WATER | ENERGY | LIFE

RIVERSIDE PUBLIC UTILITIES

Board Memorandum

BOARD OF PUBLIC UTILITIES **DATE: APRIL 10, 2023**

SUBJECT: AWARD BID SUB-865 FOR FURNISHING BATTERY BANK FOR RIVERSIDE SUBSTATION TO CONCEPT POWER INC. OF LAS VEGAS, NEVADA, IN THE AMOUNT OF $78,849.30; WORK ORDER 2311734 IN THE AMOUNT OF $108,000 FOR RIVERSIDE SUBSTATION BATTERY REPLACEMENT PROJECT

ISSUES:

Consider awarding Bid SUB-865 for furnishing flooded battery bank to Concept Power Inc., of Las Vegas, Nevada, in the amount of $78,849.30, and approve the capital expenditure for Work Order No. 2311734 in the amount of $108,000 for the Riverside Substation Battery Replacement Project.

RECOMMENDATIONS:

That the Board of Public Utilities:

1. Award Bid SUB-865 for furnishing flooded battery bank for the Riverside Substation to Concept Power Inc., of Las Vegas, Nevada, in the amount of $78,849.30;

2. Approve the capital expenditure for Work Order No. 2311734 in the amount of $108,000 which includes all design, construction, procurement, testing and commissioning and construction support for replace battery at Riverside Substation; and

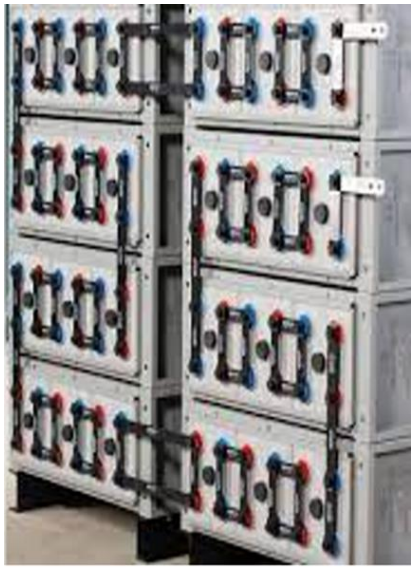
3. Authorize the City Manager, or designee, to execute any documents necessary to effectuate the project described herein, as well as the ability to make minor and non-substantive changes in alignment with all purchasing policies.

BACKGROUND:

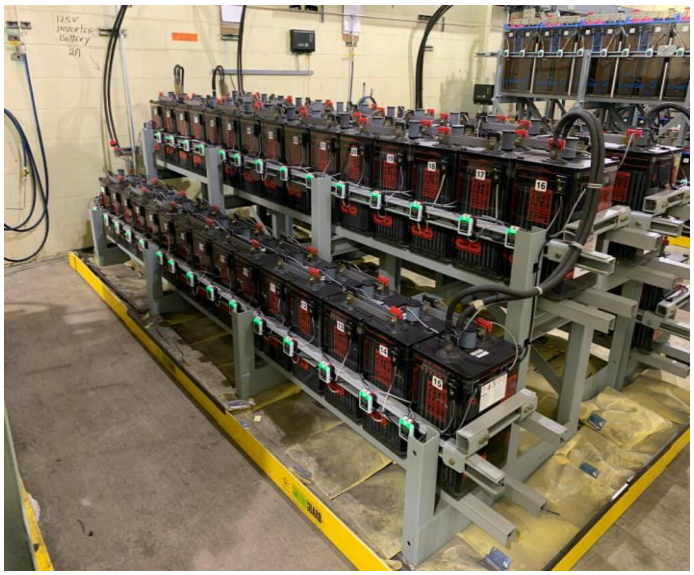
Batteries are critical components of electrical transmission and distribution systems. When faults are detected, batteries provide a reliable source of auxiliary power to the protective relays, which operate circuit breakers. In addition, when station power is lost, batteries provide a consistent source of power to critical systems such as supervisory control and data acquisition (SCADA) and communication equipment, allowing operators to continue operating the system.

RPU has standardized the use of vented lead acid-type battery banks to supply this 125-volt DC requirement for the substations. These vented lead acid battery banks have proven to be very reliable and have low maintenance requirements and an average life span of 15 years.

Riverside Substation has an 800 Amp-hour (AH) valve-regulated lead battery (old standard) with a short life span. The latest battery testing revealed that the battery bank reached the end of its useful life. Replacing this battery is critical for maintaining the reliable operation of the protection and control system, in compliance with North American Electric Reliability Corporation (NERC) Protection and Control Standard (PRC), NERC PRC-005-6 for protection system maintenance.



Typical Valve Regulated Battery Bank



Typical Flooded Battery Bank

DISCUSSION:

Project Description

The scope of work includes replacing the 800 AH battery bank and racks, spare parts, spill containment, and installing a battery monitoring system at the Riverside Substation. The battery monitoring system will automate data collection, reduce labor testing costs, and is an outstanding solution for ensuring compliance with national reliability standard NERC PRC-005.

The engineering design for this project will be performed by RPU staff. RPU field forces will perform the construction work, testing, and commissioning. There is no anticipated contract work associated with this project.

Total Project Cost

The project and fiscal breakdown is proposed as follows:

Project and Fiscal Breakdown		
Work Type	Performed By:	Amount ($)
Project Management and Engineering	RPU Engineering Staff	$9,151
Construction, Test and Commissioning	RPU Substation Electricians	$20,000
Equipment and Material		$78,849
Work Order Total:		**$108,000**
Anticipated Start Date:		**April 2023**
Anticipated Duration:		**16 weeks**

On December 21, 2022, RPU requested quotes from four vendors through an informal procurement process per Purchasing Resolution No. 23914 Section 404. Bids closed on January 12, 2023. Two vendors submitted bids. Staff evaluated the bids and deemed Concept Power Inc. of Las Vegas, Nevada, to be the lowest responsive and responsible bidder. The bid was within the engineer's estimate of $80,000.

Vendors	City Location	Bid Amount	Rank
Concept Power Inc.	**Las Vegas, NV**	**$78,849.30**	**1**
OneSource Distributors	Riverside, CA	$104,395.40	2
Royal Wholesale	Riverside, CA	No Bid	
Enersys	Santa Fe Springs, CA	No Bid	

- *Engineer's Estimate* *$80,000*

The purchase of the equipment and material is covered under Purchasing Resolution No. 23914 Section 404 which specifies specialized equipment that is particular to the needs of the City's Public Utilities Department and provides for acquisition through Informal Procurement if it appears to the Purchasing Manager to be in the best interest of the City.

The Purchasing Manager concurs that the recommended actions are in compliance with Purchasing Resolution No. 23914.

STRATEGIC PLAN ALIGNMENT:

This item contributes to **Strategic Priority 6 - Infrastructure, Mobility and Connectivity** and **Goal 6.2** – Maintain, protect, and improve assets and infrastructure within the City's built environment to ensure and enhance reliability, resiliency, sustainability, and facilitate connectivity.

This item aligns with each of the five Cross-Cutting Threads as follows:

1. **Community Trust** – Planned replacement of deteriorating battery infrastructure with monitor that complies with current standards will improve safety and reliability of the electric system is a prudent and responsible action that helps build community trust and results in the greater public good.

2. **Equity** – The replacement of the battery bank has been established based on engineering planning and operational criteria, with equitable distribution of services to ensure every member of the community has equal access to share the benefits of system improvements and reliability.

3. **Fiscal Responsibility** – This item represents fiscal responsibility by identifying and replacing aging infrastructure, providing optimal electrical system reliability, safety, and efficiency, and reducing potential equipment and system failures and overall operational costs. The lowest price for the battery bank units and thereby the best value for RPU' s customers was ensured through a competitive bidding process.

4. **Innovation** – RPU is committed to identifying creative solutions to meet the needs of our community members, effectively and efficiently by providing innovative infrastructure improvements. A collaborative and efficient approach has been used to replace the aging electric infrastructure to minimize potential disruptions to our customers in the future.

5. **Sustainability & Resiliency** – This project ensures that new battery bank and related component upgrades provide grid modernization and reliability that is expected to last well into the future.

FISCAL IMPACT:

The total fiscal impact is $108,000. Sufficient funds are available in Public Utilities Substation Bus Upgrade Account No. 6130100-470608.

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Approved by:	Todd M. Corbin, Utilities General Manager
Approved by:	Rafael Guzman, Assistant City Manager
Approved as to form:	Phaedra A. Norton, City Attorney
Certifies availability of funds:	Edward Enriquez, Interim Assistant City Manager/Chief Financial Officer/City Treasurer

Attachments:

1. Project Map
2. Presentation