

Agenda Report

July 29, 2013

TO: Honorable Mayor and City Council

THROUGH: Municipal Services Committee (July 23, 2013)

FROM: Water and Power Department

SUBJECT: AUTHORIZATION TO ENTER INTO A CONTRACT WITH GE PACKAGED POWER, INC. TO DESIGN, FURNISH AND DELIVER THE POWER ISLAND EQUIPMENT FOR THE GLENARM REPOWERING PROJECT; AND AN AMENDMENT TO THE FISCAL YEAR 2014 ADOPTED CAPITAL IMPROVEMENT BUDGET

RECOMMENDATION:

It is recommended that the City Council:

1. Find that the proposed contract to design, furnish and deliver the Power Island Equipment ("PIE"), as part of the Glenarm Repowering Project, was subject to adequate environmental review as part of the Glenarm Repowering Project Final Environmental Impact Report Findings adopted by City Council on April 8, 2013;
2. Find that the proposed contract with GE Packaged Power, Inc. ("GE") is exempt from competitive bidding pursuant to City Charter Section 1002 (f), contracts for professional or unique services, and that there are no changed circumstances or new information that would trigger further environmental review;
3. Authorize the City Manager to enter into a contract with GE to design, furnish and deliver the Power Island Equipment for the Glenarm Repowering Project in an amount not-to-exceed \$62,550,000, conditional upon receipt of the South Coast Air Quality Management District ("SCAQMD") permit to construct; and
4. Amend the Fiscal Year 2014 Adopted Capital Improvement Budget by appropriating \$25.4 million from the unappropriated Power Fund balance to the Power Fund Capital Improvement Budget Number 3194-Local Generation Repowering Project Phase II.

MUNICIPAL SERVICES COMMITTEE RECOMMENDATION:

On July 23, 2013, the Municipal Services Committee recommended that the City Council authorize the City Manager to enter into a contract with GE to design, furnish and deliver the PIE, and amend the Capital Budget.

BACKGROUND:

In March 2009, the City of Pasadena adopted the Energy Integrated Resource Plan ("IRP"), which serves as a blueprint for Pasadena Water and Power ("PWP") to deliver reliable, environmentally responsible electricity service at competitive rates through 2030. A key feature of the IRP is the replacement of the existing steam generating Unit B3 with a new natural gas-fired combined-cycle unit of approximately the same equivalent size. The installation of this new combined-cycle unit is known as the Glenarm Repowering Project ("Repowering Project").

The objectives of the Repowering Project include the following:

- Maintain the City's ability to generate power locally when needed, to ensure sufficient power supply, and to make up for any shortfall due to import or distribution system constraints.
- Replace the 48-year old steam generating unit B3 that has exceeded its design life. Unit B3 is currently experiencing frequent tube ruptures, component failures and spare parts scarcity due to its age.
- Provide for mandated capacity (i.e., guarantee of availability) to generate power when required by the California Independent System Operator.
- Provide means to operate the electric grid efficiently and reliably by managing excessive generation and compensate for the intermittency of renewable resources.
- Balance reliable electricity service and competitive and stable rates with consideration of environmental concerns and reduced dependence on coal power.

Guided by the above objectives, staff and its consultant, POWER Engineers spent considerable time performing due diligence when defining the project requirements and weighing the available options. The best available option was determined to be a fast-starting, combined-cycle natural gas-fired generating unit of the same gross capacity as the existing unit B-3. The new combined cycle plant will be known as Unit GT-5.

Unit GT-5, which would be located south of the existing Glenarm Building, will include a new gas turbine generator, steam turbine generator, once-through steam generator ("OTSG"), condenser, wet-type cooling tower, water storage tanks, electric-powered fuel gas compressors, air compressors, inlet air chilling system, emissions monitoring and control equipment, generator step-up transformer and major pumps. Collectively, this core equipment is known as the Power Island Equipment ("PIE").

The proposed contract will provide for the process design, furnishing, and delivery of the PIE for the Repowering Project. The detailed power plant design and construction will be procured under a separate Balance of Plant ("BOP") contract.

A Request for Proposals (RFP) for providing design, furnishing, and delivery of the PIE was posted on the City's website on June 28, 2012. The proposal was downloaded by 109 registered vendors and five vendors responded with six proposals. The proposals received were independently evaluated by three city staff members and POWER Engineers based on the criteria stated in the RFP. The "evaluated cost" criterion of the scoring system assigns a monetary value to the fuel and resource consumption of the equipment, as measured over the expected thirty year life of the equipment, in addition to its initial capital cost. The top two firms were invited for an interview at the Broadway Steam Plant. The evaluation yielded the following scores:

BIDDERS	EVALUATED SCORES
GE Packaged Power, Inc., Houston, TX	82.75 (GE Gas Turbine)
Abeinsa, Inc., Chesterfield, MO	80.25 (Rolls Royce Gas Turbine)
Abeinsa, Inc., Chesterfield, MO	79.25 (GE Gas Turbine)
Quanta, Inc., Greenwood Village, CO	79 (GE Gas Turbine)
Lauren, Inc., Abilene, TX	78 (Rolls Royce Gas Turbine)
ESI, Farmington, CT	68.75 (Rolls Royce Gas Turbine)

GE met the requirements of the RFP, received the highest evaluated score, and is therefore recommended for the award of contract.

The proposed contract amount of \$62,550,000 is based on the firm bid of \$61,174,000 for the design, furnishing and delivery, including spare parts and selected options, plus \$1,376,000 for contingency (2.2% of the firm bid).

Currently, staff is working on one issue that needs to be completed and resolved successfully before undertaking the City Council action requested in this report. This issue is the approval by SCAQMD of a permit to construct the project. PWP submitted two permit applications (one for GE and one for Rolls Royce combustion turbine combined-cycle plant) to SCAQMD in June 2012. SCAQMD is ready to issue only one permit and PWP will need to select which option is optimal for the project. Following City Council approval, PWP will request issuance of the permit for the GE equipment.

The proposed contract complies with the Competitive Bidding and Purchasing Ordinance, Pasadena Municipal Code, Chapter 4.08 and the Living Wage Ordinance, Pasadena Municipal Code 4.11.

INCREASE IN OVERALL PROJECT COST COMPARED TO INITIAL ESTIMATE:

Initially in 2009, as a part of the IRP recommendations, the Glenarm Repowering Project was estimated at \$115.1 million dollars. Subsequently, a power plant consultant, POWER Engineers, was hired to guide PWP in developing the detailed project scope and assist as needed throughout the project until commercial operation. With the input of POWER Engineers, other consultants, equipment manufacturers and other utilities, staff concluded that most of the major equipment should be procured under the Power Island contract. A more limited number of equipment items had originally been contemplated. This will reduce the risk to the project by minimizing coordination issues between separate parties, and allow PWP to secure a “wrap” performance guarantee around the Power Island. This expanded scope for the Power Island has resulted in an increase of approximately \$18 million for this contract compared to the initial estimate.

Also, as a result of the Environmental Impact Report approval conditions, air permitting conditions, and newly expected requirements of the California Independent System Operator (CAISO), cost not initially contemplated has been added. This cost is associated with an increased scope for noise attenuation, air pollution equipment and an increased operating range of the generation unit. Additionally, the overall economic recovery, federal anti-coal policies, the replacement of aging power plants, and other California regulatory requirements have increased demand for natural gas fired power plants. These factors are putting upward pressure on the cost of equipment and construction. During the course of time, staff reconsidered location and size of the control room and offices. The latest plan to build a stand-alone reduced size control room and office structure on the Glenarm site has resulted in savings of approximately \$11 million compared to the initial estimate.

The overall projected project cost is now estimated to be \$131.8 million compared to the \$115.1 million initial estimate, an increase of 15% compared to the initial estimate, or approximately a 27% increase if the savings from the new plan for lesser cost control room and offices are considered separately. Please refer to Exhibit 1 for more details resulting in changes in the budget estimate. Despite this increase in the budget estimate, the repowering project remains a cost-effective and vital resource to ensure reliability, help reduce Pasadena’s environmental impact, and provide the operational flexibility needed as more intermittent renewable resources are added to the power grid.

COUNCIL POLICY CONSIDERATION:

This authorization supports the City Council strategic goals to improve, maintain, and enhance public facilities and infrastructure, to increase conservation and sustainability, and maintain fiscal responsibility and stability. This authorization also supports PWP’s energy efficiency and renewable portfolio standard goals, as well as the major strategic planning targets identified in the Energy IRP.

ENVIRONMENTAL ANALYSIS:

On April 8, 2013, the City Council certified the Final EIR for the Glenarm Repowering Project, made environmental findings, adopted a Mitigation Monitoring and Reporting Program and a Statement of Overriding Considerations, and granted the land use approvals for the Repowering Project. The actions proposed herein are a subsequent discretionary step required to implement the Project studied in the EIR. Pursuant to State CEQA Guidelines Section 15162, there are no changed circumstances or new information which would trigger additional environmental review.

FISCAL IMPACT:

The action will cost \$62.55 million for the Power Island Equipment as shown in the table below. It is anticipated that \$40.37 million of the total cost will be spent during fiscal year 2014; and that the remaining costs will be spent over the next two fiscal years.

	Total Expenditure FY 2014	FY 2015 & FY 2016	Total Expenditure
Base Contract Amount	\$40,370,000	\$20,804,000	\$61,174,000
Contingency (2.2% of the firm bid)		\$1,376,000	\$1,376,000
Total Fiscal Impact	\$40,370,000	\$22,180,000	\$62,550,000

Several financing options are being considered, based on structure that includes up to 20% equity financing with the remainder to be funded by issuing revenue bonds which will be appropriately sized and timed based on project cash flow requirements and market conditions to minimize financing costs. Based on current market conditions, debt service obligations for the new revenue bonds could range from \$7.5 million to \$8 million annually. As a worst case, assuming there are no revenues from the new unit, the effect on an average customer bill could range from \$3 to \$7 per month, based on electricity consumption and actual market conditions at the time the bonds are issued.

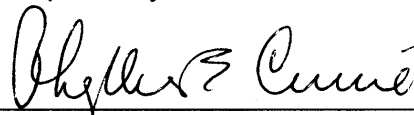
The Repowering Project is expected to operate at significantly improved efficiency levels that will result in lower costs of operation. The improved efficiency may also provide expanded market opportunities for ancillary services and resource adequacy requirements. The lower costs and potential revenue opportunities could offset some of the impact of the increased debt service obligations.

Following the approval of the recommendation to authorize an additional \$25.4 million in appropriations, there will be sufficient appropriations in the Power Capital Fund 411, Capital Improvement Program #3194 – Local Generation Repowering Project – Phase II. Funding for this action will be addressed by the use of revenue bonds which will be issued later this year. Pending the issuance of the revenue bonds, funds from the

unreserved Power Fund account will be used to pay for project costs based on the reimbursement resolution that was approved by the City Council for this project in January 2013. The Power Fund will be made whole upon the issuance of the revenue bonds.

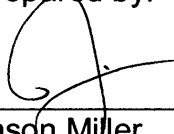
The estimated total cost of the Local Generation Repowering Project – Phase II Project is about \$132 million and the project is expected to be completed in FY 2016. There is no anticipated impact to other operational programs or capital projects as a result of this action.

Respectfully submitted,



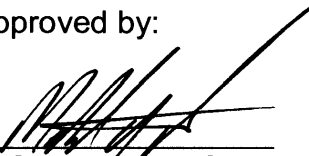
PHYLLIS E. CURRIE
General Manager
Water and Power

Prepared by:



Jason Miller
Engineer

Approved by:



MICHAEL J. BECK
City Manager

Exhibit 1

(Authorization to Enter Contract with GE Package Power, Inc July 29, 2013)

Glenarm Repowering Budget Changes

Scope of Work	Previous Estimate	Current Estimate	Difference (\$)	Explanation
Power Island Equipment				
Equipment Subtotal	\$ 39,482,381	\$ 48,303,504	\$ 8,821,123	Increased Scope, noise control, flexibility, emissions compliance
Delivery	\$ 2,104,000	\$ 2,525,388	\$ 421,388	Commensurate with equipment scope
Taxes	\$ 3,553,414	\$ 4,347,315	\$ 793,901	Commensurate with equipment scope
Maintenance Contract, Spare Parts, Options	\$ -	\$ 5,206,655	\$ 5,206,655	Newer design, efficiency enhancements, lessons learned
10% Contingency	\$ -	\$ 5,358,248	\$ 5,358,248	Material escalation, scope, foreign exchange, overseas shipment
Power Island Equipment	\$ 45,139,795	\$ 65,741,110	\$ 20,601,315	
Balance of the Plant Equipment - Engineering and construction				
Design, Construction, Permitting	\$ 51,000,000	\$ 51,000,000	\$ -	Various increases and decreases, but no net change
Contingency (14% / 20%)	\$ 7,020,000	\$ 9,424,958	\$ 2,404,958	Increased uncertainty & risk - Glenarm site, escalation, delays
Project and Construction Management	\$ -	\$ 3,325,800	\$ 3,325,800	Added project controls measures to assure cost/schedule/budget
Engineering & Construction	\$ 58,020,000	\$ 63,750,758	\$ 5,730,758	
Air Permit Fee				
Proposed AQMD 1304.1 Fee	\$ -	\$ 1,500,000	\$ 1,500,000	AQMD is now seeking to levy new fees on boiler replacements
Glenarm Building - control room and offices				
Control room and other offices	\$ 12,000,000	\$ -	\$ (12,000,000)	Removed from project due to expense
Modular Building for control room/offices	\$ -	\$ 830,183	\$ 830,183	Alternative to Glenarm Building
Glenarm Building - control room and offices	\$ 12,000,000	\$ 830,183	\$ (11,169,817)	
Total Repowering Project	\$ 115,159,795	\$ 131,822,051	\$ 16,662,256	

**Disclosure Pursuant to the
City of Pasadena Taxpayer Protection Amendment
Pasadena City Charter, Article XVII**

Contractor/Organization hereby discloses its trustees, directors, partners, officers, and those with more than 10% equity, participation, or revenue interest in Contractor/Organization, as follows:

(If printing, please print legibly. Use additional sheets as necessary.)

1. Contractor/Organization Name: GE PACKAGED POWER, INC.

2. Type of Entity:
 non-government nonprofit 501(c)(3), (4), or (6)

3. Name(s) of trustees, directors, partners, officers of Contractor/Organization:

PRESIDENT DARRYL WILSON
VICE PRESIDENT + TREASURER RICHARD KASSON
VICE PRESIDENT + SECRETARY KENT SHOEMAKER
VICE PRESIDENT ELIZABETH VER SCHURE
VICE PRESIDENT LANCE HALL
ATTORNEY SECRETARY BRYAN KAY

4. Names of those with more than a 10% equity, participation or revenue interest in Contractor/Organization:

Prepared by: HARRY COTHAM
Title: ATTORNEY-IN-FACT
Phone: 713-803-0965
Date: 15 FEBRUARY 2013