



RIVERSIDE PUBLIC UTILITIES

Board Memorandum

BOARD OF PUBLIC UTILITIES

DATE: JANUARY 13, 2025

SUBJECT: BID NO. SUB-02B PROCUREMENT OF TWO 220kV – 66kV SUBSTATION POWER TRANSFORMERS WITH HD HYUNDAI ELECTRIC AMERICA CORPORATION IN THE AMOUNT OF \$11,912,380.39 FOR THE WILDERNESS SUBSTATION WITH A CONTINGENCY OF 10% IN THE AMOUNT OF \$1,191,238.03 FOR A TOTAL NOT-TO-EXCEED AMOUNT OF \$13,103,618.42

ISSUES:

Consider authorizing the procurement for the furnishing and delivery of two 220KV - 66KV power transformers from Bid No. Sub-02B with HD Hyundai Electric America Corporation in the amount of \$11,912,380.39 for the Wilderness Substation and authorizing a 10% change order authority in the amount of \$1,191,238.03, for materials purchase as part of the Riverside Transmission Reliability Project Work Order No. 642975 for a total not-to-exceed amount of \$13,103,618.42.

RECOMMENDATIONS:

That the Board of Public Utilities:

1. Authorize the procurement of two Power Transformers from Bid No. SUB-2B for Wilderness Substation with HD Hyundai Electric America Corporation of Duluth, Georgia, in the amount of \$11,912,380.39 with a contingency of 10% in the amount of \$1,191,238.03 for a total not-to-exceed amount of \$13,103,618.42; and
2. Authorize the City Manager, or designee, to execute any documents necessary to effectuate the procurement described herein, as well as the ability to make minor non-substantive changes in alignment with all purchasing policies.

BACKGROUND:

The Riverside Transmission Reliability Project (RTRP) is a joint initiative between Southern California Edison (SCE) and Riverside Public Utilities (RPU) to enhance the reliability and capacity of Riverside's electric utility system. This project will provide RPU with a critical second connection to California's electric transmission grid by linking to the existing 230kV SCE Mira Loma-Vista line.

As part of the RTRP, SCE will construct the Wildlife Substation, a 230kV switchyard, and approximately 10 miles of 230kV double-circuit transmission lines, connecting the Wildlife Substation to the Mira Loma and Vista Substations by looping into the Mira Loma-Vista No. 1 - 230 kV transmission line. The Wildlife Substation will serve RPU's proposed Wilderness Substation, which will step down the voltage using two 220kV to 66kV transformers. The Wilderness Substation will then integrate into RPU's 69kV system, supplying power to Riverside's

distribution substations and generating stations to address the city’s long-term capacity and reliability needs.

The Board approved project Work Order No. 642975 on August 24, 2020, in the amount of \$216,515,521. Work Order No. 642975 has sufficient funds for the procurement and construction of Wilderness Substation.

The Wilderness Substation is a critical component of the City of Riverside’s electrical needs, and long-term capacity and reliability improvements. The substation will include two 220kV transformers, six new 66kV transmission lines, two 220kV circuit switchers, fourteen 66kV circuit breakers, thirty-four 66kV disconnect switches, two 66kV capacitor banks, steel structures, associated hardware, and protection and automation equipment. Approval is being requested for the procurement of two-220kV power transformers due to their long lead time. Future project phases will involve the procurement of the remaining equipment, materials, and construction contracts, which will be presented to the Board for approval at a future date(s).



Typical 220kV Power Transformer

DISCUSSION:

Bid No. SUB-2B (Two 220kV Power Transformers)

On July 25, 2024, six power transformer vendors were invited to submit bids through the informal Request for Bid (RFB) SUB-02B procurement process for equipment and materials. Three of the six vendors submitted bids. Staff evaluated the bids based on pricing and compliance with the bid requirements, and determined that Hyundai of Ulsan, South Korea, was the lowest responsive

and responsible bidder. The bid price was within the engineering estimate.

Vendors	City Location	Bid Amount	Rank
Hyundai	Ulsan, South Korea	\$11,912,380.39	1
Ijin	Hongseong, South Korea	\$12,970,938.75	2
GE	Canoas – RS, Brazil	\$13,217,547.50	3
SMIT	Nijmegen, Netherlands	NO BID	N/A
HICO	Memphis, Tennessee	NO BID	N/A
Hitachi	Hitachi City, Japan	NO BID	N/A

➤ *Engineer’s Estimate* \$12,000,000

The procurement/fiscal breakdown is as follows:

Work Type	Performed By:	Amount (\$):	% of Total:
220kV-66kV Substation Power Transformers	Hyundai	\$11,912,380.39	90%
Contingency – 10% (Contract)		\$1,191,238.03	10%
Work Order Total:		\$13,103,618.42	100%
Anticipated Start Date:	February 2025		
Anticipated Duration:	48 Months		

Purchasing Resolution No. 24101. Section 404. Utilities Exception. The Water, Electric and Sewer Utilities have a need for compatibility within their respective systems for uniform operation, maintenance and replacement, and this need can be met by procuring certain supplies, equipment, and materials supplies through Informal Procurement or Negotiated Procurement. If it appears to the Manager to be in the best interest of overall economy and efficiency of the City to do so, and it is within existing budget appropriation, the following supplies, equipment, and materials are determined to be peculiar to the needs of the Water Utility, the Electric Utility, and the Sewer Utility and may be acquired by Informal Procurement or Negotiated Procurement, regardless of their estimated Procurement expenditure amounts, provided that the City’s Board of Public Utilities or City Council shall have approved the proposed acquisition if required under the provisions of the City Charter, either by approval of the procurement contract or approval of annual purchase orders.

The Purchasing Manager concurs that the recommended action complies with Purchasing Resolution No. 24101 Section 404.

STRATEGIC PLAN ALIGNMENT:

This item contributes to Strategic Priority No. 6 Infrastructure, Mobility and Connectivity and 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.

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

1. **Community Trust** – The addition of Wilderness substation is part of the overall Riverside Transmission Reliability Project (RTRP) that underwent a significant public outreach campaign, which included numerous public meetings and extensive collaboration with the

key stakeholders to receive public input.

2. **Equity** – RPU endeavors to provide safe and reliable electric service to all its customers. Since RPU’s electric system is an interconnected network, investments made to 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 by selecting the lowest responsive and responsible project bid, providing optimal project efficiency, and ensuring compliance with the city terms and conditions.
4. **Innovation** – A collaborative and innovative approach for design was used to identify and resolve any conflicting activities, especially the incorporation of new intelligent software to help maximize continuity and accuracy in the design. Wilderness will be the station to be built using 3D modeling and intelligent circuit design.
5. **Sustainability & Resiliency** – The addition of Wilderness Substation will improve the electric reliability to our customers by providing a second source from Edison in case of SCE Vista substation failure. This addition provides system upgrades for grid modernization and reliability that is expected to last well into the future.

FISCAL IMPACT:

The total fiscal impact is \$13,103,618.42. Sufficient funds are available in Public Utilities Electrical Capital Account No. 6130000-470685 (RTRP non-reimbursable).

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Approved by:	David A. Garcia, Utilities General Manager
Certified as to availability of funds:	Kristie Thomas, Finance Director/Assistant Chief Financial Officer
Approved by:	Rafael Guzman, Assistant City Manager
Approved as to form:	Jack Liu, Interim City Attorney

Attachments:

1. Project Site Map
2. Presentation