



Agenda Report

October 21, 2019

TO: Honorable Mayor and City Council

FROM: Department of Water and Power

SUBJECT: AUTHORIZATION TO ENTER INTO PURCHASE ORDER CONTRACTS WITH ADVANCED CONTROL SYSTEMS, INC. FOR A FULL UPGRADE TO THE SUPERVISORY CONTROL AND DATA ACQUISITION SYSTEM, AN UPGRADE TO THE RECEIVING STATION REMOTE TERMINAL UNITS, AND AN ASSOCIATED SUPPORT AGREEMENT FOR THE WATER AND POWER DEPARTMENT

RECOMMENDATION:

It is recommended that the City Council:

1. Find the proposed action to be categorically exempt under the California Environmental Quality Act ("CEQA") pursuant to Section 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. Authorize the City Manager, or his designee to enter into the following two Purchase Order ("PO") contracts, without competitive bidding pursuant to City Charter Section 1002 (F) Contracts for professional or unique services, with Advanced Control Systems, Inc. ("ACS"), for a total amount not to exceed \$1,267,916 to;
 - a. Provide a full upgrade of the Supervisory Control And Data Acquisition ("SCADA") system and Remote Terminal Units ("RTUs") at various receiving stations, in an amount not to exceed \$657,993 which includes a base contract amount of \$572,168 and a 15% contingency of \$85,825; and,
 - b. Provide ongoing support of the SCADA system in an amount not to exceed \$360,545 for an initial term of three years, with two optional one-year extensions of \$123,158 and \$126,220, respectively, resulting in a final total contract value of \$609,923; and,
3. Grant the proposed contracts exemptions from the Competitive Selection process pursuant to Pasadena Municipal Code Section 4.08.049 (B) contracts for which the City's best interests are served.

BACKGROUND:

SCADA System Upgrade

The SCADA system is a computer system that continuously monitors real-time operating condition of Pasadena's electrical system and alerts about any anomalies which staff needs to investigate. This system is vital for maintaining the electric system, making it reliable, minimizing unplanned electric outages, and allowing for quicker restoration of such outages.

The current SCADA system uses ACS software and hardware including RTUs which were installed in 1999 and subsequently upgraded in 2005 and 2013. This system has helped improve reliability of the electrical system and reduced duration of electrical outages through an effective interface with PWP's Outage Management System ("OMS"). Over the years the electrical system has evolved, new types of equipment have been installed and more robust cyber security measures have become necessary. In the meantime, ACS system hardware and software are reaching end-of-life and require major upgrading. The other alternative to a complete system replacement would be very costly, extremely resource intensive without any corresponding benefit and take multiple years to implement. Therefore, upgrading of ACS system is recommended compared to a total replacement.

The existing SCADA database and displays can be utilized and upgraded by ACS to the latest version of application software. In addition, customized operating system scripts and programs can be utilized and upgraded by ACS. There are no other known vendors capable of utilizing existing SCADA system application software, custom scripts, and custom programs to perform an upgrade. Utilizing ACS to upgrade the existing SCADA system results in a project that can be completed in a matter of months, with reduced PWP resource requirements, risk, and impact to electric system operations. ACS is the only known vendor that is able to upgrade the existing system with minimal impact and risk to PWP electric system operations.

Upgrade of Receiving Station Remote Terminal Units

PWP uses RTUs in its electrical distribution system to remotely monitor and control vitally important electric system equipment via the SCADA system. The existing RTUs were installed along with the SCADA system in 1999 and the electronic components are no longer supported by the original manufacturer, ACS.

Upgrade of these RTUs, in conjunction with the proposed SCADA system upgrade, would enhance reliability of the electric system. It would also minimize the amount of required reprogramming of the SCADA database and display, making it the most cost-effective solution, while simultaneously limiting the amount of risk to PWP system operations.

To upgrade the existing RTUs, ACS is the only vendor that can provide the upgraded electronics, interface cabling, programming, and on-site commissioning support to ensure compatibility with existing components and reliable operations.

For the upgrade of the SCADA System and RTUs, staff recommends City Council to authorize the City Manager, or his designee, to enter into a PO contract with ACS, for an amount not to exceed \$657,993, which includes a base contract amount of \$572,168, and a 15% contingency of \$85,825 to address unforeseen conditions and changes.

SCADA Long Term Service Agreement

The SCADA system requires constant monitoring and maintenance by PWP personnel. It also requires routine software upgrades and troubleshooting support by the original manufacturer, ACS.

The support services provided by ACS are listed below:

- Engineering Support Services
- Software and Hardware Subscription Support
- Network Terminal Unit ("NTU") Software Support
- Quarterly Patch Management
- Emergency 24/7 Customer Care Help Desk Access
- Training

For continued support by ACS, staff recommends a long term service agreement for an amount not to exceed \$360,545 for an initial term of three years (to be effective in January 2020) with two one-year optional extensions of \$123,158 and \$126,220, respectively, for a total contract value of \$609,923.

ACS has consistently provided support and upgrades for the SCADA system since the original implementation, for an amount totaling approximately \$1,115,864 since 2010. The current support services agreement with ACS will be expiring at the end of calendar year 2019.

COUNCIL POLICY CONSIDERATION:

The proposed contract is consistent with the Public Facilities Element of the General Plan and supports the Council's goal to improve, maintain and enhance public facilities infrastructure to provide a high level of public service which adds to the quality of life in the City and increase its attractiveness through more efficient management of resources, to provide cost effective and innovative management of the City's resources, and to implement capital improvements that will maintain and rehabilitate infrastructure.

ENVIRONMENTAL ANALYSIS:

The project is categorically exempt under the CEQA Guidelines in Section 15301 Existing Facilities (Class 1), of the State CEQA Guidelines (California Code of Regulations Title 14, Chapter 3). Class 1 consists of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of use. Section 15301 Part (b) specifically applies this categorical exemption

to existing facilities of both investor and publicly owned utilities. The project is an alteration of an existing facility involving no expansion of the existing use.

FISCAL IMPACT:

The maximum cost of these actions is \$1,267,916. Funds for these actions will be addressed by the utilization of existing and future budget appropriations in the Power Capital Fund 411 and Power Operating Fund 401. The breakdown of proposed contracts and funding sources is illustrated in Table I below:

Table I: Breakdown of Proposed Contracts and Funding Sources

Contract	Amount	Funding Source
SCADA and RTU Upgrades	Base Contract:	\$572,168
	Contingency:	\$85,825
	Total Contract:	\$657,993
SCADA Support Services	Base Contract:	\$360,545
	Extension #1:	\$123,158
	Extension #2:	\$126,220
	Total Contract:	\$609,923
Total Not to Exceed Amount:		\$1,267,916

Respectfully submitted,



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