



Office of the City Manager

CONSENT CALENDAR

October 29, 2013

To: Honorable Mayor and Members of the City Council

From:  Christine Daniel, City Manager

Submitted by: Andrew Clough, Public Works Director

Subject: California Energy Commission Loan for Citywide LED Street Light Replacement

RECOMMENDATION

Adopt a Resolution:

1. Authorizing the City Manager to enter into a loan agreement with the California Energy Commission (CEC) for up to \$3.5 million, at a 1% interest rate for a 15 year term beginning approximately January 1, 2014 for replacement of high pressure sodium and metal halide street lights with light emitting diode (LED) fixtures; and
2. Finding that the proposed project is categorically exempt from the California Environmental Quality Act (CEQA) under Section 15301.

FISCAL IMPACTS OF RECOMMENDATION

Based on initial cost and savings estimates, a Citywide LED street lighting conversion project will result in an incentive payment from PG&E and annual energy cost reductions, which will modestly exceed the debt service on the loan. Debt service on the loan will be paid from these energy cost savings from the Street Light Assessment District Fund (470), and the General Fund (010).

The loan revenues will be received and disbursed through the California Energy Commission Fund 186. If approved by the CEC, the loan will be set up in the contract management system.

While the project may generate savings in excess of the debt service that could be used for other purposes, it is premature to program expenditures until the installation is complete and final cost and savings values are available.

CURRENT SITUATION AND ITS EFFECTS

The City has approximately 8,000 street lights that consist of high pressure sodium and metal halide lamps. LED technologies are now available that provide better and more efficient illumination. LEDs are being used in Albany, El Cerrito, Hayward, San Jose, Sunnyvale, Los Angeles, and other cities in California. Oakland is in the process of converting all its fixtures to LEDs. The City has already piloted LED street lights at the Berkeley Marina, and is in the process of converting fixtures on Telegraph Avenue.

An initial analysis for conversion of all existing street lights estimates the cost at \$3.5 million, and shows project costs could be financed by a combination of PG&E incentives and a CEC 1% 15-year loan for \$3.5 million. In addition, energy savings may produce a modest positive cash flow (savings may exceed debt service) beginning in the first year after full implementation of the project.

CEC loan program funds are currently available: reservations are on a first-come-first-serve basis and must be secured by a Council resolution. CEC loans are capped at \$3 million, but exceptions may be granted case-by-case. Staff is seeking authority for a loan of up to \$3.5 million to cover contingencies, pending the cap on the amount being approved by the CEC. The loan also requires a finding of compliance with the California Environmental Quality Act.

PG&E incentives are contingent upon project completion by the end of calendar year 2014. Staff plans to release a competitive solicitation for the conversion this December.

BACKGROUND

LED fixtures are a proven alternative to high pressure sodium and metal halide street lighting. LEDs are more efficient than existing lamps, have much longer life spans, and produce higher quality light that renders truer colors.

Cost savings: The City spends over \$600,000 for electricity to power our street lights. Due to its higher efficiency an LED conversion could reduce costs by over 50%.

Environmental impact: Energy from street lights accounts for over 1,000 metric tons of carbon dioxide emissions annually, or approximately 13% of municipal emissions from all sources -- utility energy, transportation fuels and land filled waste. An LED conversion could reduce emissions from street light energy by 50%, accounting for an estimated 6.5% reduction in overall municipal emissions.

Staff has determined that the project is categorically exempt from the California Environmental Quality Act (CEQA) under Section 15301 (existing facilities) because there is no expansion of service, light levels will remain relatively consistent, and there is no change in the number or location of the light fixtures. A notice of exemption will be filed upon Council approval.

RATIONALE FOR RECOMMENDATION

A street lighting conversion can reduce City operating expenses, improve lighting quality, and reduce greenhouse gas emissions.

The CEC 1% loan is considerably less costly than other currently available financing sources.

ALTERNATIVE ACTIONS CONSIDERED

The City could choose not to apply for the CEC loan, and seek other forms of financing at higher interest rates.

CONTACT PERSON

Phil Harrington, Deputy Director, Public Works, 981-6661

Billi Romain, Sustainability Coordinator, Planning & Development, 981-7432

Attachments:

1: Resolution

2: CEQA Categorical Exemption

RESOLUTION NO. ##,###-N.S.

APPLICATION FOR CALIFORNIA ENERGY COMMISSION ENERGY PARTNERSHIP
PROGRAM TECHNICAL ASSISTANCE GRANT

WHEREAS, the City adopted the Climate Action Plan, which establishes a goal of reducing carbon dioxide emissions by 33% between 2000 and 2020, and light emitting diode technology (LED) can reduce the City's municipal carbon dioxide emissions by approximately 6.5%; and

WHEREAS, PG&E has financial incentives for projects installed by December 31, 2014 which, along with energy savings for such a project could fully offset the cost to service a 15-year loan; and

WHEREAS, the California Energy Commission provides loans to schools, hospitals, local governments, special districts, and public care institutions to finance energy efficiency improvements.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the City Manager is authorized to apply for a loan of up to \$3.5 million from the California Energy Commission to implement an energy efficient street lighting conversion project.

BE IT FURTHER RESOLVED that in compliance with the California Environmental Quality Act (CEQA), the Berkeley City Council finds that the activity funded by the loan is categorically exempt under Section 15301 (existing facilities) because there is no expansion of service, light levels will remain relatively consistent and there is no change in the number or location of the light fixtures.

BE IT FURTHER RESOLVED that if recommended for funding by the California Energy Commission, the City Manager is authorized to accept a loan for up to \$3.5 million.

BE IT FURTHER RESOLVED that the amount of the loan will be paid in full, plus interest, under the terms and conditions of the Loan Agreement, Promissory Note and Tax Certificate of the California Energy Commission.

BE IT FURTHER RESOLVED that the City Manager is authorized to execute all necessary documents to implement and carry out the purpose of this resolution.

Notice of Exemption

To: Office of Planning and Research
PO Box 3044, Room 212
Sacramento, CA 95812-3044

From: City of Berkeley
Department of Public Works
2180 Milvia Street
Berkeley, CA 94704

County Clerk—Recorder
County of Alameda
1106 Madison Street
Oakland, CA 94607

Project Title:

Berkeley City-wide: Energy-Efficient Street Lighting Upgrade

Project Location:

City of Berkeley Street lights citywide
City of Berkeley, County of Alameda

Nature, Purpose and Beneficiaries of Project:

This project will replace high-pressure sodium (HPS) street lights with light-emitting diode (LED) street lights on all public streets and pathways. The new fixtures will be mounted on the existing light poles. Approximately 7,600 high pressure sodium and metal halide fixtures will be replaced with an equal number of LED fixtures. All LED fixtures will be Generation D with a correlated color temperature (CCT) of 4300 degrees Kelvin and are “Dark Sky-Friendly” according to the international Dark Sky Association (IDA) (<http://www.darksky.org/>).

The lower wattage is expected to reduce energy consumption by over two million kWh annually and reduce carbon dioxide emissions by over 500 metric tons annually through avoided generation requirements.

In addition to lower energy consumption, LED street lights provide more directional light, reducing light trespass to surrounding areas and the night sky. Due to improved distribution, the light intensity directly beneath the fixtures will be significantly lower than it is under the HPS fixtures.

The purpose of the project is to use newer lighting technology to improve the efficiency and efficacy of existing streetlight fixtures. The benefits include less greenhouse gas emissions, lower taxpayer expenditures and better quality of light.

Name of Public Agency Approving Project:

City of Berkeley

Name of Person or Agency Carrying Out Project:

City of Berkeley, Department of Public Works
Lorin Jensen, Supervising Civil Engineer

Exempt Status:

Categorical Exemption: Class 1, Section 15301. Existing Facilities

Reasons why project is exempt:

This project is exempt because it is a minor alteration of an existing public facility involving no expansion of use. The project will replace a total of approximately 7,600 high-pressure sodium light and metal halide fixtures with an equal number of LED fixtures. The new fixtures will be installed on the existing light poles in their current locations. There is no expansion of service, light levels will remain relatively consistent and there is no change in the number or location of the light fixtures.

Lead Agency Contact Person:

Phil Harrington, Deputy Director Public Works
(510) 981-6661

If filed by applicant:

1. Attach certified document of exemption finding.
2. Has a Notice of Exemption been filed by the public agency approving the project? YES.

Signature: _____

Title: _____

Date: _____

- Signed by Lead Agency
- Signed by Applicant

Date received for filing at OPR: _____