subject to federal income taxation under section 1375 of the Code for Subchapter S corporations that have Subchapter C earnings and profits at the close of the taxable year if greater than 25% of the gross receipts of such Subchapter S corporation is passive investment income, (v) section 86 of the Code requires recipients of certain Social Security and certain Railroad Retirement benefits to take into account, in determining the taxability of such benefits, receipts or accruals of interest on the 2016A Bonds and (vi) under section 32(i) of the Code, receipt of investment income, including interest on the 2016A Bonds, may disqualify the recipient thereof from obtaining the earned income credit. Bond Counsel has expressed no opinion regarding any such other tax consequences.

Bond Counsel's opinion is not a guarantee of a result, but represents its legal judgment based upon its review of existing statutes, regulations, published rulings and court decisions and the representations and covenants of the City described above. No ruling has been sought from the Internal Revenue Service (the "Service") with respect to the matters addressed in the opinion of Bond Counsel, and Bond Counsel's opinion is not binding on the Service. The Service has an ongoing program of auditing the tax-exempt status of the interest on municipal obligations. If an audit of the 2016A Bonds is commenced, under current procedures the Service is likely to treat the City as the "taxpayer," and the owners would have no right to participate in the audit process. In responding to or defending an audit of the tax-exempt status of the interest on the 2016A Bonds, the City may have different or conflicting interests from the owners. Public awareness of any future audit of the 2016A Bonds could adversely affect the value and liquidity of the 2016A Bonds during the pendency of the audit, regardless of its ultimate outcome.

Existing law may change so as to reduce or eliminate the benefit to holders of the 2016A Bonds of the exclusion of interest thereon from gross income for federal income tax purposes. Proposed legislative or administrative action, whether or not taken, could also affect the value and marketability of the 2016A Bonds. Prospective purchasers of the 2016A Bonds should consult with their own tax advisors with respect to any proposed changes in tax law.

# LITIGATION

There is no litigation or action of any nature now pending against the City or, to the knowledge of its respective officers, threatened, seeking to restrain or enjoin the issuance, sale, execution or delivery of the 2016A Bonds or in any way contesting or affecting the validity of the 2016A Bonds or any proceedings of the City taken with respect to the issuance or sale thereof, or the pledge or application of

any moneys or security provided for the payment of the 2016A Bonds or the use of proceeds thereof. There is no litigation pending, or to the knowledge of the City, threatened, questioning the existence of the City or the title of the officers of the City to their respective offices. There is no litigation pending, or to the knowledge of the City, threatened, which materially questions or affects the financial condition of the Electric System.

#### AUDITED FINANCIAL STATEMENTS

The audited financial statements of the City's Water and Power Enterprise Funds, as of June 30, 2015 and for the year then ended, are included in Appendix B to this Official Statement. A complete copy of the City's Comprehensive Annual Financial Report may be obtained from the City. There has been no material adverse change in the finances of the Electric System since June 30, 2015. The 2016A Bonds are revenue obligations of the City payable only from the Net Income of the Electric System in the Light and Power Fund and certain other funds as provided in the Fiscal Agent Agreement. The financial statements of the City's Water and Power Enterprise Funds for the Fiscal Year ended June 30, 2015 have been audited by Lance, Soll & Lunghard, LLP, independent accountants (the "Auditor") as stated in their report appearing in Appendix B. The Auditor has not updated its report or taken any action intended or likely to elicit information concerning the accuracy, completeness or fairness of the statements made in this Official Statement, and no opinion is expressed by Lance, Soll & Lunghard, LLP with respect to any event or transaction subsequent to their report dated February 24, 2016. The City has not requested, nor has the Auditor given, the Auditor's consent to the inclusion in Appendix B of its report on such financial statements.

# FORWARD-LOOKING STATEMENTS

The statements contained in this Official Statement and in the Appendices hereto, and in any other information provided by PWP or the City, that are not purely historical, are forward-looking statements, including statements regarding PWP or the City's expectations, hopes, intentions or strategies regarding the future. Prospective investors should not place undue reliance on forward-looking statements. All forward-looking statements included in this Official Statement are based on information available to PWP and the City on the date hereof, and PWP and the City assume no obligation to update any such forward-looking statements. It is important to note that PWP's actual results could differ materially from those in such forward-looking statements.

The forward-looking statements herein are necessarily based on various assumptions and estimates and are inherently subject to various risks and uncertainties, including risks and uncertainties relating to the possible invalidity of the underlying assumptions and estimates and possible changes or developments in social, economic, business, industry, market, legal and regulatory circumstances and conditions and actions taken or omitted to be taken by third parties, including customers, suppliers and competitors, and legislative, judicial and other governmental authorities and officials. Assumptions related to the foregoing involve judgments with respect to, among other things, future economic, competitive and market conditions and future business decisions, all of which are difficult or impossible to predict accurately and many of which are beyond the control of PWP and the City. Any of such assumptions could be inaccurate and, therefore, there can be no assurance that the forward-looking statements included in this Official Statement would prove to be accurate.

#### FINANCIAL ADVISOR

The City has retained Public Resources Advisory Group, Los Angeles, California, as financial advisor (the "Financial Advisor") in connection with the issuance of the 2016A Bonds. The Financial Advisor has not been engaged, nor has it undertaken, to audit, authenticate or otherwise verify the information set forth in this Official Statement, or any other related information available to the City, with

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respect to accuracy and completeness of disclosure of such information. The Financial Advisor has reviewed this Official Statement, but makes no guaranty, warranty or other representation respecting accuracy and completeness of the information contained in this Official Statement.

#### **CERTAIN LEGAL MATTERS**

The issuance of the 2016A Bonds is subject to the approving opinion of Norton Rose Fulbright US LLP, Los Angeles, California, Bond Counsel. A complete copy of the proposed form of Bond Counsel opinion is contained in Appendix F. Bond Counsel will receive compensation from the City contingent upon the sale and delivery of the 2016A Bonds. Certain legal matters will be passed upon for the City by Michele Beal Bagneris, City Attorney of the City, and by Norton Rose Fulbright US LLP, Los Angeles, California, Disclosure Counsel.

# PURCHASE AND REOFFERING

(the "Initial Purchaser") purchased the 2016A Bonds from the City at a
competitive sale at an aggregate purchase price of \$ (representing the aggregate principal
amount of the 2016A Bonds, plus a net original issue premium of \$, and less an Initial
Purchaser's discount of \$\). The public offering prices may be changed from time to time by
the Initial Purchaser. The Initial Purchaser may offer and sell 2016A Bonds to certain dealers and others
at prices lower than the offering prices shown on the inside cover page hereof.

#### CONTINUING DISCLOSURE

Pursuant to a Continuing Disclosure Agreement to be entered into with Digital Assurance Certification, L.L.C. ("DAC") simultaneously with the issuance of the 2016A Bonds (the "Continuing Disclosure Agreement"), under which the City has designated DAC as Disclosure Dissemination Agent (the "Disclosure Dissemination Agent"), the City has covenanted for the benefit of the holders and beneficial owners of the 2016A Bonds to provide certain financial information and operating data relating to the City and the Electric System by not later than 210 days following the end of the City's Fiscal Year (which Fiscal Year presently ends on June 30) (the "Annual Report"), commencing with the report for Fiscal Year 2015-16, and to provide notices of the occurrence of certain enumerated events. The Annual Report and the notices of specified events will be filed by the City with the Municipal Securities Rulemaking Board ("MSRB") through the MSRB's Electronic Municipal Market Access (EMMA) System. The specific nature of the information to be contained in the Annual Report and the notice of specified events is set forth in APPENDIX E – "FORM OF CONTINUING DISCLOSURE AGREEMENT" herein. These covenants have been made in order to assist the Initial Purchaser in complying with S.E.C. Rule 15c2-12(b)(5) (the "Rule").

Due to the implementation of a new enterprise resource planning system, the City was 59 days late in filing its unaudited financial statements of the Light and Power Fund and did not file its unaudited Comprehensive Annual Financial Report but rather filed its audited Comprehensive Annual Financial Report when it became available on February 29, 2016.

The City will reserve the right to amend the Continuing Disclosure Agreement, and to obtain the waiver of non-compliance with any provision of the Continuing Disclosure Agreement, if such amendment or waiver is supported by a written opinion of counsel expert in federal securities laws selected by the City to the effect that such amendment or waiver would not materially impair the interest of the holders of the 2016A Bond and would not, in and of itself, cause the Continuing Disclosure Agreement to violate the Rule if such amendment or waiver had been effective at the time of the primary offering of the 2016A Bonds, after taking into account any applicable amendments to or official interpretations of the Rule.

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The Disclosure Dissemination Agent has only the duties specified in the Continuing Disclosure Agreement. The Disclosure Dissemination Agent's obligation to deliver the information at the times and with the contents described in the Continuing Disclosure Agreement is limited to the extent the City has provided that information to the Disclosure Dissemination Agent as required by the Continuing Disclosure Agreement. The Disclosure Dissemination Agent has no duty with respect to the content of any disclosures or notice made pursuant to the terms of the Continuing Disclosure Agreement or duty or obligation to review or verify any information in the Annual Report, Audited Financial Statements, notice of Notice Event or Voluntary Report (all as defined in the Continuing Disclosure Agreement), or any other information, disclosure or notices provided to it by the City, and the Disclosure Dissemination Agent shall not be deemed to be acting in any fiduciary capacity for the City, the holders of the 2016A Bonds or any other party. The Disclosure Dissemination Agent has no responsibility for any failure to report to the Disclosure Dissemination Agent a Notice Event or a duty to determine the materiality thereof, as to determine or liability for failing to determine whether the City has complied with the Continuing Disclosure Agreement, and the Disclosure Dissemination Agent may conclusively rely upon certification of the City at all times.

# **EXECUTION AND DELIVERY**

The execution and delivery of this Official Statement have been duly authorized by the City.

CITY OF PASADENA, CALIFORNIA

By:_	 	
• -	Director of Finance	