



Council Meeting: August 28, 2012

**SUBJECT: Approval of Budget Modification No. 4 to Appropriate LED Street Light Rebate Towards Additional Energy-Efficient Street Light Conversions****BACKGROUND**

On November 9, 2010, Council awarded a contract in the amount of \$1,142,065 to Team Econolite to replace existing street light fixtures on various arterial and collector streets with more energy-efficient, Light Emitting Diode (LED) street lights (RTC#10-311). Funding for this effort was provided under an Energy Efficiency and Conservation Block Grant (EECBG) from the Federal Department of Energy through the American Reinvestment and Recovery Act (ARRA). For each streetlight head that was converted, from 200-watt High Pressure Sodium Vapor (HPS) to LED, the City applied for and expects to receive a \$125 rebate from PG&E. The contract with Team Econolite anticipated this rebate and required the contractor to install additional LED street lights equal to the total value of the PG&E rebates once obtained.

As was anticipated under the original proposal and scope of work, a budget modification to appropriate the revenue from the PG&E rebate, estimated at \$245,425, is necessary in order for staff to authorize the contractor to proceed with further street light head conversions.

**DISCUSSION**

The contract called for replacement of street light heads, with either a 60-diode or 80-diode LED fixture, depending upon the level of lighting required. Originally, it was anticipated that approximately eleven percent (11%) of the fixtures would need to be the brighter, 80-diode LED. The contract also required photometric analysis to determine the appropriate level of lighting using existing streetlight poles. The analysis indicated the need for more of the 80-diode size heads, particularly on multi-lane arterial roadways. In total, 56% of the fixtures installed were the larger 80-diode size. Due to the \$263 per-head higher cost of 80-diode heads over 60-diode heads, only 1,607 street lights were replaced, rather than the 2,400 originally anticipated within the grant budget, as summarized in the table below.

<u>Head Size</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Total Cost</u>
60-diode LED	700	\$ 562.04	\$ 393,428
80-diode LED	907	\$ 825.23	\$ 748,483
<b>Total</b>	<b>1,607</b>		<b>\$ 1,141,911</b>

All work under the original contract has been completed, and the request for rebate funds has been submitted to PG&E. In total, 1,607 fixtures were installed, which will result in an initial rebate to the City of \$200,875.

This project initially focused on conversion of 200-watt HPS lights that typically run mid-block along arterial streets, except at intersections. The streetlights at intersections are typically 250-watt HPS. Staff intends to apply the rebate money to replacing the 250-watt HPS lights at intersections. This will enhance the lighting distribution and color rendition, while eliminating what now appear to be gaps in the string of lights. The PG&E rebate amount for replacement of 250-watt HPS heads is expected to be \$150 per intersection fixture.

This initial rebate is estimated to fund an additional 243 80-diode LED conversions. The expected rebate from installing these 243 fixtures would be \$36,450, which would provide funding for an additional 44 conversions. Using this iterative approach, it is estimated that an additional 297 street light conversions can be completed, resulting in an estimated additional rebate amount of \$44,550. After using all of the rebates, the total number of LED conversions for this project is estimated at 1,904 and the total PG&E rebate amount is estimated at \$245,425.

**FISCAL IMPACT**

Budget Modification No. 4 has been prepared to appropriate \$245,425 of rebate funding to the LED Streetlight Replacement Project #828620 to fund an additional 297 LED conversions. Staff fully expects to receive the appropriate rebate for each conversion; however, if the full amount of the rebate is not received, expenditures that exceed the actual rebate amount will have to be absorbed in the operating budget of Program 121 – City Streetlight System. This could result in other street light maintenance activities being deferred.

**BUDGET MODIFICATION NO. 4  
 FISCAL YEAR 2012/2013**

	<b>Current</b>	<b>Increase/ (Decrease)</b>	<b>Revised</b>
<b>Capital Projects Fund</b>			
<u>Revenues</u>			
4112 - PG&E Rebates	\$0	\$245,425	\$245,425
<u>Expenditures</u>			
Project 828620 - Light Emitting Diode (LED) Streetlight Replacement	\$0	\$245,425	\$245,425

**PUBLIC CONTACT**

Public contact was made by posting the Council agenda on the City's official notice bulletin board outside City Hall, at the Sunnyvale Senior Center, Community Center and Department of Public Safety; and by making the agenda and report available at the Sunnyvale Public Library, the Office of the City Clerk and on the City's web site.

**ALTERNATIVES**

1. Approve Budget Modification No. 4 to appropriate the PG&E Rebate to the Energy Efficient Street Light Conversion Project 828620.
2. Do not approve Budget Modification No. 4 to appropriate the PG&E Rebate. Under this alternative, the City may have to return the PG&E rebate funds to the Federal Department of Energy because grant funds (not local funds) were used to complete the conversions to date.

**RECOMMENDATION**

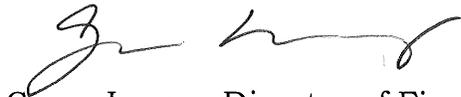
Staff recommends Alternative 1: Approve Budget Modification No. 4 to appropriate the PG&E Rebate to the Energy Efficient Street Light Conversion Project. This will result in increased long-term energy efficiency, improved lighting distribution, and reduced ongoing costs for streetlight power.

Reviewed by:



Kent Steffens, Director of Public Works

Reviewed by:



Grace Leung, Director of Finance

Approved by:



Gary M. Luebbbers  
City Manager