

Agenda Report

November 18, 2013

TO: Honorable Mayor and City Council

THROUGH: Municipal Services Committee (November 12, 2013)

FROM: Water and Power Department

SUBJECT: AUTHORIZATION TO ENTER INTO A CONTRACT WITH PROCESSES UNLIMITED INTERNATIONAL, INC. FOR PROJECT MANAGEMENT AND CONSTRUCTION MANAGEMENT SERVICES FOR THE GLENARM REPOWERING PROJECT

RECOMMENDATION:

It is recommended that the City Council:

1. Find that on April 8, 2013, the City Council made findings pursuant to the California Environmental Quality Act, adopted a Statement of Overriding Considerations, and approved the Glenarm Repowering Project; and there are no changed circumstances or new information which would trigger further environmental review;
2. Find that the proposed contract with Processes Unlimited International, Inc. ("PROU") is exempt from competitive bidding pursuant to City Charter Section 1002 (f), contracts for professional or unique services; and
3. Authorize the City Manager to enter into a contract with PROU to provide project management and construction management services for the Glenarm Repowering Project in an amount not-to-exceed \$3,304,000.

MUNICIPAL SERVICES COMMITTEE RECOMMENDATION:

On November 12, 2013, the Municipal Services Committee recommended that the City Council enter into a contract with Processes Unlimited International, Inc. for Project Management and Construction Management services for the Glenarm Repowering Project.

EXECUTIVE SUMMARY:

Pasadena Water and Power ("PWP") is proceeding with the development of the Glenarm GT-5 Repowering Project ("Repowering Project"), which entails the replacement of PWP's existing steam generating unit "B3" with a state-of-the-art

combined-cycle plant of equal capacity. To date, one of the two key contracts that make up the Repowering Project, the power generating equipment has been fully executed. The second major contract, for the design and construction of the plant, is expected to be authorized and executed in the first quarter of CY2014 in order to support the groundbreaking scheduled for the second quarter of CY2014.

In addition to the equipment procurement, design and construction contracts, PWP is recommending awarding a third services contract for project management and construction management services necessary to ensure the Repowering Project is safely and effectively completed on time and within budget.

The proposed contract will provide dedicated project management and experienced oversight for the Repowering Project. This will protect PWP's interest and ensure successful completion of the project. PWP is proposing a contract amount of \$3,304,000 that is based on PWP's estimate of \$3,004,000, plus \$300,000 for contingency (10% of base estimate). Please refer to "Contract Management Controls" for an explanation of how the estimated costs will be contained. PWP's estimate was derived from the hourly rates provided by PROU, the estimated hours of the project management personnel allocated for the job, and miscellaneous work items.

To manage the proposed contract, PWP will utilize a task order system to break down the contract scope into individual tasks with specific deadlines, cost, and deliverables. In addition, PWP will prepare a work plan and division of responsibility to avoid duplication of efforts, unnecessary expenditures, and loss of work quality. Attachment B includes the preliminary Work Plan and Project Responsibility Matrix, as well as the Task Order Letter form that will be used to manage services under the proposed contract.

PWP will provide monthly updates to the Municipal Services Committee on the Glenarm repowering project showing progress, schedule, budget, local hiring and any anticipated issues.

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 electric service at competitive rates through 2030. The Repowering Project is a key feature of the IRP.

The power plant that will be constructed as part of the Repowering Project will be delivered through two major contracts, (i) the Power Island Equipment ("PIE") contract and (ii) the Balance of Plant ("BOP") detailed design and construction contract. On July 29, 2013, City Council authorized the City Manager to execute the PIE contract, and the BOP contract is expected to be authorized and executed in the first quarter of CY2014.

Reasons for Contract Recommendation

The successful implementation of the Repowering Project is a high priority and critical element of PWP's strategic planning efforts. The Repowering Project is technically complex, subject to very stringent air emissions requirements, will span several years in duration, requires the coordination of two major contracts in excess of \$50 million each, and is expected to be an efficient and reliable cornerstone of PWP's local generation. The execution of a capital project of this magnitude requires significant supervisory resources, a well-defined project management plan, as well as sufficient staffing that has vital experience and expertise. Project success therefore depends on these resources and supervisory structure in controlling safety, cost, schedule and work quality.

Early in the development of the Repowering Project, it was determined that PWP would not have the in-house resources to simultaneously manage the remaining active phases of the Repowering Project and its regular responsibilities of keeping the existing plants operating safely, reliably, efficiently, and in compliance with environmental regulatory requirements. Hiring additional FTEs was also considered but there would not be any need for this increased staffing level once the project is completed. Additionally, while PWP is experienced in managing capital projects, it does not possess the collective experience and expertise of outside firms that specialize in managing large power generation projects such as the GT-5 Repowering Project. As such, this contract is being proposed to provide the aforementioned resources for dedicated project management and experienced oversight to protect PWP's interests and to ensure the successful execution of the Repowering Project.

PWP will maintain the overall control of the Repowering Project. It is expected that one of the Power Plant engineering staff will be dedicated to this project full-time for the purposes of coordination, providing plant information and interface needs with other City departments. Additionally, one to three PWP staff from the Power Plant operations, instrumentation, maintenance, electrical, health & safety and engineering will also be assigned to this project during the different phases to the extent their services and involvement is required. All power plant staff will undergo in-class and hands-on training before the contractor turns operational control of GT5 to PWP. PWP senior management will regularly monitor project progress, adherence to schedules, cost, and equipment performance and resolve major issues, and provide project status to the City Manager, Municipal Services Committee and the City Council.

Similar Power Project Management

PWP visited several municipal and private power plants to discuss their approaches to managing similar recent projects. In the course of managing these projects, most of these facilities employed one or more members of the currently proposed PROU team. In the course of interviewing the facility managers, PWP also received positive feedback regarding the performance of the PROU team members on these projects, which is discussed further under "PROU Team Information".

City of Riverside Energy Resource Center ("Riverside") – Four units built in two phases (Total 180 MW): utilized (i) a full time dedicated Riverside employee for project management, (ii) a full time third party construction manager, (iii) a full time assistant to the construction manager, (iv) a full time document controls employee, (v) two to four Riverside employees dedicated to the project for inspection, (vi) third party inspectors for specialty inspection.

City of Anaheim Canyon Power Plant ("Anaheim") – 4 units (Total 180 MW): utilized (i) a full time dedicated Anaheim employee for project management, (ii) two full time third party construction managers, (iii) a full time assistant to the construction managers, (iv) a full time document controls employee, (v) third party inspectors for standard and specialty inspection.

Imperial Irrigation District ("IID") – El Centro Unit 3 Repower (128 MW): utilized (i) one full time third party project/construction manager, (ii) one full time IID engineer, (iii) two full time IID finance and administration employees, (iv) one full time document controls employee, (v) one full time consulting engineer for electrical and civil engineering issues, (vi) third party inspectors for standard and specialty inspection.

Los Angeles Department of Water and Power ("LADWP") –Projects at multiple locations (over 1,400 MW): utilized combinations of third party and LADWP employees to provide (i) one full time construction manager, (ii) one full time project manager, (iii) one full time document control staff, (iv) two to three part time quality assurance inspectors, (v) several DWP engineers to review drawings and associated submittals.

The management structure and approach proposed in this contract is a best practice and consistent with both public and private industry in the management of power plant construction. In addition, while every power project is unique, the proposed contract amount is consistent with expenditures made in the aforementioned projects based on the services to be performed under the contract.

PROU Team Information

Processes Unlimited International is a full service planning, engineering and project management firm serving the energy industry, located in Pasadena. In addition to providing services to PWP in the past on several smaller power plant projects, PROU has nearly 30 years' experience in the energy industry and also provided the engineering and construction management services for the Southern California Public Power Association ("SCPPA") Magnolia Project. Refer to Attachment C for PROU's statement of Power Qualifications. Additionally, the following team members and their respective roles and experience is described below, Attachment D contains greater detail and project histories.

Tom Ettinger: Mr. Ettinger will serve as the project sponsor and provide direction to PROU's resources located within their Pasadena office. Mr. Ettinger has over 40 years of power plant and heavy industrial process experience. Mr. Ettinger's experience includes not only engineering support for Pasadena's existing generating facility, but

also experience with traditional steam boiler power plants and gas-fired turbine plants in simple and combined cycle configurations.

David Tateosian: Mr. Tateosian will serve as the project manager and has over 30 years of power plant project management experience. His most recent project management engagement for Imperial Irrigation district involved a contracting strategy similar to the Repowering Project and he also has experience in this project management capacity in his work as the Owner's Engineer on the City of Riverside's recent generation projects.

Henry R. Fine: Mr. Fine will serve as the construction manager and has over 40 years of extensive experience with power plant construction and commissioning of gas-fired simple-cycle and combined-cycle installations. In addition to many other plants, Mr. Fine has worked as a construction manager on several Southern California gas turbine power plants and in all three cases, the owner had a contracting strategy similar to the Repowering Project. Both Mr. Tateosian and Mr. Fine have worked together in different capacities over the last ten years and have a proven track record of successful projects and satisfied clients.

Carl Haase: Mr. Haase will provide civil and structural engineering support and has over 40 years of project management experience. Mr. Haase recently completed similar work on the Anaheim Canyon Power Plant from 2010 to 2012, and also served a similar role for the SCPPA Magnolia Power Project located in Burbank from 2003 to 2005.

Gary Rose: Mr. Rose will provide electrical and controls engineering support and has over 40 years of power engineering, project management and construction management experience. Mr. Rose also recently completed work on the Anaheim Canyon Power Plant from 2010 to 2012 and the SCPPA Magnolia project from 2003 to 2005.

Team Roles and Responsibilities

Under the requirements of the proposed contract, PROU will provide a project manager and a construction manager. The project manager will be responsible for overall management and delivery of the entire repowering project, in accordance with project requirements and bid documents. In this capacity, the project manager will be acting on behalf of PWP, will manage the PIE and BOP contracts on behalf of PWP and will report directly to the PWP Assistant General Manager of Power Supply as required throughout the course of the project. In addition to his regular duties, the Power Plant Superintendent will supervise the Repowering Project and will coordinate with the Project Manager. Additionally, the project manager will be responsible for monitoring critical Repowering Project elements such as safety, schedule, quality and cost. The project management organization chart is shown in Attachment A. This type of arrangement, where the BOP contractor reports to the Project Manager is not uncommon for these types of projects when an owner has limited resources. As the owner, PWP will have overall control of the project and all contracts.

While the Project Manager is acting on PWP's behalf in the management of these contracts, PWP is ultimately responsible for delivering the project under budget and on time. Liquidated damage provisions in the PIE and BOP contracts will address the consequences of delays and other failures to meet the requirements of the contracts. In the event the Project Manager or their team is not performing their responsibility to PWP's satisfaction in their assigned role, they will be replaced at PWP's direction.

The construction manager will report to the Project Manager and will be responsible for the overall management of the BOP construction, and ensuring that the PIE contractor adheres to the terms of the PIE contract with respect to delivery and performance. The construction manager will be responsible for the coordination between the PIE and BOP contractors on critical project activities, including equipment delivery and commissioning. During project closeout, the construction manager will also be responsible for ensuring that all outstanding work items are resolved and that all final construction-related project records are furnished to the City.

In addition to the above core services, PROU will provide additional critical support and quality control functions. A safety inspector and quality assurance personnel will ensure the BOP contractor adheres to their safety and quality control procedures; the quality assurance role will be filled by various members of the team. With respect to document management, PROU will manage the flow of information on the project (submittals, RFIs, pay requests, etc.) and ensure that responsible parties complete their reviews or approvals in a timely fashion. This will be done by a dedicated PROU document management employee. A part time scheduler will review the BOP contractor's schedule updates for reasonableness and to alert the project team to potential delays or other projected schedule issues. Additionally, the scheduler will be responsible for reviewing any assertions by the BOP contractor that any changes of conditions impact the project's critical path.

During the early phases of the project, PROU will review and provide input on the BOP bid documents prior to release, and will perform ongoing constructability reviews during the design and construction phases. During the middle phases of the project, PROU will review BOP contractor submittals for consistency with the Power Island Equipment Contractor's equipment submittals and check for any contractual impacts the BOP Contractor's submittals may have on the project. This submittal review differs from POWER Engineers responsibility in that POWER's review is a comparison of BOP-proposed plant design, equipment configuration and process which must be compared with the BOP specifications, which POWER prepared. Additionally, POWER will review PIE submittals for conformance with the PIE specifications, which POWER prepared.

Throughout the project, there will be a need for engineering support during the engineering, construction and commissioning phases. PROU will furnish, on an as-needed basis, the necessary civil, mechanical, and electrical engineering personnel to ensure engineering and construction are performed in accordance with prevailing industry standards, as well as Federal, State and City of Pasadena codes. Refer to Attachment "B", "Division of Responsibility" for the respective roles and responsibilities

that will be divided between PROU's engineering staff and the City's Owner's Engineer, POWER Engineers.

RFP and Evaluation Process

A Request for Proposals ("RFP") for providing project and construction management services for the Glenarm Repowering Balance of Plant design and construction project was posted on the City's website on June 25, 2013. The RFP was downloaded by 52 registered vendors and three vendors responded; PROU, Pasadena, CA; POWER Engineers, Inc., San Diego, CA; IEC Corporation, Sacramento, CA. The proposals received were independently evaluated by three PWP staff members based on the criteria shown in the following average score table:

Evaluation Criteria	Max. Points	Vendors		
		IEC	PROU	POWER
Relevant experience managing and successfully delivering similar projects in the region	40	32	36	30
Pricing, rate schedule, and other pricing items	40	38	38	40
References and Qualifications of Proposed Team Members	10	6	10	7
Local Pasadena business preference	5	0	5	0
Small or micro business	5	0	0	0
Total	100	76	89	77

PROU met the requirements of the RFP, received the highest evaluated score, and is therefore recommended for the award of contract. PROU is a local Pasadena vendor.

The RFP advertisement and vendor selection took place in accordance with the competitive selection process defined in the Competitive Bidding and Purchasing Ordinance, Pasadena Municipal Code, Chapter 4.08. This Ordinance sets forth procedures for procurements excluded from competitive bidding requirements under Section 1002 of the City Charter. Competitive selection for this contract is in the best interests of the City because of the need to balance cost against the specialized experience and capabilities necessary to manage a complex capital project such as the Repowering project. This contract complies with the Living Wage Ordinance, Pasadena Municipal Code 4.11.

Proposed Contract Amount and Fee Basis

In response to the RFP, vendors provided hourly rates for the services requested. Based on hourly rates provided by PROU, and the work scope defined in the RFP, PWP

estimated the contract amount required to provide the necessary project and construction management services. The work scope defined in the RFP was based on PWP's experience with the GT-3 and GT-4 project completed in 2003, the experience and input of several municipal utilities and PWP's consulting engineer, POWER Engineers. The proposed contract amount of \$3,304,000 is based on PWP's base estimate of \$3,004,000, plus \$300,000 for contingency (10% of the base estimate). A 10% contingency would address any need for increased project manager and construction manager services due to unforeseen circumstances, project delays and/or schedule extensions which may arise on a project of this size and complexity.

The proposed contract includes time and materials based compensation with a not-to-exceed total cost amount. It is not a fixed price contract because the full extent of the work scope cannot be known before the project starts, and any scope changes due to foreseeable (design change) or unforeseeable circumstances (force majeure, etc.) would require contract extensions/administrative processes that would further delay the project. This is a typical Project Management arrangement for projects where the PIE contractor supplies the major equipment and the BOP contractor performs final engineering design, procures remaining equipment, constructs and tests the power plant. The BOP contractor will mainly be responsible for getting the project done on time, PROU will manage the BOP contractor in that process. PWP will manage PROU's cost and scope in accordance with the paragraph "Contract Management Controls".

No reputable vendor was willing to provide a fixed price contract given the complexity of such a project and possibility of scope change due to unforeseeable circumstances. PWP determined that it was not in the best interest of the City to pursue a fixed price option given the number of potential contingencies associated with it.

PWP will utilize the contract management controls, described below, to manage the budget for the proposed contract. The services will be billed as incurred, and costs for each respective service will be controlled by the use of task orders as explained below.

Contract Management Controls

PWP will closely oversee implementation of the proposed contract to manage costs and mitigate the risk of potential cost overruns. The Repowering Project's technical nature and relatively fast-paced schedule demand that a process exists for ensuring cost containment and accountability, as well as alerting PWP to the potential for cost overruns before such overruns occur. In order to manage this risk, PWP will use a two-part system consisting of:

1. A project work plan organized by work phases, project milestones and anticipated task types during each phase; and,
2. A "task order" system that breaks down the work plan into individually-authorized tasks with specific deadlines, costs and deliverables.

If project circumstances require a change in an existing task order, or require a new task order to be created, PWP will request a proposal from PROU for a not-to-exceed cost to perform the proposed change in accordance with the proposed additional scope. Upon mutual agreement of scope, schedule and cost, the amended or new task order will be issued to PROU.

Another general set of risks on complex capital improvement projects is unnecessary expenditure, loss of quality and delay arising from duplication of effort and failure to clearly define project responsibilities for PWP staff and the various vendors (collectively, "implementation team members"). Repowering Project implementation team members may have the ability to perform many of the same tasks, so it must be made clear who is doing what from a project management standpoint to avoid duplication of effort. Similarly, to avoid task non-performance issues arising from the assumption of one stakeholder that somebody else will perform a given task, the full accounting of tasks will also ensure that scope gap is minimized. In order to manage the risks of duplication of effort and scope gap, PWP will use a matrix defining division of responsibility between the project stakeholders, to be finalized once all stakeholders' roles are identified.

While all elements of the project controls cannot be fully completed until all contracts are executed and all stakeholders, milestones and work scope(s) are identified, Attachment B includes the preliminary Work Plan, Project Responsibility Matrix, Major Project Responsibility Gantt Chart, as well as a Task Order Letter form for the Repowering Project.

Contractor Change Orders

PROU will be the first stop in the change management process; they are responsible for reviewing the proposed change for A) entitlement under the terms and conditions of the project documents and contract, B) reasonableness of the proposed scope and cost, and C) the impacts of proposed changes on the project schedule and budget. Once PROU reviews the proposed change, agrees or disagrees, and/or adjusts it, it is forwarded to the Power Supply Assistant General Manager with a recommendation for approval or rejection.

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 Environmental Impact Report ("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 table below summarizes the total cost for the Repowering Project, which is expected to cost \$131.8 million and be completed in FY 2016.

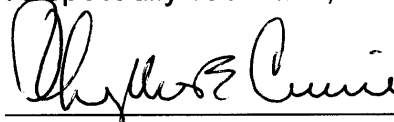
Repowering Project Work Scope	Current Estimate	Actual Contract Award	Difference
Power Island Equipment (Approved 7-29-13)	\$65,741,000	\$62,550,000	\$(3,191,000)
Project/Construction Management (Proposed)	\$3,326,000	\$3,304,000	\$(22,000)
Proposed AQMD 1304.1 Fee	\$1,500,000	\$0	\$(1,500,000)
Modular Control Room	\$830,000	TBD	\$0
Balance of Plant Design/Construction & Administrative	\$60,425,000	TBD	\$0
Total Repowering Fiscal Impact	\$131,822,000		\$(4,713,000)

The recommended action will cost up to \$3.3 million for the project manager and construction manager services as shown in the table below. It is anticipated that \$700,000 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	\$700,000	\$2,304,000	\$3,004,000
Contingency (10% of estimate)		\$300,000	\$300,000
Total Fiscal Impact	\$700,000	\$2,604,000	\$3,304,000

Funding for this action will be addressed by the utilization of existing budgeted appropriations in the Power Capital Fund 411, Capital Improvement Program #3194 – Local Generation Repowering Project – Phase II. There is no anticipated impact to other operational programs or capital projects as a result of this action.

Respectfully submitted,



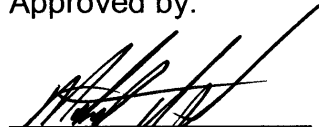
PHYLLIS E. CURRIE
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Attachments (4):

- Attachment A – Repowering Project Organization Chart
- Attachment B – Glenarm Repowering Project Work Plan, Division of Responsibility Matrix, Major Project Responsibility Gantt Chart and Task Order Form
- Attachment C – Processes Unlimited International, Inc. Qualifications
- Attachment D – Repowering Project Team Members