



# RIVERSIDE PUBLIC UTILITIES

## Board Memorandum

**BOARD OF PUBLIC UTILITIES**

**DATE: DECEMBER 13, 2021**

**SUBJECT: BID NO. SUB-851 – TELEPROTECTION SUBSTATION AUTOMATION INFRASTRUCTURE UPGRADE PROJECT WITH ONESOURCE DISTRIBUTORS OF OCEANSIDE, CALIFORNIA, IN THE AMOUNT OF \$458,525.38 – WORK ORDER 2202600 IN THE AMOUNT OF \$544,378**

**ISSUES:**

Consider the award of Bid No. SUB-851 for teleprotection equipment to OneSource Distributors, of Oceanside, California, in the amount of \$458,525.38 and approve the capital expenditure for Work Order No. 2202600 in the amount of \$544,378 for the Teleprotection and Substation Automation Infrastructure Upgrade Project.

**RECOMMENDATIONS:**

That the Board of Public Utilities:

1. Award Bid No. Sub-851 for Teleprotection and Substation Automation Infrastructure Upgrade Project to OneSource Distributors, of Oceanside, California, in the amount of \$458,525.38; and
2. Approve Work Order No. 2202600 in the amount of \$544,378.

**BACKGROUND:**

Teleprotection is a key technology for protecting the integrity of sub-transmission lines and the voltage stability of the electric grid. Teleprotection devices use communication channels to exchange information between substation transmission relays such as pilot and distance relays. The transmission relays use this information to detect faults on transmission lines and clear faults at very high speed, minimizing system damage and maintaining system stability.

Riverside Public Utilities (RPU) currently utilizes a legacy Synchronous Optical Network (SONET) as a platform for teleprotection. Although this system was installed in the early 1990s, SONET has been very reliable technology. It provides deterministic channel behavior, which is critical for teleprotection applications. However, the SONET platform has reached its end of life and will soon no longer be supported by the manufacturer, which causes challenges maintaining the existing aging system. To minimize any disruption of current electric utility operations, RPU is planning to upgrade the existing teleprotection system with a newer platform.

RPU operations and engineering evaluated different solutions and found that General Electric's JunglePax (JPAX) system is the most cost effective and reliable option for managing mission critical operations that are compatible with RPU's infrastructure. JPAX is purpose built for utility teleprotection applications. This new teleprotection platform will maintain the deterministic performance of the legacy product while providing an increased efficiency and ease of integration with existing infrastructure.

## **DISCUSSION:**

The scope of work includes upgrading the existing teleprotection equipment at 11 electrical substations. The engineering design contemplated for this project will be performed by RPU staff. The construction work, testing, and commissioning will be performed by RPU field forces.

On August 6, 2021, RPU requested quotes from five vendors in response to Bid No. SUB-851 through an informal Request for Bids process conducted by RPU staff for the teleprotection equipment procurement. Bids closed on September 3, 2021 and three bids were received. Staff reviewed the bids and deemed OneSource Distributors, from Oceanside, California, to be the lowest responsive and responsible bidder. The bid was within the engineer's estimated amount of \$480,000. The bids are summarized in the table below:

<b>Vendors</b>	<b>City Location</b>	<b>Bid Amount</b>	<b>Rank</b>
<b>OneSource Distributors</b>	<b>Oceanside, CA</b>	<b>\$458,525.38</b>	<b>1</b>
Royal Industrial Solutions	Riverside, CA	\$470,422.15	2
Anixter	Corona, CA	\$ 477,267.08	3
➤ <i>Engineer's Estimate</i>		\$480,000.00	

The project/fiscal breakdown is as follows:

<b>Project and Fiscal Breakdown</b>		
<b>Work Type</b>	<b>Performed By:</b>	<b>Amount (\$)</b>
Project Management and Engineering	RPU Staff	\$8,000
Electrical Work & Testing	RPU Crews	\$32,000
Material and Parts	OneSource Distributors	\$458,525
Contingency (10% of Contract)		\$45,853
<b>Work Order Total:</b>		<b>\$544,378</b>
<b>Anticipated Start Date:</b>		<b>March 2022</b>
<b>Anticipated Duration:</b>		<b>4 months</b>

The Purchasing Manager concurs that the recommended actions are in compliance with Purchasing Resolution No. 23256.

## **STRATEGIC PLAN ALIGNMENT:**

This item contributes to Strategic Priority No. 6 Infrastructure, Mobility and Connectivity Goal 6.2 to 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** – The replacement of teleprotection system will improve the reliability of the electric system, which helps build community trust and result in the greater public good.
2. **Equity** – RPU endeavors to provide safe and reliable electric service to all its customers. The entire teleprotection system will be upgraded. Since RPU's electric system is an interconnected network, investments made to maintain individual parts of the system improve the reliability of the overall system, thereby providing an equitable benefit to all customers.
3. **Fiscal Responsibility** – This item represents fiscal responsibility through the selection of the lowest project bid, providing optimal project efficiency, and effectively utilizing funding for the project.
4. **Innovation** – RPU is committed to identifying creative solutions to meet the needs of community members effectively and efficiently by providing innovative infrastructure improvements. Upgrading teleprotection infrastructure is part of the effort to modernize the grid to make it more innovative and more resilient through the use of innovative technologies, equipment and automation systems that communicate together to deliver reliable and efficient electric power.
5. **Sustainability & Resiliency** – Upgrading system protection infrastructure will improve the system capability and reliability in detecting and clearing faults quickly to minimize damages to the electric system.

#### **FISCAL IMPACT:**

The total fiscal impact is \$544,378. Sufficient funds are available in Public Utilities Substation Bus Upgrade Account No. 6130100-470616.

Prepared by:	Daniel E. Garcia, Utilities Deputy General Manager
Approved by:	Todd M. Corbin, Utilities General Manager
Approved by:	Kris Martinez, Interim Assistant City Manager
Approved as to form:	Phaedra A. Norton, City Attorney

Certifies availability of funds:	Edward Enriquez, Chief Financial Officer/City Treasurer
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Attachments:

1. Project Site Map
2. Presentation