



BID SUB-865 - RIVERSIDE SUBSTATION BATTERY REPLACEMENT PROJECT

Riverside Public Utilities

Board of Public Utilities
April 10, 2023

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BACKGROUND

Auxiliary DC Power Supply

1. Critical for the control and operation
2. Critical for reliable operation of the protection and control system
3. Complying with NERC PRC-005-6



2

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BACKGROUND

1. Riverside substation has an 800 AH valve-regulated lead acid-type battery (VRLA) with short life span
2. Replace the old battery with new standardized vented lead acid-type battery banks
3. The replacement is based on the most recent battery testing, which revealed that the battery bank had reached the end of its useful life



3

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BACKGROUND



Typical Valve Regulated
Battery Bank



Typical Flooded Battery Bank (new standard)

Flooded battery Bank Advantages

- 1- Longer life span
- 2- Low maintenance
- 3- More reliable



4

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DISCUSSION

Scope of Work includes:

1. Replacing the 800 AH battery bank and racks
2. Spare parts
3. Spill containment
4. Installing a battery monitoring system that automates data collection, reduces labor testing costs, and is an outstanding solution for NERC PRC-005 compliance



5

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DISCUSSION – PROJECT MAP



6

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DISCUSSION – WORK SCOPE

- Scope of work includes replacement of battery bank and rack, including the spill containment, and Installing a battery monitoring system that automates data collection
- RPU staff will perform procurement, engineering design, construction, testing, and commissioning



7

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BATTERY BID RESULTS

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	
Energysys	Santa Fe Springs, CA	No Bid	

Engineer's Estimate

\$80,000



8

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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



9

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STRATEGIC PLAN ALIGNMENT



Strategic Priority 6 - Infrastructure, Mobility and Connectivity

Goal No. 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.

Cross-Cutting Threads



Community Trust



Fiscal Responsibility



Sustainability & Resiliency



Equity



Innovation



10

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RECOMMENDATIONS

That the Board of Public Utilities:

1. Award Bid SUB-865 for furnishing flooded battery bank for 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. 231173 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.



11

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