

# MEMORANDUM

**TO:** UTILITIES ADVISORY COMMISSION  
**FROM:** UTILITIES DEPARTMENT  
**DATE:** JANUARY 11, 2017  
**SUBJECT:** Utilities Quarterly Update – 1<sup>st</sup> Quarter of Fiscal Year 2017

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This update, on water, gas, electric, wastewater collection and fiber utilities, efficiency programs, legislative/regulatory issues, utility-related capital improvement programs, operations reliability impact measures and a utility financial summary, is for the Council and Utilities Advisory Commission's (UAC's) information. This update has been prepared to keep the UAC and Council apprised of the major issues that are facing the water, gas, electric, wastewater collection and fiber utilities.


Items of special interest this quarter include:

- an accounting of the use of the cap-and-trade allowance revenues for the electric fund since 2012 (page 6 and Table 1 on page 7)
- a discussion of the use of cap-and-trade allowance revenues for the gas fund (page 12)
- a chart showing that actual gas prices for fiscal year (FY 2017 to date have been higher than expected when the budget was prepared (Figure 10 on page 15)
- a notice of the Power Content Label with a link to the location on the City's website (page 20)
- a discussion on the legislative and regulatory issues expected in the coming year (page 21)
- the first quarter of FY 2017 financial summary for each fund is not included in this quarterly report due to the City's focus on completion of the FY 2016 Comprehensive Annual Financial Report. A full financial summary and reserve level status update will be provided in the second quarter update.

**Attachment:**

Attachment A: Utilities Fiscal year 2017 First Quarter Report

**REVIEWED BY:**

 SHIVA SWAMINATHAN, Senior Resource Planner

**APPROVED BY:**

  
ED SHIKADA

Utilities General Manager

# Utilities Quarterly Update

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First Quarter of  
Fiscal Year 2017

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December 2016

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Utilities Quarterly Update  
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## **I. Electricity**

### **Electric Supplies**

#### Western Area Power Administration (Western) Issues

Unfortunately the ongoing drought continues to keep projected Western Base Resource generation levels well below long-term average levels (399 gigawatt-hours, or GWh). For the first quarter of FY 2017, Western supply delivered 119 GWh (28 GWh below long-term average levels, but 22 GWh *higher* than in FY 2016). For the first quarter of FY 2017, Western supplied only 119 GWh (19% below long-term average levels) and cost \$4.1M (6% lower than the FY 2017 Adopted Budget).

At the October 5, 2016 Western Customer Meeting, the Bureau of Reclamation (“Reclamation”) announced that \$4.2 million will be reimbursed to Western Base Resource power customers to reflect a loss of value in energy resulting for excess releases from the Trinity Reservoir. Reclamation had released water in excess of what was mandated to support fisheries over the course of several years creating an adverse impact to power customers in foregone power opportunities. The \$4.2 million reimbursement will be disbursed to power customers in the form of lower Western Base Resource bills going forward.

In December, 2015, the California Independent System Operator (CAISO) and Western signed the Market Efficiency Enhancement Agreement (MEEA), which changed the pricing points applied to Western Base Resource schedules imported into the CAISO. Prior to the MEEA, Western Base Resource was priced as if it was imported into the CAISO at the California-Oregon, border resulting in substantial congestion price risk with an inability to manage such risk. Since the implementation of the MEEA, savings to Western customers are estimated to be \$1.6 million, with Palo Alto’s share about \$200,000. Palo Alto staff along with staff from the City of Santa Clara and the Northern California Power Agency (NCPA) invested substantial time assisting with Western’s negotiations with the CAISO.

Western officially started the development of its 2025 Power Marketing Plan. The Plan sets allocations and terms for marketing energy from Central Valley Project hydroelectric generation after 2024 when the current Western Base Resource Contract expires. The proposed 2025 Marketing Plan would extend the current Western Base Resource Contract 30 years through 2054 with allocations up to 98% of current allocations. Palo Alto submitted comments on the plan to include certain termination, allocation reduction and cost containment provisions. Western will publish the Final 2025 Power Marketing Plan in June 2017. Staff will bring this item to the UAC and Council for discussion along with a tentative schedule and decision points.

#### Calaveras Hydroelectric Project Issues

Drought conditions are lessening their impact on Calaveras, as the reservoir has benefited from average precipitation during the El Niño winter. For the first quarter of FY 2017 Palo Alto’s

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share of this project's generation was 10.9 GWh (75% below the long-term average level, and 185% *higher* than in FY 2016).

NCPA staff is monitoring the impacts of the Bay Delta Water Quality Control Plan (WQCP) on the Calaveras hydroelectric facilities which is on the Stanislaus River and part of the San Joaquin watershed. The proposed Bay Delta WQCP would require a 40% unimpaired flow criteria<sup>1</sup> on the San Joaquin River, potentially resulting in a shift of water available for discretionary generation from the Calaveras hydroelectric project and other hydro projects in the same watershed. While the flow criteria may not alter the amount of water which will flow through the project the timing of such flows may be impacted, resulting in a potential loss of energy value.

Electric Load and Resource Balance

The size of the committed and planned market purchases over the last and current calendar years (CYs) (shown in Figure 1 below) reflects a below average level of hydroelectric output, as discussed above. For CYs 2015 and 2016 combined, net committed fixed-price forward market purchases currently account for approximately 543 GWh, which represents 28% of the City's total load for the two-year period. For CY 2017, near normal hydro output is projected along with a surge in solar resources. Long-term renewable resources (landfill gas, wind and solar) are projected to provide 54% of the City's total CY 2017 load. Overall electric supply resources are expected to be surplus to load by about 1% for CY 2017; however, some periods will see significant surplus positions while other periods will be deficit (see Figure 2 below).

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1 Unimpaired flow is defined as "the flow that would occur if all runoff from the watershed remained in the river, without storage in reservoirs or diversions, such as irrigation, power generation, or water supply."

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Figure 1: Electric Supply Resource Actual and Projection, 2015 to 2017 (as of Oct. 26, 2016)

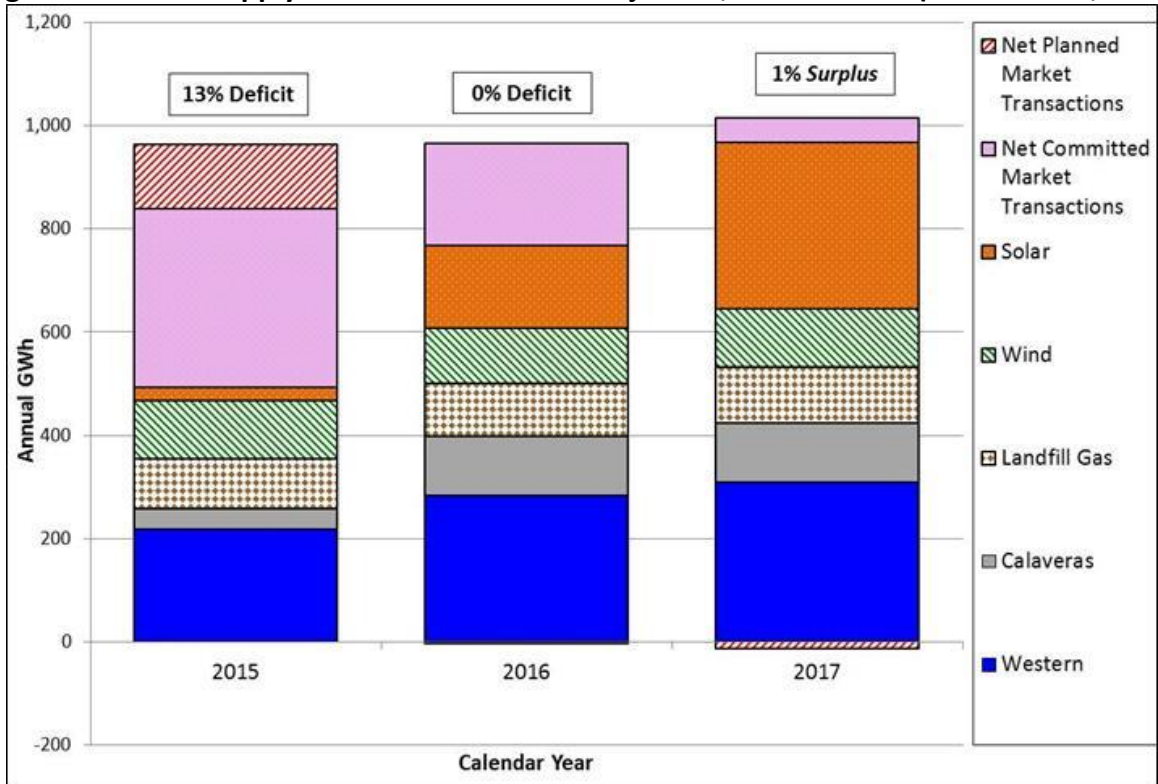
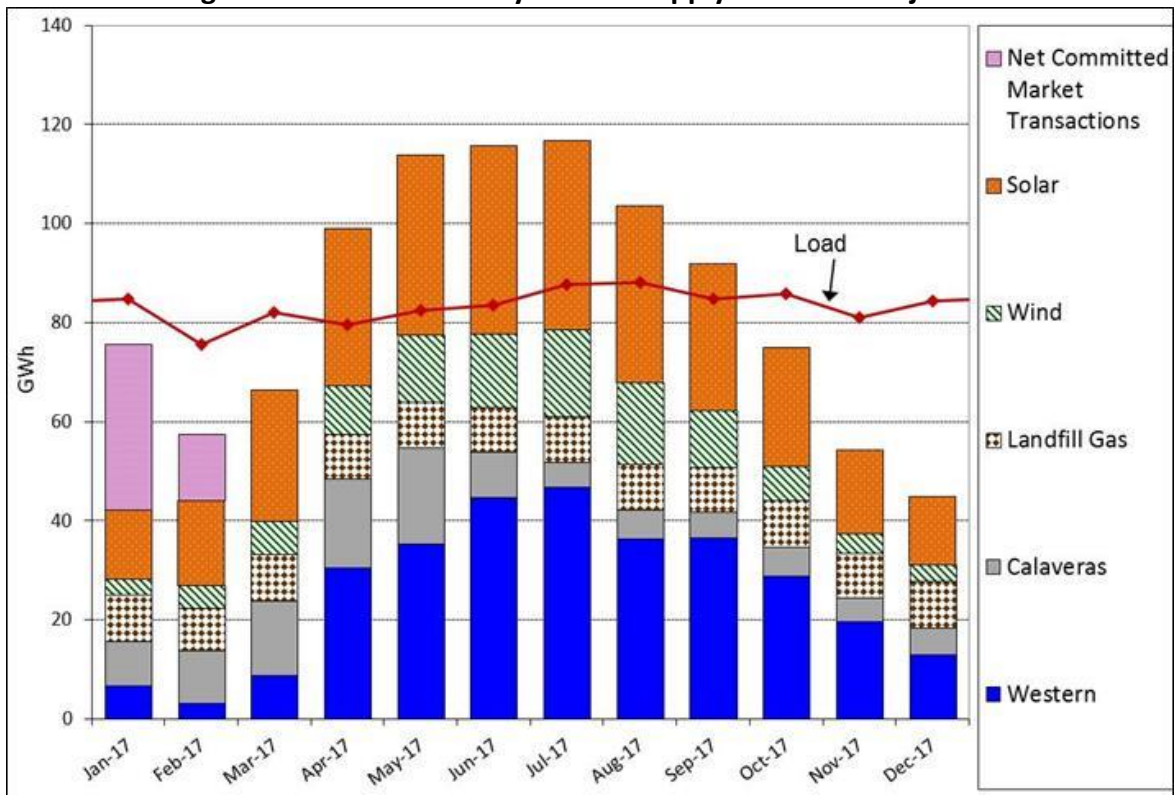


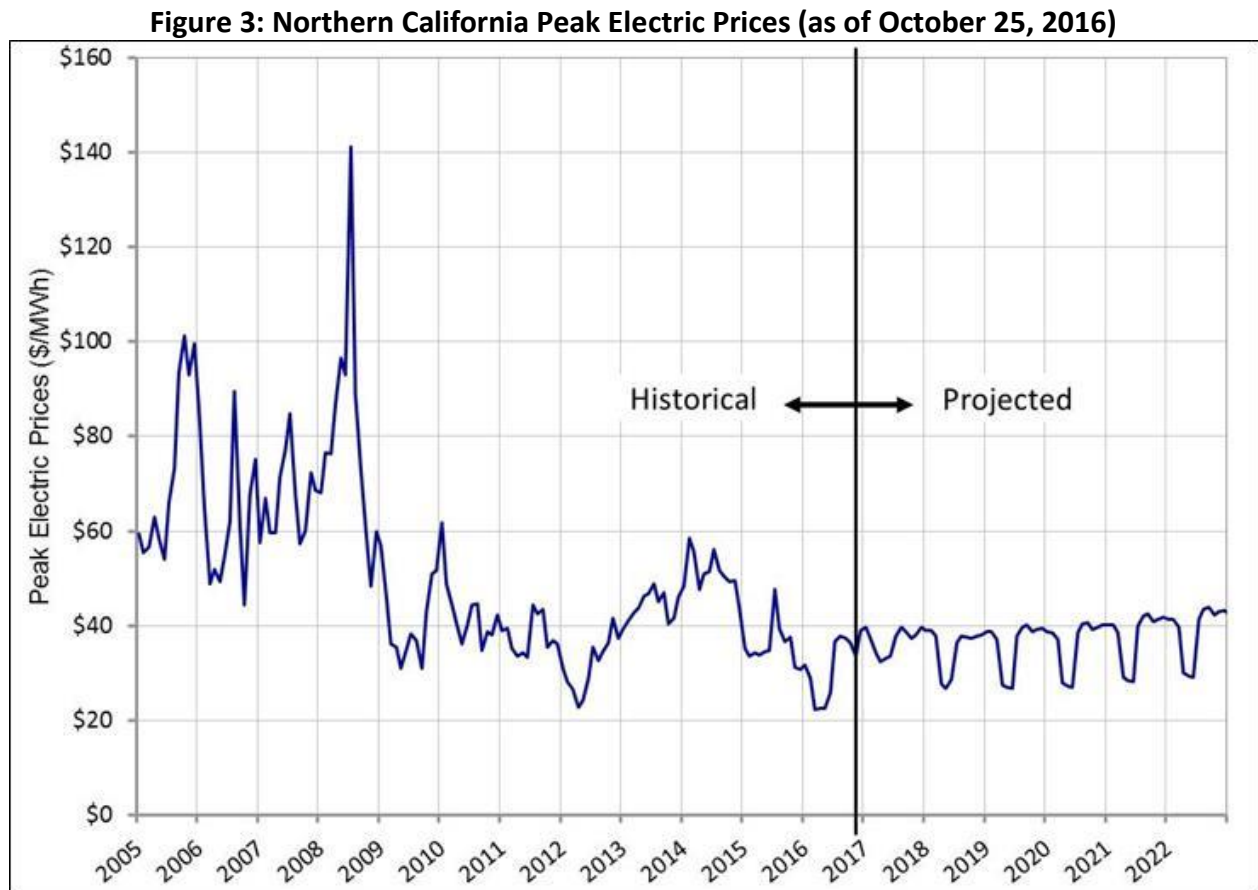
Figure 2: CY 2017 Monthly Electric Supply Resource Projection



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Electric Market Price History and Projections

As of October 25, 2016, the price for on-peak energy for November 2016 in Northern California was \$33.66 per megawatt-hour (MWh)<sup>2</sup>, while the prices for December 2016 and January 2017 were \$38.99/MWh and \$39.62/MWh, respectively. These values are approximately \$3.83/MWh lower than they were at the time of the last quarterly report.<sup>3</sup> On-peak prices for calendar year strips are in the range of \$35 to \$37/MWh for 2016 through 2018. These prices are approximately \$1.90/MWh lower than they were at the time of the last quarterly report. Figure 3 below illustrates historical monthly on-peak prices and projected monthly forward prices for Northern California from 2005 through 2023.



**Cap-and-Trade: Use of Allowance Revenue**

As of the end of CY 2015, CPAU received \$11.98 million in revenue from auctioning the emissions allowances allocated to its electric utility. The City Council adopted a resolution on December 10, 2012 (Staff Report 3342) that identified the following permissible uses for allowance revenue: 1) the cost of RECs to fulfill carbon neutrality goals, 2) RPS-eligible

<sup>2</sup> Note that \$30 per megawatt-hour is equal to 3 cents per kilowatt-hour.

<sup>3</sup> Market prices for the previous quarterly report were from September 13, 2016.



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renewable energy purchases above State mandated purchases, 3) energy efficiency costs that are not funded by Public Benefits collections, and 4) rebates to electric ratepayers.

For CY 2012 through 2014, there was a surplus of allowance revenue over expenditures. Table 1 shows the actual expenses and revenues for CY 2012 through CY 2015. For CY 2016, staff anticipates that all allowance revenue will be spent on Carbon Neutral REC purchases and renewable energy.

**Table 1: Use of Cap-and-Trade Allowance Auction Revenue and Expenditures**

	<b>CY 2012</b>	<b>CY 2013</b>	<b>CY 2014</b>	<b>CY 2015</b>
<b>Projected Allowance Revenue</b>				
Annual Revenue	1,145,326	2,912,695	3,913,232	4,008,407
Prior Year Carryover	0	1,145,326	1,041,501	951,363
<b>Total Allowance Revenue</b>	<b>1,145,326</b>	<b>4,058,021</b>	<b>4,954,733</b>	<b>4,959,771</b>
<b>Funding from Auction Revenues for Eligible Expenditures</b>				
Carbon Neutral REC Purchases	0	0	434,088	361,642
Additional Renewables	0	1,710,388	1,620,838	4,598,129
Additional Energy Efficiency	0	1,306,133	1,948,444	0
<b>Total Expenditures</b>	<b>0</b>	<b>3,016,520</b>	<b>4,003,370</b>	<b>4,959,771</b>
Remaining Funds	1,145,326	1,041,501	951,363	0

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**Electric Budget and Portfolio Performance Measures**

Electric Supply Cost Summary Compared to Budget Estimates

Table 2 below shows the City of Palo Alto Utilities' (CPAU's) supply cost by cost category through the first quarter of FY 2017. Supply costs were \$2.2 million (9.4%) under budget primarily due to less than expected market purchases.

**Table 2: FY 2016 Electric Utility Supply Cost Summary**



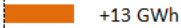






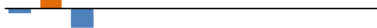







Supply Cost Category	Actuals, Year To-Date		Amount Over (+) / Under(-) Budget	Month by Month Budget Variance July through June
Market Purchases	\$-1.2 million		-1.4 million	
Renewable Sources	9.7 million		-0.3 million	
Calaveras Hydro	3.0 million		+0.1 million	
Western Hydro	4.0 million		-0.3 million	
Transmission	4.3 million		+0.7 million	
NCPA Services	0.7 million		+0.1 million	
Capacity	0.1 million		-0.1 million	
Carbon Neutral Costs	0.0 million		-0.1 million	
<b>TOTAL</b>	<b>20.7 million</b>		<b>-2.2 million</b>	

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Electric Usage and Generation Summary Compared to Budget Estimates

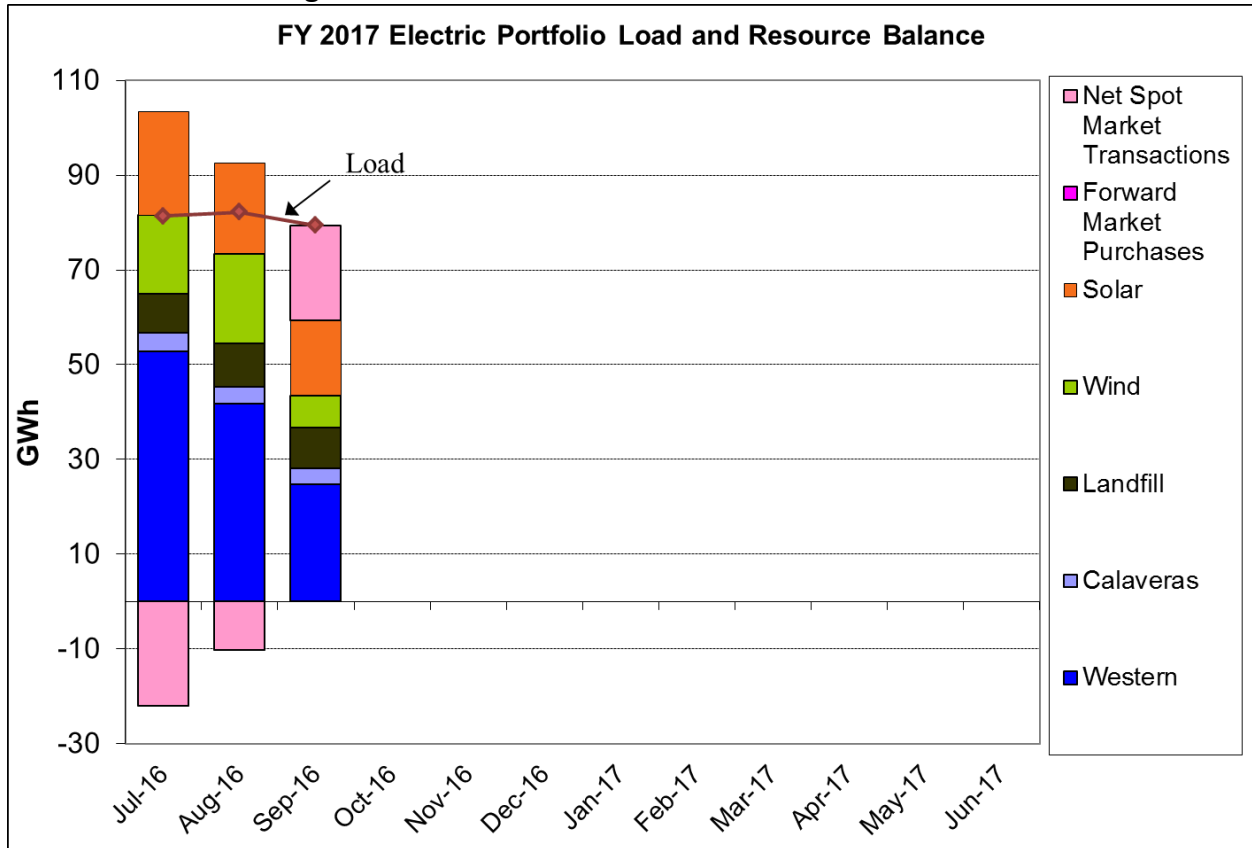
Table 3 and Figure 4 below summarize the City’s electric supply sources through the first quarter of FY 2017. Load was 7% lower than budget. Solar generation was below budget (-20%), but was mostly balanced out by Western hydro generation, which was above budget (+12%). Some spot market purchases were expected; however, the City ended up selling power on the spot market instead due to a combination of the above factors. As a result, total supply was just a little below budget.

**Table 3: FY 2016 Electric Load and Generation Compared to Budget Projections**

	Year To-Date		Amount Over (+) / Under(-) Budget Projection	Month by Month Budget Variance July through June
Load	243 GWh		 -17 GWh	
Generation Source	Generation Year To-Date	% of Portfolio	Amount Over (+) / Under(-) Budget Projection	Month by Month Budget Variance July through June
Western Hydro	119 GWh	49%	 +13 GWh	
Calaveras Hydro	11 GWh	4%	 +3 GWh	
Landfill Gas	26 GWh	11%	 -1 GWh	
Wind	42 GWh	17%	 -3 GWh	
Solar	57 GWh	23%	 -15 GWh	
Forward Market	-	0%	- GWh	
Spot Market	-12 GWh	-5%	 -14 GWh	
<b>TOTAL SUPPLY</b>	<b>243 GWh</b>	100%	 -2 GWh	

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Figure 4: FY 2016 Electric Load and Resource Balance

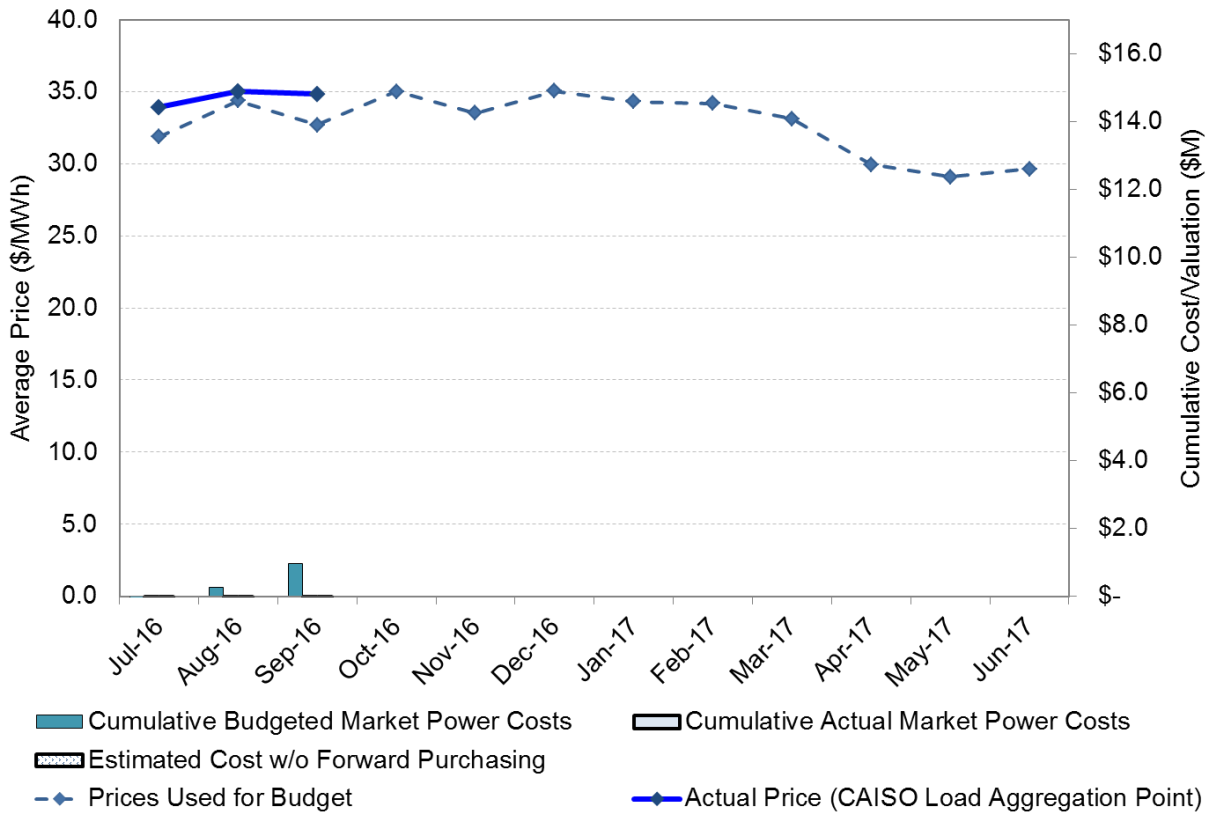


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Electric Market Prices and Costs Compared to Budget Estimates

Figure 5 shows monthly market prices and the cost of purchasing energy from the market. Electric market prices through the first quarter of FY 2017 were lower due to continued lower natural gas prices that impact the electricity markets. The cost of market purchases through the first quarter of FY 2017 was equal to what it would have been if all energy had been purchased in the spot market<sup>4</sup>. The total cost of market purchases in the first quarter was lower than budget mainly due to lower than expected load.

**Figure 5: FY 2016 Electric Market Purchase Costs and Market Prices**



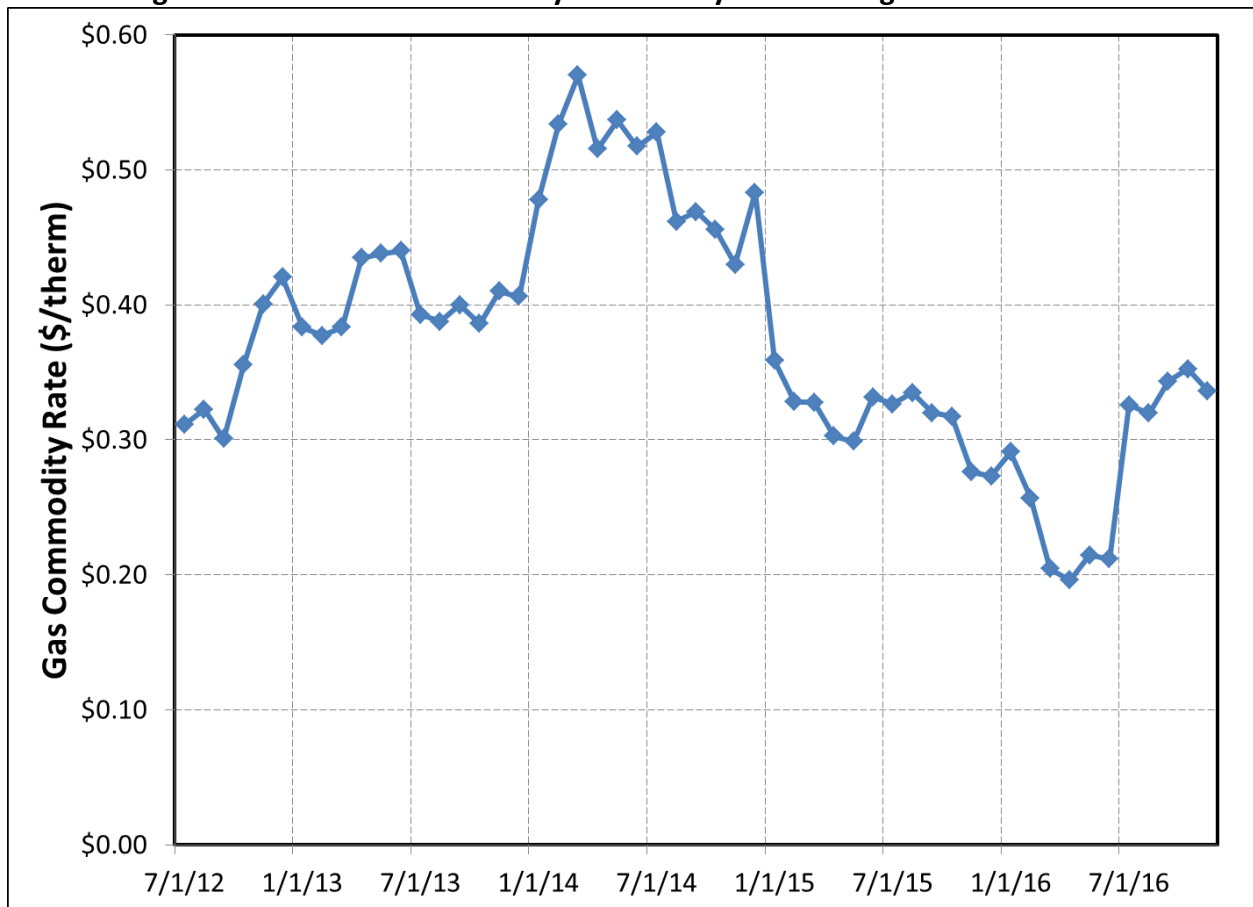
<sup>4</sup> Note that some market purchases are made on a forward basis to lock in market prices.

## II. Natural Gas

### Gas Supply Retail Rates

Since July 1, 2012, the commodity portion of CPAU's retail gas rates for all customers varies every month depending on the market price of natural gas. Figure 6 below shows the actual commodity rates charged from July 2012 through November 2016. These rates can also be found on the web site at: <http://www.cityofpaloalto.org/civicax/filebank/documents/30399>. Note that gas commodity rates have risen from the low rates in the spring of 2016.

Figure 6: CPAU's Gas Commodity Rates—July 2012 through November 2016



### Cap-and-Trade: Use of Allowance Revenue

Calendar year 2015 was the first year the CPAU Gas utility had a compliance obligation in CARB's cap-and-trade program. As of the end of CY 2015, CPAU received \$501,000 in revenue from auctioning the emissions allowances allocated to its gas utility. The City Council adopted a resolution on January 26, 2015 (Staff Report 5397) that identified the following permissible uses for allowance revenue: 1) Investment in energy efficiency programs for the City's natural gas portfolio and retail customers, 2) purchases or investment in cost effective renewable bio-gas resources for the City's gas portfolio, 3) Investment in other carbon reduction activities for the City's natural gas utility, including system maintenance or replacement to reduce fugitive gas emissions; and 4) Rebates to natural gas retail ratepayers provided on a non-volumetric

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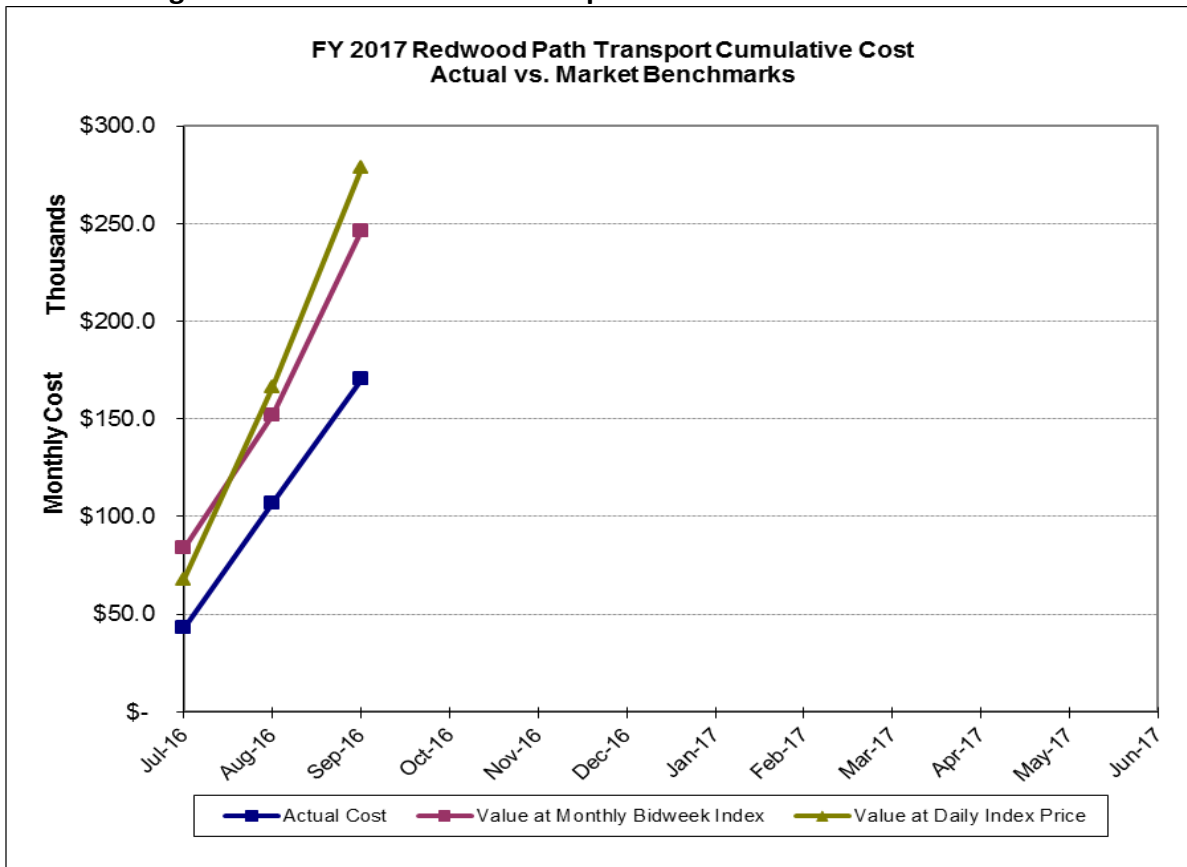
basis. All available funds were carried over into CY 2016 and are planned to be expended this year.

**Gas Budget and Portfolio Performance Measures**

Value of CPAU’s Share of Redwood Pipeline Capacity

Figure 7 below shows the cost of the Redwood gas transmission line compared to the value at month-ahead spot market prices as well as daily spot market prices. The Redwood pipeline allows the City to buy gas at the receipt point of Malin, Oregon and transport the gas to “PG&E Citygate”, which is normally a higher value receipt point. The City’s share of the Redwood pipeline was a net benefit to the Gas Utility of approximately \$76,000 through the first quarter of FY 2017. This is the difference between the value of Redwood capacity of \$246,000 (the difference of the monthly index prices at the ends of the Redwood pipeline in Malin, Oregon and PG&E Citygate) and the transportation cost of using the Redwood pipeline of \$170,000.

**Figure 7: Cumulative Redwood Pipeline Cost vs. Market Benchmarks**

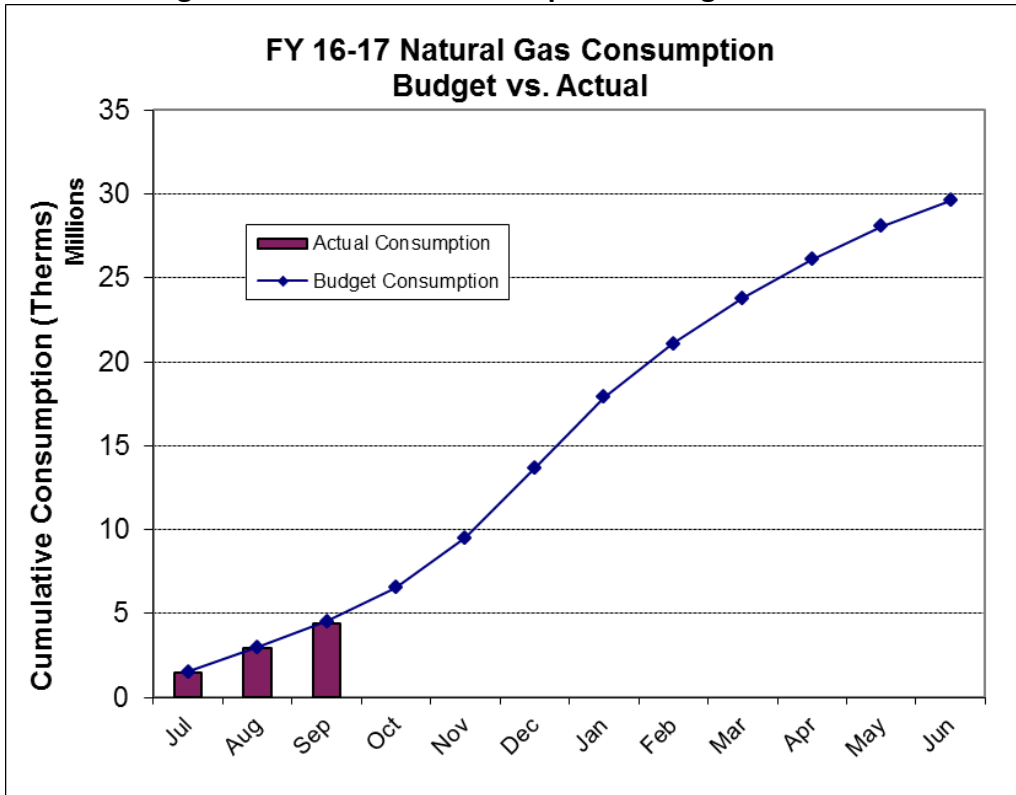


Natural Gas Consumption and Costs: Budget vs. Actual

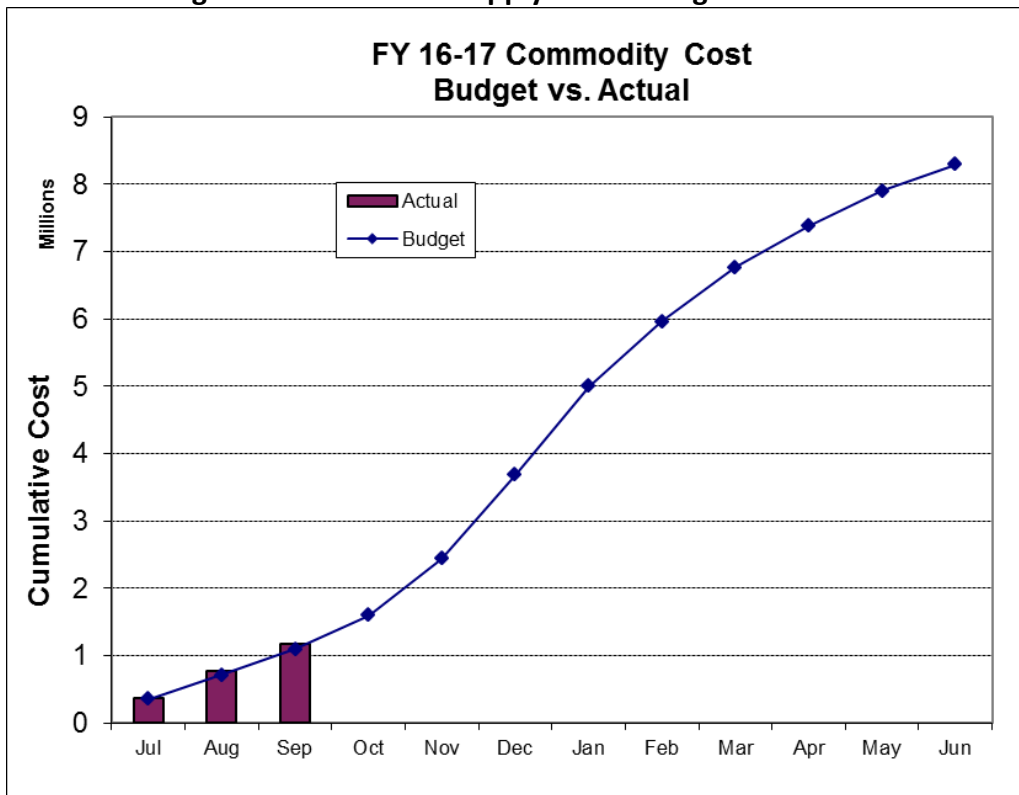
Figure 8 and Figure 9 compare actual natural gas use and supply costs with the FY 2017 budget. Natural gas use through the first quarter of FY 2017 was 2.6% below the budget forecast, and costs were 3.3% lower than budgeted amounts.

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**Figure 8: Natural Gas Consumption – Budget vs. Actual**



**Figure 9: Natural Gas Supply Cost – Budget vs. Actual**

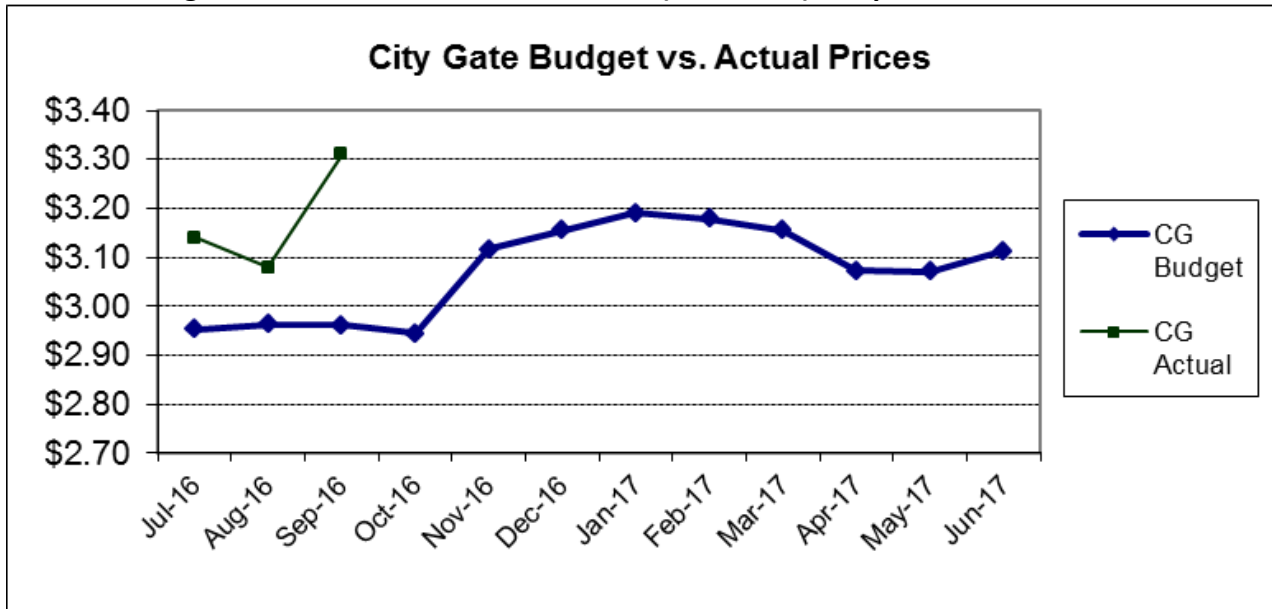




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Figure 10 shows actual gas prices at PG&E Citygate (CG) versus gas prices that were projected at the time the FY 2017 budget was developed. During FY 2017 thus far, gas prices have been higher than budget.

**Figure 10: FY 2016 Natural Gas Prices (\$/MMBtu) – Expected vs. Actual**



### III. Water

#### Water Availability

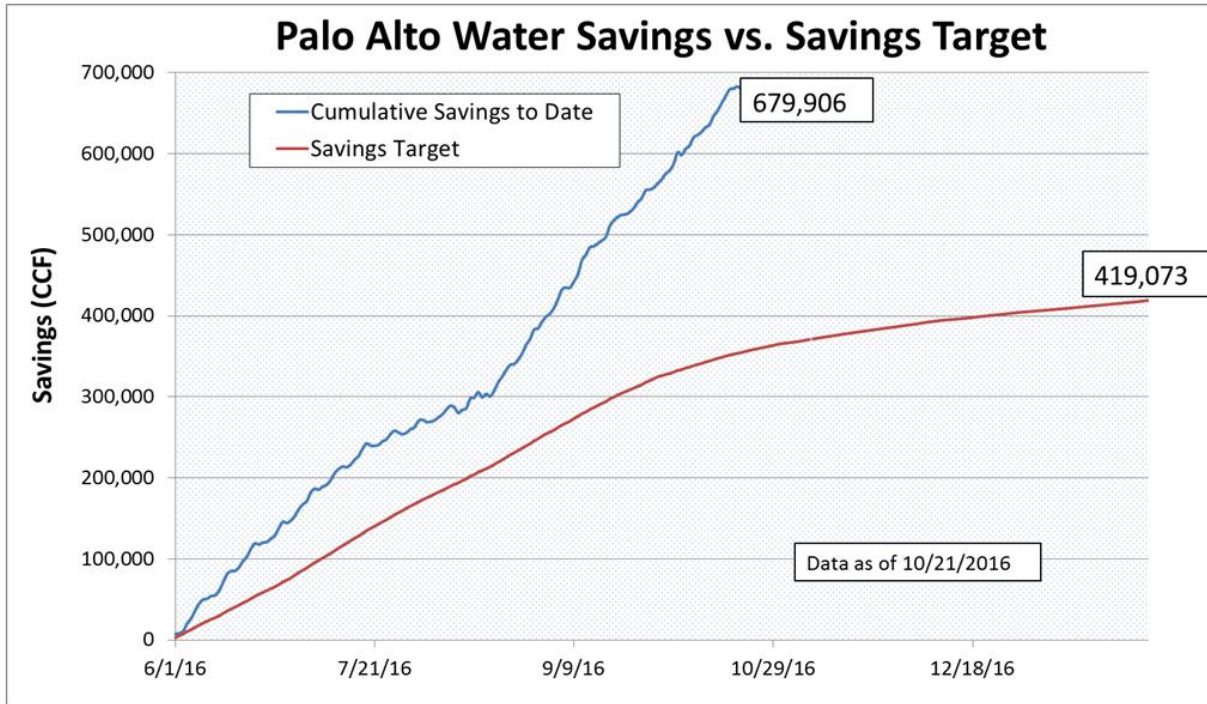
Because the rainy season is just beginning, more information regarding water supply will be available for the next quarterly report.

#### Water Use Compared to Targets

The City is conserving water at a rate far beyond the San Francisco Public Utilities Commission (SFPUC) request for 10% voluntary water use reductions. As of October 21, the City’s water use was 24.3% less than 2013 as shown in Figure 11 below

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Figure 11: Water Use Compared to Voluntary Target



**Recycled Water Strategic Plan**

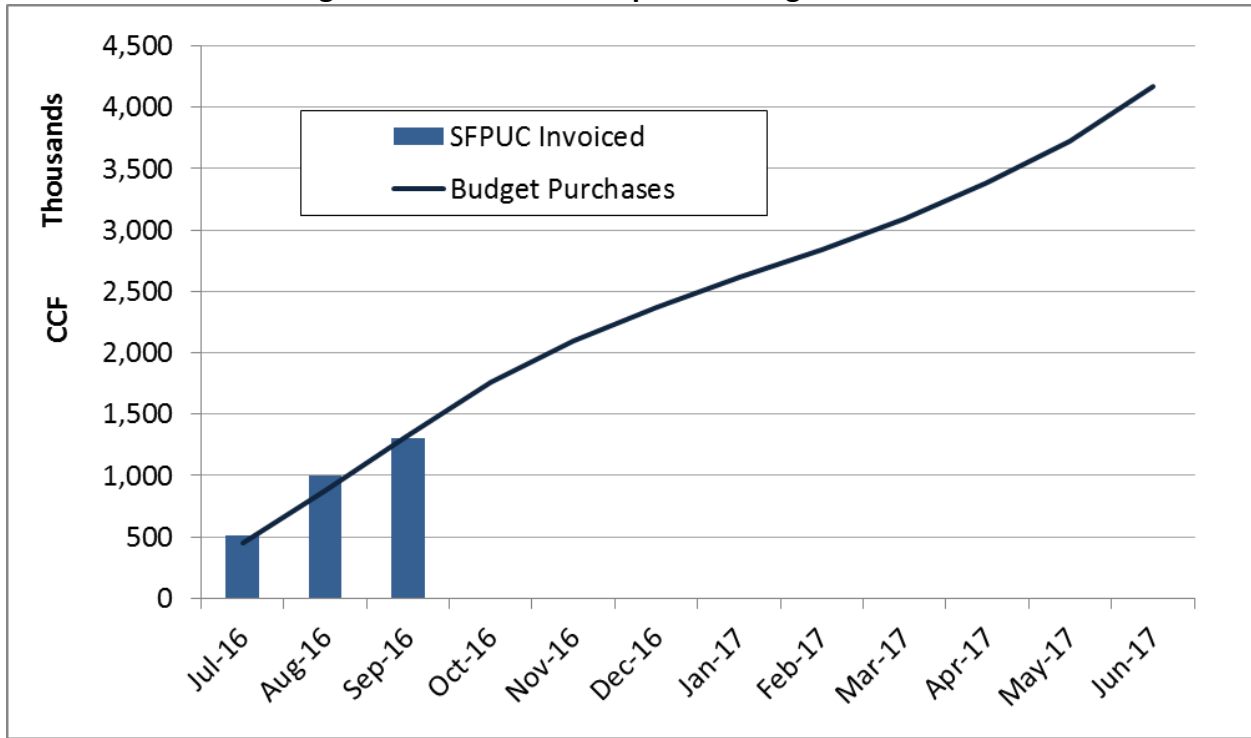
On October 11, 2016 the SCVWD approved the proposed cost share distribution for the Northwest County Recycled Water Strategic Plan (see [Staff Report 6700](#)). The cost share distribution states anticipates a 90% cost share for SCVWD (not to exceed \$1.8 million) and a combined 10% cost share for all the partners of the Regional Water Quality Control Plant.

**Water Budget Performance Measures**

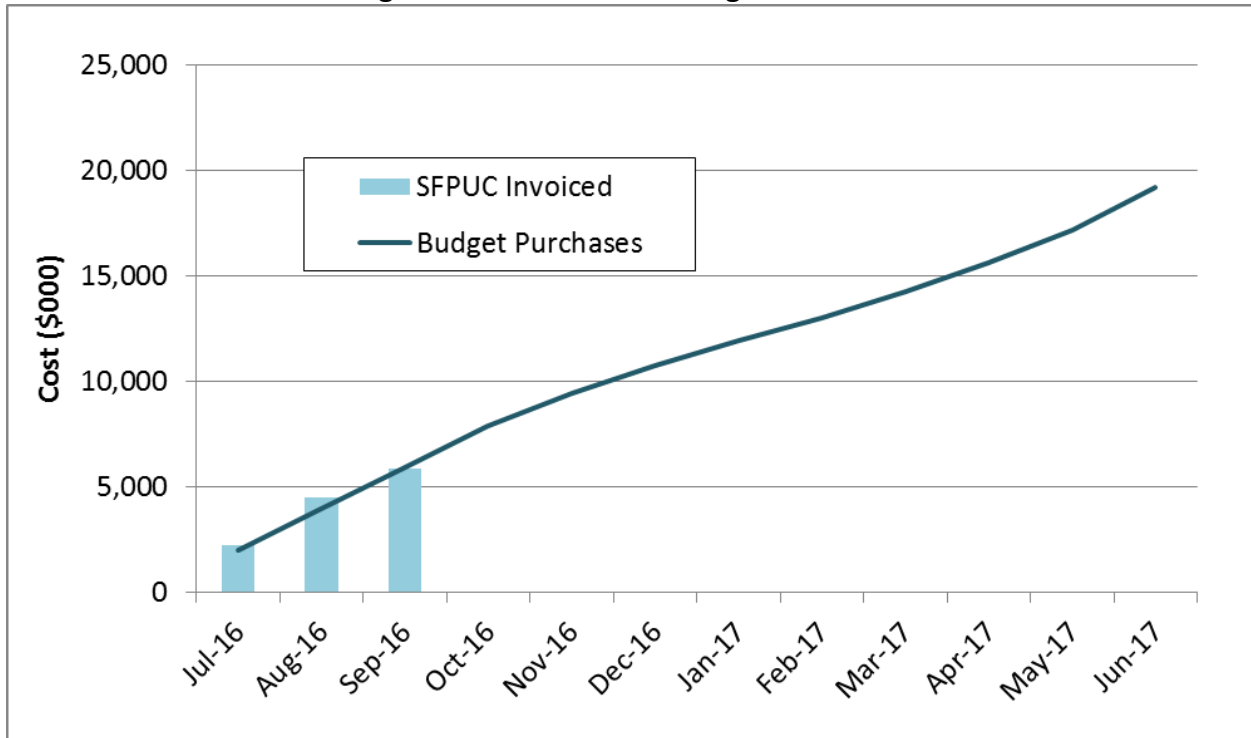
Figure 12 and Figure 13 below compare actual water consumption and water supply cost to the FY 2017 budget projections. Actual water use through the first of FY 2017 was 10% higher than budget estimates. Actual supply costs through the first quarter of FY 2017 were 10% above budget, due to the higher consumption. These increases are likely due to the loosening of drought restrictions.

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**Figure 12: Water Consumption – Budget vs. Actual**



**Figure 13: Water Cost – Budget vs. Actual**



## **IV. Fiber Optics**

### **Commercial Dark Fiber Service**

The total number of commercial dark fiber customers increased from 107 to 108 in the first quarter of FY 2017. The total number of active dark fiber service connections serving commercial customers decreased from 219 to 216 in the first quarter of FY 2017 (some customers have multiple connections). Commercial customers generate 81% of the dark fiber license revenues. Through the end of FY 2016, 22 new dark fiber service connections to existing and new customers were completed, while 30 service connections were disconnected.

Dark fiber Engineering and Operations are installing additional fiber along key routes between the Stanford Research Park and Downtown due to fiber capacity issues. This effort represents the beginning of a larger project to overlay fiber along the entire system.

### **Fiber-to-the-Premises Master Plan and Wireless Network Plan**

Staff is currently working on the following tasks for the FTTP and Wireless Plans as directed by the Council on September 28, 2015:

1. "Dig Once" ordinance: Staff, including the City Attorney's office and the City's consultant CTC Technology & Energy (CTC), is working to evaluate existing dig once models, ordinances and strategies implemented by other municipalities and counties. Staff anticipates bringing a recommendation to the Council late this year or in early 2017.
2. In May 2016, a Request for Information (RFI) was issued for a partnership for deployment of citywide fiber-to-the-premises. Eight responses were received and reviewed by staff and CTC. CTC recommended conducting additional discussions with three of the respondents. Meetings were held with these respondents in early October 2016. CTC and staff are currently evaluating the information collected in these meetings to determine if additional discussions are warranted with these respondents.
3. Staff is working with CTC to develop RFPs for a Mobile Broadband Network for Public Safety (e.g. "in-vehicle" broadband access) and a Point-to-Multipoint Network for Secure City Enterprise Access to improve command and control of critical City infrastructure for Public Safety and Utilities. The RFPs are expected to be released in mid-November 2016.

### **Citizen Advisory Committee**

Staff continues to meet on a regular basis with the committee regarding fiber and wireless initiatives. Five new members have been appointed by the City Manager to the committee and they will attend the next meeting on October 27, 2016.

## **V. Public Benefit, Demand Side Management Programs and Communications**

### **Energy Efficiency Program Achievements**

CPAU offers a wide range of customer programs and services to encourage energy and water efficiency and customer-owned renewable generation. The Annual DSM Report summarizes

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overall savings goals versus achievements, program-level achievements and expenditures, as well as key initiatives undertaken by CPAU. The Annual DSM Report for FY 2015 was provided to Council on April 18, 2016 and UAC in May 2016 ([Staff Report 6715](#)). The Annual DSM Report for FY 2016 will be completed in early 2017. Below are highlights from selected programs.

### 2016 Summer Demand Response Program

The Demand Response pilot program called two Peak Load Reduction events in 2016—on June 3rd and September 26th. These events are called only when the temperature is projected to be the highest of the year for the purpose of alleviating stress on the electrical grid. The 2016 citywide peak load occurred on September 26th (one of the event days), with an hourly peak load of 168.9 MW at 5 p.m. On this day, 237 kW of reduction was achieved.

### **Local Renewable Energy Programs**

#### Net Energy Metering Cap

On August 22, 2016 Council approved the Net Energy Metering (NEM) Successor Program and revised the NEM cap to 10.8 MW. As of October 12, 2016 Palo Alto has 7.8 MW of local solar photovoltaic (PV) capacity installed, representing 73% of the NEM cap. Staff will launch a NEM Reservation program in November to allow customers who have signed PV purchase or lease contracts to apply for a reservation for the remaining NEM capacity. Once the remaining NEM capacity is fully reserved customers will be placed on the NEM Successor program. CPAU will maintain a NEM Reservation wait list in the event that a project with an approved NEM Reservation is cancelled.

### **Communications Activities**

#### Education, Workshops and Community Outreach Activities

The following activities were held since the last quarterly report:

- September 17: Residential Solar and EV Workshop for SunShares program
- September 18: CPAU tabled at the Midtown Residents Association Ice Cream Social
- September 24, CPAU hosted a Landscape Design and Planting Workshop w/ BAWSCA
- October 2: CPAU tabled at the Bike 'n Roll Event in front of City Hall
- October 15: CPAU hosted a Pruning, Propagation & Dead Heading Workshop w/BAWSCA
- November 5: CPAU hosted a workshop featuring the Home Efficiency Genie Program

#### Communications Highlights

This section summarizes communications highlights, updates on major campaigns and noteworthy events. Copies of all current and past ads and bill inserts are available online at [cityofpaloalto.org/UTLbillinsert](http://cityofpaloalto.org/UTLbillinsert)

#### Advocacy for Electrification

At the invitation of California Energy Commissioner Hochschild, on August 30 CPAU staff Shiva Swaminathan and Christine Tam made a presentation to CEC on Palo Alto electrification initiatives. The presentation covered four areas under evaluation: customer programs to incentivize replacement of gas appliances with electric alternatives, building code changes to

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require electric appliances for new construction and renovation projects, changes to the utility rate structures, and support for electric vehicle adoption. The presentation also discussed the role of electrification to meet the Governor’s greenhouse gas reduction goal of 80% by 2050, and how policy makers, utilities, and local governments can coordinate their efforts to support electrification.

Bay Area SunShares Solar PV & Zero-Emissions Vehicle Program

Staff worked on a promotional campaign this quarter for the Bay Area SunShares program, which offered discounted rates on solar PV systems and zero-emissions vehicles (ZEVs). The program was designed to make it simpler and cheaper to go solar or purchase a ZEV by leveraging the bulk buying power of homeowners and vehicle buyers. Participation was open to residents and employees of companies located in the nine Bay Area counties and Yolo and Sacramento counties. Since this was a limited time only program that closed on November 4, CPAU engaged in a great deal of outreach to increase participation, including workshops, bill inserts, ads, email blasts, webpages, and social media posts. Information on Palo Alto solar programs is available at [www.cityofpaloalto.org/solar](http://www.cityofpaloalto.org/solar)

No Better Time to Go Solar!

Staff developed communication materials to inform customers and other solar stakeholders that customers can take advantage of the NEM rate, which offers full retail value for their solar production, before the program closes (when the NEM cap is reached). Messaging centered around the idea that with the expansion of the NEM cap and availability of the SunShares program, there was no better time to go solar!

Power Content Label

CPAU produces a Power Content Label each year and typically distributes it to customers via utility bill inserts, email newsletters, on the website and in social media during the month of September. This year, CPAU developed two Power Content Labels: one for residential customers and one for non-residential customers. Two different versions are necessary in order to accommodate information on the PaloAltoGreen program, as that program is no longer available for residential customers, but is still available to non-residential customers. View these at [www.cityofpaloalto.org/PowerContentLabel](http://www.cityofpaloalto.org/PowerContentLabel)

## **VI. Research and Development and Innovation**

### **Program for Emerging Technologies**

CPAU’s Program for Emerging Technologies, or PET, ([www.cityofpaloalto.org/UTLIInnovation](http://www.cityofpaloalto.org/UTLIInnovation)) provides the opportunity for local businesses and organizations to submit proposals for innovative and impactful products to CPAU for review as a prospective partner. The goal is to find and nurture creative products and services that will manage and better use electricity, gas, water and fiber optic services. From the program’s inception in June 2012 through the first quarter of FY 2017, the program received a total of 61 applications. Table 4 below summarizes the status of all applications through the first quarter of FY 2017.

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**Table 4: Status to date of all applications to the Program for Emerging Technologies**

<b>Deadline</b>	<b>Total Received</b>	<b>Under Review</b>	<b>Declined/Closed</b>	<b>Active</b>	<b>Completed</b>
FY 2013	13	0	11	0	2
FY 2014	15	0	11	1	3
FY 2015	15	1	10	2	2
FY 2016	14	5	4	0	5
FY 2017	4	4	0	0	0
<b>TOTAL</b>	<b>61</b>	<b>10</b>	<b>36</b>	<b>3</b>	<b>12</b>

## **VII. Legislative and Regulatory Issues**

While the City operates on the (July through June) Fiscal Year, the State legislature operates on the Calendar Year and Congress on the Federal Fiscal Year (October to September). In order to provide accurate information in this report, staff notes below current issues and those items appearing since the last quarterly report, regardless of each entity's operating year.

### **Summary**

As noted in the last quarterly report, the State Legislature has ended its 2016 session. Congress will be in recess for part of November and will return for only a few weeks before ending its session. While state and federal elected officials are between sessions, CPAU staff has time to collaborate with stakeholders on continuing issues or those items we anticipate will appear in 2017. These issues are noted below.

#### Water: lead testing in schools

In 2016, a failed bill would have water suppliers testing lead in private and public schools, health care centers, and other locations. While that legislation did not move far, there is a current regulatory move to mandate lead testing in schools. The issue is under consideration now at the State Water Resources Control Board (Water Board) and CPAU staff is discussing the issue with other members of the California Municipal Utilities Association (CMUA). CMUA has expressed its desire for the Water Board to set direction that clearly notes the reasonable roles of water suppliers and school districts regarding testing and any potential mitigation, as well as to ensure the number of samples and timelines are appropriate. As this issue moves forward, CMUA staff will relay these comments to Water Board staff.

#### Energy: Changing market structure

In 2015, SB 350 created the provision for a fundamental change in California's energy market by allowing other states to join the California market. Colloquially called regionalization, CPAU staff and many other stakeholders have spent more than a year thus far discussing the issue of combining markets and sharing energy resources. Governor Brown attempted to introduce legislation formalizing the regional structure, however; too many concerns and questions remained at the end of the legislative session and a bill was never filed.

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Now, legislative staff has begun holding stakeholder meetings to ensure such a bill is introduced in 2017. The Northern California Power Agency (NCPA) is an engaged member at these meetings and keeps CPAU well informed, as does CMUA. Staff will continue to work with these agencies to ensure any market changes do not adversely affect CPAU’s energy customers.

**State Regulatory Proceedings**

California Air Resources Board

CARB continues to hold public workshops regarding a proposed regulation to create publicly-owned utility (POU) compliance penalties supporting enforcement of the Renewable Portfolio Standard (RPS) Program. It also continues work on cap-and-trade regulations for post 2020 implementation and updates to the climate scoping plan. CARB also released its draft plan to comply with the federal Clean Power Plan.

California Energy Commission

The CEC continues to work on implementing SB 350 and CPAU, through NCPA, is active in this process, particularly on the requirements for integrated resource plans (IRPs). The CEC also continues its efforts on power source disclosure regulations (i.e. the “Power Content Label”), and has created reporting templates. Like CARB, the CEC is also working on RPS enforcement and recently promulgated draft pre-rulemaking amendments to current procedures. One such amendment would potentially harm Palo Alto by impeding its ability to contract for hydroelectric generation through its agreement with Western. CPAU staff recognized the issue and worked with NCPA to gain an audience with CEC staff to describe the problem and suggest different language.

**VIII. Utility Financial Summary**

Due to City accounting staff working on the FY 2016 Comprehensive Annual Financial Report, financial reserve estimates and other financial details for the first quarter of FY 2017 are not available in time for this report. The next Utilities quarterly update (for the second quarter of FY 2017) will contain all relevant financial information, including the estimated levels of financial reserves.

**Residential Bill Comparisons (based on 30-day bills)**

**Table 5: Residential Electric Bill Comparison (\$/month)**

As of November 1, 2016					
Season	Usage (KWh/mo)	Palo Alto	PG&E	Santa Clara	Roseville
Winter (Nov -Apr)	300	33.09	55.06	34.16	53.70
	453 (Median)	57.18	69.24	52.21	69.87
	650	90.48	145.72	138.43	98.42
	1200	183.43	365.63	359.47	184.87



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**Table 6: Residential Natural Gas Bill Comparison (\$/month)**

As of November 1, 2016				
Season	Usage (therms)	Palo Alto	Menlo Park, Redwood City, Mountain View, Los Altos, and Santa Clara (PG&E Zone X)	Roseville (PG&E Zone S)
Winter (Nov-Mar)	18	25.70	27.52	27.52
	54 (Median)	56.45	82.56	82.56
	80	89.43	134.28	135.32
	150	186.92	281.96	283.01

**Table 7: Residential Water Bill Comparison (\$/month)**

As of November 1, 2016							
Usage CCF/month	Palo Alto	Menlo Park	Redwood City	Mountain View	Los Altos	Santa Clara	Hayward
4	43.69	44.46	46.47	34.63	33.37	19.80	31.20
(Winter median) 7	67.18	63.03	65.43	53.68	45.20	34.65	52.62
(Annual median) 9	87.24	75.43	78.07	66.38	53.09	44.55	66.90
(Summer median) 14	137.39	107.95	119.47	98.13	73.81	69.30	104.51
25	247.72	180.33	229.94	206.08	119.91	123.75	197.02

Based on the FY 2015 BAWSCA survey, the fraction of SFPUC as the source of potable water supply was 100% for Palo Alto, 100% for Menlo Park, 100% for Redwood City, 94% for Mountain View, 11% for Santa Clara and 100% for Hayward.

**Table 8: Residential Wastewater Collection (Sewer) Bill Comparison (\$/month)**

As of November 1, 2016						
Palo Alto	Menlo Park	Redwood City	Mountain View	Los Altos	Santa Clara	Hayward
34.83	85.91	75.11	34.30	33.93	41.65	29.80

**Table 9: Median Residential Overall Bill Comparison (\$/month)**

As of November 1, 2016							
Utility and Usage	Palo Alto	Menlo Park	Redwood City	Mountain View	Los Altos	Santa Clara	Hayward
Electricity (453 kWh/mo)	\$ 57.18	\$ 69.24	\$ 69.24	\$ 69.24	\$ 69.24	\$ 52.21	\$ 69.24
Gas (54 th/mo)	56.45	82.56	82.56	82.56	82.56	82.56	82.56
Wastewater	34.83	85.91	75.11	34.30	33.93	41.65	29.80
Water (9 CCF/mo)	87.24	75.43	78.07	66.38	53.09	44.55	66.90
TOTAL	\$235.70	\$313.14	\$304.98	\$252.48	\$238.82	\$220.97	\$248.50

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**Non-Residential Bill Comparisons (based on 30-day bills)**

**Table 10: Non-Residential Electric Bill Comparison (\$/month)**

As of November 1, 2016				
Usage (KWh/mo)	Palo Alto	PG&E	Santa Clara	Roseville
1,000	114	209	175	140
160,000	18,494	24,364	19,963	19,921
500,000	54,285	67,335	61,122	50,460
2,000,000	171,790	283,628	236,301	190,599

**Table 11: Non-Residential Natural Gas Bill Comparison (\$/month)**

As of November 1, 2016		
Usage (therms/mo)	Palo Alto	PG&E
500	597	683
5,000	5,266	6,054
10,000	10,673	11,071
50,000	51,857	49,323