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Staff Report for a Resolution Authorizing the City Manager or His Designee to Execute an On-Bill Financing Loan Agreement with Pacific Gas and Electric Company to Provide 0% Interest Loan Financing and a Rebate Grant Through Participation in the California Wastewater Process Optimization Program

SUMMARY AND RECOMMENDATIONS

Staff recommends that the City Council approve a resolution authorizing the City Manager or his designated representative to sign an On-Bill Financing (OBF) Loan Agreement with PG&E, which allows the energy savings to pay for the capital costs associated with the purchase and installation of an energy efficient turbo blower to replace one of the current aeration blowers.

BACKGROUND

In its treatment operations, the Water Pollution Control Plant (WPCP) is the largest single consumer of electrical energy of all City facilities; the majority of that electricity powers the aeration tank blowers. To comply with the Climate Action Plan mandate to continue to evaluate opportunities to purchase high efficiency equipment, the City contacted the California Wastewater Process Optimization Program (CalPOP) regarding energy efficiency measures that could be implemented to reduce electrical usage. CalPOP provides no-cost engineering services to identify energy savings measures for wastewater treatment plants, while also providing incentives for installations that improve wastewater processes, reduce operating costs and save energy.

Analysis

At the City's request, a CalPOP engineer spent several days in 2011 at the WPCP analyzing Plant processes and data, specifically regarding the operation of the aeration basin. He subsequently prepared a Facility Audit Report (attached). This audit qualifies specific energy efficiency measures for CalPOP incentives.

The Audit's proposed modifications to the Plant would improve control of plant processes, and yield energy and operational cost savings for the Plant. Specifically, the proposals are:

- Replace one existing Lamson 150 HP blower with a high efficiency turbo blower.
- Install a 10 HP fixed speed Sutorbilt positive displacement blower to maintain constant airflow to the offline aeration tank for maintenance of diffuser heads.

These two measures are expected to save the City 276,000 KWh per year with an approximate annual savings of \$29,600 in energy costs. CalPOP will also pay the City an estimated one-time rebate of \$24,800, which would be returned to the WPCP Enterprise Revenue Fund. The end result will be newer and more efficient plant equipment, secured at no cost to the City.

A Program Participation Agreement (PPA) (attached) was signed in November 2011, which reserves CalPOP incentive funds for the project. It stated that the City intended to move forward with the project, and set terms and conditions for payment of incentives about the project if installed. These incentives will be available only until November 1, 2014.

The Facility Audit was submitted by CalPOP to PG&E to start the process of the OBF Loan. OBF Loan funding from PG&E is a separate but related effort; coordination with PG&E is handled by the CalPOP Program Manager. Loan funding of up to \$250,000 at 0% interest is available from PG&E for financing qualified Energy Efficiency projects. The OBF Loan process will utilize the Plant's PG&E bill savings to pay off the loan principal, and the term of the loan is tied to the simple payback period of the project, conservatively estimated to be 6 years; loan payback could be sooner depending on realized energy savings. The City will only temporarily have out-of-pocket capital expenses during project construction, as both the CalPOP rebate incentive and the OBF loan funds will be disbursed upon project completion.

Based on the Facility Audit and the signed Program Participation Agreement, PG&E prepared the OBF Loan Agreement. Once the OBF Loan Agreement is signed by the City Manager, the CalPOP Program Manager will obtain PG&E signatures, at which time the project can begin.

The Audit recommended three different makes of blowers for replacement. After analysis of the capabilities of all three companies, and discussions with the vendors, the Audit Report recommended a single blower as better suited for our application.

Much of the installation will be done by Plant personnel. CalPOP has no limitation or recommendation on the City regarding the use of contractors or equipment purchased. However, significant deviation from the project identified in the Facility Audit may lead to reduced energy

savings, and a smaller program incentive. The Plant will secure design and instrumentation contractors and purchase the blowers. Some level of technical assistance and coordination will be available from CalPOP during project installation. Completion of the project must be no later than November 1, 2014.

Once the project is installed and operating as intended, CalPOP will return to install power monitoring equipment and data loggers in order to prepare an energy savings verification report for submittal to PG&E for approval. CalPOP will also obtain from the City other plant records, reports, project invoices, etc., needed to complete the approvals of project savings. Once approved, the project CalPOP incentive is re-calculated based on actual measured energy savings. The OBF loan terms may be modified to adjust loan terms to match actual project costs, energy and energy cost savings.

CalPOP Incentive and OBF Loan funds are typically disbursed about two months after Project completion.

Current Agency Policies

- Climate Action Plan (adopted by Resolution No. 2009-169 on December 21, 2009 and updated March 1, 2013)

Applicable General Plan Policies

- Policy 28.01 Conservation Advocacy Action 28.01-A: Energy Retrofits of Public Facilities. Pursue the retrofiting of City facilities to improve energy efficiency.
- Policy 52.04 Wastewater Collection and Treatment. Ensure that high operating efficiency is retained in both the wastewater collection and treatment systems.

Fiscal Impacts

This blower retrofit project will temporarily require expenditure of about \$200,000, to which staff will take all necessary steps to insure that the entire amount is refunded after installation by the CalPOP incentive and the PG&E loan. The funds were budgeted in Water Pollution Control Plant Fund 593-52 -113-5240 for Fiscal Year 2014 to cover design, instrumentation integration, and blower purchase. Installation will be performed by WPCP personnel, saving the City a significant sum in contract labor costs.

Budget Authority

The On-Bill Financing Plus incentive is the most cost effective method to finance this project while meeting City mandates to improve process efficiency.

ATTACHMENTS

- California Wastewater Process Optimization Program Pre-installation Facility Audit Report, San Leandro Wastewater Treatment Facility P1209-533 dated June 30, 2011
- California Wastewater Process Program Participation Agreement signed November 30, 2011

- PG&E Financing Supplement to the Energy Efficiency Retrofit Program Application
- PG&E General On-Bill Financing Loan Agreement

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