



RIVERSIDE PUBLIC UTILITIES

Board Memorandum

BOARD OF PUBLIC UTILITIES

DATE: FEBRUARY 19, 2016

ITEM NO: 6

File ID – 16-0486 – C

SUBJECT: APPROVAL OF WORK ORDER NO. 1603079 FOR \$1,700,000 AND AWARD OF A PURCHASE ORDER TO MITSUBISHI ELECTRIC POWER PRODUCTS FOR SPRINGS & ORANGECREST SUBSTATIONS 69 KV BREAKER AND RELAY REPLACEMENT FOR \$614,071

ISSUES:

The issues for Board of Public Utilities consideration are the approval of Work Order No. 1603079, and the award of a purchase order to Mitsubishi Electric Power Products for replacement of 69 kV circuit breakers and relays at Springs and Orangecrest Substations.

RECOMMENDATIONS:

That the Board of Public Utilities:

1. Approve Work Order No. 1603079 in the amount of \$1,700,000; and
2. Approve the award of a purchase order in the amount of \$614,071 to Mitsubishi Electric Power Products, Inc. (MEPPI) of Warrendale, Pennsylvania, for nine 69 kV circuit breakers and associated equipment for the replacement of breakers at Springs and Orangecrest Substations.

BACKGROUND:

On September 4, 2015, the Board of Public Utilities (Board) received a report of planned routine infrastructure projects over \$500,000 for fiscal year 2015/16. One of these projects discussed was the planned replacement of circuit breakers and relays at Springs and Orangecrest Substations. Such replacements are in line with the infrastructure road map, and Utility 2.0 directly benefiting approximately 12,000 customers in terms of safety and reliability.

Riverside Public Utilities' (RPU) Electric System Master Plan (ESMP) recommended the replacement of all 69 kV oil circuit breakers with modern gas breakers. The ESMP also recommends the replacement of all electromechanical relays with microprocessor-based relays in RPU's transmission and distribution system. RPU is actively replacing the breakers noted above along with older substation equipment that is reaching the end of its useful life as part of RPU's routine maintenance programs and substation upgrade projects.

The scope of work includes the replacement of nine 69 kV circuit breakers and four electromechanical relays. At Springs Substation, four circuit breakers were identified for replacement. At Orangecrest Substation, five circuit breakers were identified for replacement. Electromechanical relays associated with the affected breakers will be replaced at both substations and brought up to current technology and safety standards.

The new gas breakers will require significantly less maintenance and repair than the existing units. The replacement of these breakers with modern gas breakers will improve safety, reduce environmental risks, reduce maintenance cost, introduce new technology features, and improve electric reliability.



Typical Old Oil Circuit Breaker



Typical New SF6 Circuit Breaker

The purchase of the breaker equipment and material is covered under Section 602 of Purchasing Resolution No. 22576. Section 602 specifies specialized equipment that is particular to the needs of RPU and provides for acquisition by Open Market Procurement if it appears to the Purchasing Services Manager to be in the best interest of the City of Riverside (City). Open Market Procurement allows the City to issue requests for quotations instead of bids, meaning that the City can select based upon qualifications and pricing, not just low bid. The Purchasing Manager has made such a determination in this case.

High voltage circuit breakers are a very long lead time item and need to be ordered well ahead of construction. Four vendors were invited to submit proposals for the nine 69 kV circuit breakers. Three vendors submitted proposals. Staff evaluated the proposals and determined Mitsubishi Electric Power Products, Inc. (MEPPI) met all the requirements at a cost of \$614,071, slightly below the engineer’s estimate. The proposal amounts are detailed in the table below:

Vendors:	Proposal Amount
1. MEPPI	\$614,071
2. V&S Schuler	\$646,403
3. Hamby Young	\$647,938
4. Royal	No Bid

➤ *Engineer's Cost Estimate* \$630,000

The project and work order includes design, equipment procurement, construction, testing, and commissioning to replace the existing circuit breakers with nine new gas circuit breakers and replacement of four 69 kV bus differential relays. The electrical and physical design will be performed by a consultant selected from Energy Delivery’s consultant panel. Staff will return to the Board for approval of any large purchases related to the relay work once the design is complete. Project management, material and equipment procurement, construction, testing and commissioning efforts are expected to be completed by RPU staff. The cost breakdown follows:

Item Description	Sub-total	Percent of Total
Equipment & Materials	\$900,000	53%
Consultant Engineering	\$170,000	10%
RPU Engineering	\$140,000	8%
Construction	\$490,000	29%
Total	\$1,700,000	100%

The Purchasing Services Manager concurs that the recommended actions comply with the City of Riverside’s Purchasing Resolution No. 22576.

FISCAL IMPACT:

The total capital expenditure for Work Order No. 1603079 is estimated to be \$1,700,000. Sufficient funds are available in Public Utilities’ Capital Account No. 6130000-470616.

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 Approved by: Girish Balachandran, Utilities General Manager
 Approved by: John A. Russo, City Manager
 Approved as to form: Gary G. Geuss, City Attorney

Certifies availability of funds: Laura Chavez-Nomura, Public Utilities Assistant General Manager/Finance

Project Site Map

