



TOWN OF FAIRFAX

STAFF REPORT

SPECIAL MEETING

July 13, 2016

TO: Mayor and Town Council

FROM: Garrett Toy, Town Manager *GT*

SUBJECT: Update on retrofit of streetlights with LED fixtures

RECOMMENDATION

Receive update

DISCUSSION

At its June meeting, the Council authorized staff to participate in the PG&E LED Street Light Turnkey Replacement Program and the PG&E On-Bill Financing (OBF) program in an amount of up to \$202,000 to manage and finance the retrofit of approximately 527 streetlights with LED fixtures. The Council also asked staff to work with PG&E to determine if the streetlights could be replaced with a lower color temperature (CCT) of 3000k instead of 4000k. PG&E has indicated it can replace almost all (391) of the cobrahead streetlights with lower CCT fixtures. However, the LED wattage (56, 73 watts) for 17 of the streetlights do not come in 3000k CCT. Also, as indicated at the June meeting, the top-hat fixtures in downtown are only available in 3500k CCT.

Attached is the revised estimate from PG&E for the Turnkey and OBF programs. The number of streetlights to be retrofitted has been slightly reduced by 15 lights from a total of 527 to 512. In essence, the Town will retrofit 15 fewer top-hat fixtures in the commercial areas. Similarly, the OBF loan amount has been reduced to \$195,504 from \$201,133. The reduction in the number of retrofits is due to the slightly higher costs for the 3000 CCT fixtures (10-15% higher) and lower annual energy savings. Staff is moving forward with the replacement of 512 streetlights. No further Council action is required because the lower loan amount is within the authority previously granted staff by the Council in June.

In order to facilitate the retrofit process, we are not modifying any of the fixtures with dimmers nor installing new light shields on streetlights unless they already had them. If residents wish to request such features, they may do so after the project has been completed, but they would be required to cover 100% of the cost of materials and installation.

FISCAL IMPACT

Over the 10-year repayment period, the Town would continue to pay the same energy costs for the street lights with the estimated energy savings being applied to the loan payment. In addition, the Town would immediately save approximately \$4,000 per year on reduced maintenance costs for the LED lights.

ATTACHMENTS

1. PG&E revised estimate
2. PG&E original estimate

AGENDA ITEM # 1



PG&E LED Street Light Turnkey Replacement Service

Non-binding price estimate to be used for budgetary purposes only

City of: **Town of Fairfax**
Date of this estimate: **20-Jun-2016** Expiration date of this estimate: **20-Jul-2016**

Number of Lights to be Replaced	Voltage	Type	Wattage (Nominal/Actual)	Rate	Suggested Replacement LED Wattage
104	120	HPS	70/85	LS-2	34
383	120	HPS	70/85	LS-2	30
8	120	HPS	100/120	LS-2	50
4	120	HPS	150/176	LS-2	56
13	120	HPS	200/234	LS-2	73
512					

*post tops

Total Project Price: \$216,284
Total PG&E Rebates: \$20,780
Net Estimated Price: \$195,504

The rebates are subject to funding availability and are administered on a first come, first-serve basis. If rebate funding is depleted, customer must pay Total Project Price.

Energy cost savings in first year*: \$19,554
Energy savings (kWh/year): 125,352
CO2 reduction (lbs/year): 65,684
Avoided maintenance expenses in first year:** \$4,312

Simple Payback (Energy Only): 10.00

*Project Price Notes:

Price includes purchase of requested street lights, installation and field verification of installed lights, rate change and rebate application processing.
 No permitting costs included in total project price.
 Project price assumes all lights to be replaced will be cobra head fixtures and will not include post top, shoe box, tear drop, or decorative fixtures
 Project price assumes all street lights to be replaced are currently in operating condition.
 Project price assumes no restrictions on installations will be made (e.g.--heavy traffic area, special hours for installation, etc.)
 Project price assumes all street lights to be replaced are at an operating voltage between 120-240 volts AC.

Notes:

*Future year savings will grow with the expected increase in electricity and labor costs.
 **Avoided maintenance expenses are compared to maintaining HPSV lights.
 ***The street light manufacturer is BETA LED.

Assumptions:

- » 4100 operating hours annually
- » \$0.15599/kWh electricity cost
- » 0.524 lbs/kWh emission factor
- » \$26 per year maintenance cost for HPSV
- » \$19 per year average maintenance cost for LED
- » City has full jurisdiction over street lights



PG&E LED Street Light Turnkey Replacement Service

Non-binding price estimate to be used for budgetary purposes only

City of: Town of Fairfax
 Date of this estimate: 27-May-2016 Expiration date of this estimate: 26-Jun-2016

Number of Lights to be Replaced	Voltage	Type	Wattage (Nominal/Actual)	Rate	Suggested Replacement LED Wattage
119	120	HPS	70/85	LS-2	34
383	120	HPS	70/85	LS-2	29
8	120	HPS	100/120	LS-2	34
4	120	HPS	150/176	LS-2	56
13	120	HPS	200/234	LS-2	73
527					

*post tops

Total Project Price: \$222,598
Total PG&E Rebates: \$21,380
Net Estimated Price: \$201,218

The rebates are subject to funding availability and are administered on a first come, first-serve basis. If rebate funding is depleted, customer must pay Total Project Price.

Energy cost savings in first year*: \$20,133
Energy savings (kWh/year): 129,064
CO2 reduction (lbs/year): 67,629
Avoided maintenance expenses in first year:** \$4,522

Simple Payback (Energy Only): 9.99

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