RIVERSIDE PUBLIC UTILITIES

Board Memorandum

BOARD OF PUBLIC UTILITIES **DATE: MAY 12, 2025**

SUBJECT: **BID NO. SUB-875 PROCUREMENT OF SUBSTATION POWER TRANSFORMER WITH WEG TRANSFORMERS USA, LLC, OF WASHINGTON, MISSOURI, IN THE AMOUNT OF $3,124,956 WITH A 25% CONTINGENCY IN THE AMOUNT OF $781,149; BID NO. SUB-876 PROCUREMENT OF 15KV METALCLAD SWITCHGEAR WITH SWITCHGEAR POWER SYSTEMS, LLC, OF WINNECONNE, WISCONSIN, IN THE AMOUNT OF $2,254,388, WITH A 20% CONTINGENCY IN THE AMOUNT OF $450,507; AND INCREASE WORK ORDER NO. 2202776 IN THE AMOUNT OF $6,611,000 FOR LA COLINA SUBSTATION UPGRADE PROJECT FROM $7,080,000 TO $13,691,000**

ISSUES:

Consider awarding Bid No. SUB-875 for procurement of substation power transformer to WEG Transformers USA, LLC, of Washington, Missouri, in the amount of $3,124,956 and approve a 25% contingency in the amount of $781,149; Award Bid No. SUB-876 for procurement of 15KV Metalclad switchgear enclosure to Switchgear Power Systems, LLC, of Winneconne, Wisconsin, in the amount of $2,254,388 and approve a 20% contingency in the amount of $450,507; and approve an increase in the amount of $6,611,000 for Work Order No. 2202776 for a total revised work order amount from $7,080,000 to $13,691,000.

RECOMMENDATIONS:

That the Board of Public Utilities:

1. Award Bid No. SUB-875 for the procurement of one substation power transformer to WEG Transformers USA, LLC, of Washington, Missouri, in the amount of $3,124,956;

2. Approve a 25% contingency of $781,149 for Bid No. SUB-875;

3. Award Bid No. SUB-876 for procurement of one 15KV Metalclad Switchgear to Switchgear Power Systems, LLC, of Winneconne, Wisconsin, in the amount of $2,254,388;

4. Approve a 20% contingency of $450,507 for Bid No. SUB-876;

5. Approve an increase to Work Order No. 2202776 in the amount of $6,611,000, bringing the total Work Order amount from $7,080,000 to $13,691,000; and

6. 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:

La Colina Substation, first commissioned in 1965, is one of the oldest substations in the Riverside Public Utilities (RPU) electrical system. Located at 599 Central Avenue in Ward 2, the substation includes four 66kV power transformers and four 15kV metal-clad switchgears, with much of its original equipment still operational.

Over the years, the operation of La Colina Substation has faced several challenges due to aging equipment. On December 17, 2010, the Board of Public Utilities approved the emergency purchase of Power Transformer No. 4 to replace the original unit after an irreparable failure. In the past two decades, switchgear equipment has experienced multiple component failures and two arc flash incidents. Electrical apparatus housed within the switchgears, such as 15kV power circuit breakers, are no longer supported by manufacturers, leading to costly, customized replacement solutions. Other devices in the switchgears, including power system meters, control equipment, data acquisition units, protection relays, and ancillary materials, are legacy items scheduled for replacement as part of RPU's Switchgear Relay Upgrade Program.

The La Colina Substation Improvement Project is a crucial initiative by RPU to modernize the station by replacing all four 15kV switchgears and four 66kV power transformers with two higher-capacity 66kV power transformers and two 15kV metal-clad switchgears. This project will upgrade the substation to meet RPU's latest engineering standards for electric system protection and substation automation, enabling both local and remote control of equipment and power metering. The new equipment will integrate with the innovative 66kV infrastructure gradually installed at the station over the past 12 years, including 66kV vacuum circuit breakers, RPU's state-of-the-art 66kV substation automation system, and 66kV relay protection panels located in the main electrical enclosure. The proposed design and modernization will significantly enhance system reliability and operational efficiency.

Board & Council Actions

On November 14, 2022, the Board of Public Utilities (Board) approved Work Order No. 2202776 for the La Colina Substation Upgrade Project with an initial capital expenditure of $2,500,000. This included the design, inspection, and fabrication of the new 66kV Power Transformer No. 1. The procurement was initiated in anticipation of longer lead times, as experienced by the industry in recent years. The fabrication and delivery of the transformer were completed in September 2024.

On June 24, 2024, the Board approved an additional $2,900,000 for Work Order No. 2202776, increasing the total from $2,500,000 to $5,400,000. This increase covered the design and fabrication of 15kV metal-clad Switchgear No. 1. Staff are currently working with the vendor to review the design and monitor the timely manufacturing of the switchgear, which is scheduled for delivery in December 2025.

On December 9, 2024, the Board voted to recommend that the City Council approve a Professional Consultant Services Agreement for Request for Proposal (RFP) No. 2360 for the La Colina Substation Upgrade Project. At the same meeting, the Board approved an additional $1,680,000 for Work Order No. 2202776, increasing the total from $5,400,000 to $7,080,000. The

increase covered the award of RFP No. 2360 for the La Colina Substation Upgrade Project for design consulting services and initial engineering costs for RPU staff.

At the December 9, 2024, Board meeting, the Board was notified that staff would return to seek the Board's approval for Procurement of Power Transformer No. 2 and Switchgear No. 2.

Typical 15KV Metalclad Switchgear

Typical 69KV Power Transformer

On January 7, 2025, the City Council approved the Professional Consultant Services Agreement for RFP No. 2360 for La Colina Substation Upgrade Project with Leidos Engineering, LLC. The Consultant's responsibilities include providing physical, civil, structural, protection, and control design for the project, construction support, as-built documentation, and standards development for the project.

DISCUSSION:

RPU is committed to providing safe and reliable electric service to all customers. Planned system improvements and equipment replacements are prudent and responsible measures to minimize the risk of prolonged power outages due to equipment failures and to maximize system reliability and safety. As part of RPU's efforts to identify and replace aging infrastructure, RPU plans to undertake the La Colina Substation Improvement Project over the next three calendar years.

The table below provides an estimated cost for the entire project with the current request highlighted.

Description of Work	Fiscal Year	Amount ($)
Bid No. 7927 Fabrication and Delivery of Power Transformer No. 1	Board approval on 11/14/2022	$2,500,000
Bid No. 871: Procurement of 15kV Switchgear No. 1	Board approval on 6/24/2024	$2,900,000
RFP 2360: Professional Consultant Services Agreement	Board approval on 12/9/2024	$1,680,000
Bid No. SUB-875: Procurement of Power Transformer No. 2 Bid No. SUB-876: Procurement of Switchgear No. 2 RPU Engineering and Project Management	**Proposed on 5/12/2025**	**$6,611,000**
RPU Project Management (final), Construction, Field Testing, Commissioning and Miscellaneous Material	Anticipated 2026/2027	$7,120,000
Work Order Total		**$20,811,000**

Work Order

At this time, staff are seeking Board approval for a $6,611,000 Work Order increase, bringing the total work order authorization to $13,691,000. The funding is necessary for awarding Bid No. SUB-875, Procurement of Power Transformer No. 2, Bid No. SUB-876, Procurement of Switchgear No. 2, and engineering costs for RPU staff, all for the La Colina Substation Upgrade Project.

The table below shows the breakdown for the work order amount increase requested at this time.

Work Order 2202776 – La Colina Substation Upgrade Project		Amount
Approved on November 22, 2022		$2,500,000
Approved on June 24, 2024		$2,900,000
Approved on December 9, 2024		$1,680,000
Requested Work Order Increase		
WEG Transformers USA, LLC	$3,124,956	
Contingency (25% of Transformer Cost)	$781,149	
Switchgear Power Systems, LLC	$2,254,388	
Contingency (20% of Switchgear Cost)	$450,507	
Work Order Amount Requested (May 12, 2025)	**$6,611,000**	**$6,611,000**
Revised Work Order Amount		**$13,691,000**

RPU staff is applying a 25% contingency to the work order budget for the transformer, instead of the standard 10%. This adjustment accounts for potential import duties or tariffs that may arise after the quoted price. Power transformers are manufactured using raw materials such as copper, aluminum, and core steel, all of which could be subject to future tariff fluctuations. The increased contingency helps mitigate the risk of unforeseen cost impacts, ensuring budget adequacy for project completion.

Bid No. SUB-875 (Power Transformer)

On November 5, 2024, eight (8) vendors were invited to submit bids in response to Bid No. SUB-875 for the procurement of one Power Transformer through an informal procurement process. On January 22, 2025, three (3) vendors submitted proposals. Staff reviewed proposals and deemed WEG Transformers USA of Washington, Missouri to be the lowest, responsive and responsible bidder. Delivery of the unit is scheduled for the fourth quarter of 2027.

The RFB notification is summarized in the following table:

Vendors	City Location	Bid Amount	Rank
WEG Transformers USA	**Washington, MO**	**$3,124,956.06**	**1**
Prolec-GE Waukesha	Waukesha, WI	$3,298,197.50	2
Delta Star	San Carlos, CA	$4,122,767.71	3
Hitachi Energy	Mt. Pleasant, PA	No Bid	N/A
Hyundai	Montgomery, AL	No Bid	N/A
Pennsylvania Transformer	Canonsburg, PA	No Bid	N/A
OTC	Louisville, OH	No Bid	N/A
Niagara Power Transformer	Houston, TX	No Bid	N/A

- *Engineer's Estimate* *$3,200,000.00*

Bid No. SUB-876 (15kV Metalclad Switchgear)

On November 20, 2024, five (5) vendors were invited to submit bids in response to Bid No. SUB-876 for the procurement of one 15kV switchgear through an informal procurement process. On January 21, 2025, four (4) vendors submitted proposals. Staff reviewed proposals and deemed Switchgear Power Systems of Winneconne, Wisconsin to be the lowest, responsive and responsible bidder. Delivery of the unit is scheduled for the fourth quarter of 2027.

The RFB notification is summarized in the following table:

Vendors	City Location	Bid Amount	Rank
Switchgear Power Systems	**Winneconne, WI**	**$2,254,387.50**	**1**
Avail Switchgear Systems	Fulton, MO	$2,403,320.63	2
Crown Technical Systems	Fontana, CA	$2,567,340.62	3
Myers Power Products	Ontario, CA	$3,205,870.61	4
Advanced Power Technologies	Lafayette, IN	No Bid	N/A
➢ *Engineer's Estimate*		*$2,600,000.00*	

The transformer bids were within the engineering estimate. The last time RPU procured a power transformer of similar capacity was in 2022. Staff used an escalator factor to adjust the old pricing for inflation, but the actual cost inflation of such specialized equipment has exceeded our estimates due to factors like higher raw materials costs and changes in the labor market.

The purchase of the equipment and material is covered under Section 404 of Purchasing Resolution No. 24101. Section 404 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. 24101.

Future Actions
The La Colina Substation Upgrade Project is a comprehensive, multi-year construction project. Additional expenses for contracted services, RPU staff costs, and materials necessary to complete the project will be returned for approval at future meetings. Specifically, RPU staff will seek Board's recommendation for Council and Council approval in late 2026 or early 2027 to award a construction contract for construction, field testing, and commissioning services for this project.

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** – Planned replacement of deteriorating infrastructure with equipment 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. A collaborative and efficient approach has been used to replace the aging electric infrastructure to minimize potential disruptions to our customers during construction.

2. **Equity** – The replacement of the substation transformers and switchgears 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 community progress.

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 replacement 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. The project will feature state-of-the-art Substation Automation Systems (SAS), relay protection for the 15kV systems, along with additional auxiliary control systems, adhering to the latest standards in the industry.

5. **Sustainability & Resiliency** – This project ensures that new substation transformers and switchgears provide grid modernization and reliability that is expected to last well into the future.

FISCAL IMPACT:

The total fiscal impact is $6,611,000 for increasing Work Order No. 2202776 from $7,080,000 to $13,691,000. Sufficient funds are available in Public Utilities Substation Transformer Upgrade Capital Account No. 6130100-470632 for Fiscal Year 2025/2026.

Prepared by:	Daniel Honeyfield, Utilities Assistant General Manager/Energy Delivery
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:	Rebecca McKee-Reimbold, Interim City Attorney

Attachments:
1. Project Site Map
2. Bid Award Recommendations
3. Presentation