



Agenda Report

April 16, 2018

TO: Honorable Mayor and City Council

FROM: Water and Power Department

**SUBJECT: AUTHORIZATION TO ENTER INTO A PURCHASE ORDER
CONTRACT WITH TRICADE TECHNOLOGY SOLUTIONS TO
FURNISH AND DELIVER SERVER AND STORAGE
INFRASTRUCTURE FOR THE WATER AND POWER
DEPARTMENT**

RECOMMENDATION:

It is recommended that the City Council:

1. Find that this action is exempt from environmental review pursuant to the guidelines of the California Environmental Quality Act ("CEQA") §15301 (Existing Facilities) and that there are no features that distinguish this project from others in the exempt class and, therefore, there are no unusual circumstances; and,
2. Accept the bid dated January 29, 2018 submitted by Tricade Technology Solutions in response to specifications for Server and Storage Infrastructure; ii) reject all other bids received; and, iii) authorize the City Manager to enter into a contract not to exceed \$680,093, which includes the base contract amount of \$666,758 and a contingency of \$13,335 to provide for any necessary change orders.

EXECUTIVE SUMMARY:

The Water and Power Department's ("PWP") Data Center is the location for both the physical and virtual servers for all of the utility's files, printers, and key applications, including the Customer Information System and the Outage Management System, which provides outage information to staff and customers. The Storage Area Network ("SAN") at the site, which support almost 200 virtual servers, have exceeded their hardware lifecycle. In addition, the memory of the virtualized server environment is near 85 percent of its critical threshold and failure of this equipment would have substantial negative consequences. To protect these critical applications, PWP is proposing to upgrade the aging virtual infrastructure and also build a secondary recovery site to support the forthcoming backup Dispatch Center and City's existing Emergency Operations Center ("EOC"). Having primary and secondary data centers will ensure business continuity, meet cybersecurity requirements and avoid downtime that could result from hardware and site failures. The new infrastructure will also

support future data storage requirements for Meter Data Management System ("MDMS"), field smart devices, and future distributed energy resources.

BACKGROUND:

The PWP Data Center currently operates with two Storage Area Networks ("SANs") and hardware supporting almost 200 virtual servers that sustain mission critical files, printers, and key applications such as the Outage Management System, Geographic Information System, Energy Trading and Risk Management System, and building access control. The Data Center also houses the software and hardware servers for the Customer Information System ("CIS"), which includes customer account information and generates PWP's utility billing, and the storage of citywide surveillance recordings. The SANs have exceeded their hardware lifecycle while the memory of the virtualized server environment is nearing 85 percent of its 90 percent critical threshold. The last major hardware upgrade was completed in 2012 and the software was last updated in 2014.

To ensure continuity in operating functionality and data security and to avoid downtime-related application failure, it is necessary to complete a hardware lifecycle infrastructure refresh. PWP is proposing to implement a solution that will provide the computing, memory, and storage necessary to support current and future operational needs. This solution features a single platform that combines the storage and server into one easy-to-manage platform that can be expanded without significant down time or disruption. The combined technology reduces operational complexity, frees staff time for other duties, and reduces overall system maintenance and operating costs.

Additionally, this solution would be implemented at two locations to align with Department of Information Technology's and the City's disaster recovery initiatives:

Site 1 (Primary Data Center)

Upgrade the existing SAN and virtualized server environment to support future operational technology initiatives such as the CIS replacement, MDMS and SmartGrid.

Site 2 (Secondary Data Center)

Begin the build-out of an active secondary data center to support PWP's forthcoming backup Dispatch Center, which is a requirement of the North American Electric Reliability Corporation to meet cybersecurity mandates. The backup Dispatch Center would be built within the City's EOC and PWP's Department Operation Center ("DOC") to provide disaster recovery and business continuity. In addition, the secondary data center will also provide mission critical applications to the EOC and DOC following a major disaster.

A Notice Inviting Bids was posted to *PlanetBids* on January 11th, 2018. Notification went out to 1,658 vendors of which 84 were local. A total of 5 vendors submitted bids by the deadline of January 29th, 2018, one of which was incomplete and deemed non-responsive. Other than this solicitation, no other outreach was done.

Vendor:	Bid Amount
Tricade Technology Solutions, Pasadena, CA	\$666,757.45
Taborda Solutions Inc, Folsom, CA	\$678,979.34
Clearsourceit, Englewood, CA	\$864,825.21
Alpha Data Technologies, Los Angeles, CA	\$920,934.68
OzNet Systems, Altadena, CA	Incomplete

Tricade Technology Solutions, which submitted the lowest bid, met all of the requirements of the specification and is recommended to receive a contract in an amount not to exceed \$680,092.60. This amount includes the vendor's bid amount plus a contingency of \$13,335.15 to cover any unforeseen change orders. Also, the equipment proposed in the bid carries a warranty of three years from the commissioning date, and no maintenance expenses are expected during that time.

The City has awarded various contracts and purchase orders collectively valued at \$995,232.70 to Tricade Technology Solutions since 2010.

The proposed contract complies with the Competitive Bidding and Purchasing Ordinance pursuant to Pasadena Municipal Code Chapter 4.08 and the rules and regulations promulgated thereunder.

COUNCIL POLICY CONSIDERATION:

Providing redundant data centers will avoid business downtime and application unavailability, and the proposed contract is consistent with the Public Facilities Element of the General Plan and supports the City Council's goal to improve, maintain and enhance public facilities infrastructure and to implement capital improvements that will maintain and rehabilitate infrastructure.

ENVIRONMENTAL ANALYSIS:

The proposed action is exempt from the CEQA pursuant to California CEQA Guidelines Section 15301 (Existing Facilities), which exempts actions such as maintenance, repair and operations relating to existing facilities, mechanical equipment or structures where there is negligible or no expansion of the use. The proposed project is for installation of equipment that will only be used to run critical applications on servers and storage at two data centers.

FISCAL IMPACT:

The maximum cost of this action is \$680,092.60. Funding for this action will be addressed by the utilization of existing budgeted appropriations in the following accounts:

Water and Power Capital Funds 411 and 412:

Water System CIP 1025	Management Information Systems	\$238,032.41
Power System CIP 3119	Management Information Systems	\$442,060.19

It is expected that 100% of the funds will be expended in fiscal year 2018.

The following table summarizes the total fiscal impact:

Base Contract Amount	\$666,757.45
Not to Exceed Amount	\$680,092.60
2% Contingency	\$13,335.15
Total 2018 Fiscal Impact	\$680,092.60

There is no anticipated impact to other operational programs or capital projects as a result of this action.

Prepared by:

DMT


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Respectfully submitted,



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Concurred by:



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Approved by:



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