



DISTRIBUTION DATE: 12/15/11

City Administrator's Office

# MEMORANDUM

**TO:** HONORABLE MAYOR &  
CITY COUNCIL

**FROM:** Vitaly B. Troyan P.E.  
Director, Public Works Agency

**SUBJECT:** LED Street Light Financing

**DATE:** December 15, 2011

City Administrator  
Approval *Sama Arner*

Date 12/15/11

## INFORMATION

As requested by Council, Electrical Services has evaluated financing options available for the replacement of existing high pressure sodium (HPS) street lights with energy efficient light emitting diode (LED) fixtures. The programs examined provide for turnkey projects, which could be financed through revenue neutral plans utilizing existing energy funding collected through the Lighting and Landscape Assessment District.

PG&E has informed staff that their "on bill financing" plan, which has a \$250,000.00 ceiling at a 0% financing rate, can be used to fund the replacement of lighting in those areas of East Oakland identified by city police staff as being impacted by high crime issues. The 195 lights analyzed by staff can be replaced with lower wattage LED equivalent lights and still meet the improved lighting effect sought by OPD, while qualifying for the PG&E program through energy savings. The West Oakland locations identified by OPD would not qualify for this program due to the lighting level increases which basically nullify the optimum achievable energy savings.

In order to finance both the West Oakland crime lighting increases and move forward with a project to replace the estimated 33,000 HPS cobra style street lights, Electrical Services will submit a request for proposals from those companies capable of supplying a turnkey project, including financing, while still meeting the revenue neutral goal. Currently two plans have been examined which provide this service at a sub 4% lending rate and a payoff period of 10 to 15 years. PG&E energy rebates, estimated to be \$3 million, could be used to offset the financing cost or to fund the requested crime lighting increases without penalty to the energy savings requirement. The total financed cost for a complete replacement project is estimated at \$22 million, without the rebates.

Benefits expected by the transition to LED lighting include the following:

- Long life (15 year), low maintenance lighting.
- 40% to 50% energy savings annually (approximately \$1.8 mil).
- Estimated emission avoidance equivalents per year: SO<sub>2</sub> – 380,597 tons, Nox – 312,328 tons, CO<sub>2</sub> – 19,093 tons.
- Improved visibility and color rendition.

- Utilization of local contract labor to accomplish the project.

Electrical Services is encouraged by the potential transition to LED lighting from the aspect of private financing for public projects, which essentially do not increase current costs associated with the operation and maintenance of the existing infrastructure while providing community benefit through technological improvement.

Respectfully submitted,



Vitaly B. Troyan  
Director, Public Works Agency

For questions please contact Dan Clanton, Electrical Services Manager at (510) 615-5428.