

Agenda Report

February 22, 1999

To: City Council

From: City Manager

Subject: **Authorization To Enter Into a Contract With
Advanced Control Systems For SCADA System
Software And Hardware Replacement At The
City's Power Dispatch Center**

RECOMMENDATION:

It is recommended that the City Council authorize the General Manager to enter into a contract without competitive bidding pursuant to City Charter Subsection 1002(f), professional or unique services, with Advanced Control Systems, ("ACS"), for Supervisory Control and Data Acquisition system ("SCADA") software and hardware replacement at the City's Power Dispatch Center for an amount not to exceed \$957,226.

BACKGROUND:

On December 1, 1998, Water and Power staff issued a Request for Proposals for Dispatch Center Systems Replacement Project ("RFP"). The RFP sought the services of a highly qualified vendor (or vendors) to deliver, install, and assist in integrating, implementing and maintaining a suite of software and hardware products including SCADA.

Power system SCADA is a mission-critical application that provides power dispatchers with real-time data for monitoring voltages, power flows, breaker status, and other key data on the distribution system. SCADA enables remote control of electrical system devices essential for maintaining reliable power delivery. The SCADA also includes automatic generation control ("AGC"), which continuously controls our local generators' output to match system demand.

Additionally, SCADA systems now offer outage management, which helps dispatchers quickly determine the exact cause, location, and number of customers affected by an electrical outage based on data from remote monitoring and incoming trouble calls.

The current power SCADA was installed in the mid-1980's and must be replaced due to a number of factors. This aging system consists mainly of obsolete, proprietary hardware and software that cannot be upgraded, maintained or repaired, and must be replaced. Furthermore, it has been identified as not being Year 2000 compliant. The software has not been kept current by the vendor to reflect new regulatory requirements or industry business practice.

Upgrading the existing system was considered and determined not to be a viable alternative. The cost of replacing and upgrading the existing hardware and software would be similar to that of the recommended proposal while providing substantially less functionality and expandability. The upgrade alternative would leave in place the existing proprietary software applications that do not support industry standard devices or the new regulatory requirements for control measurements. Additionally, the current applications cannot be expanded to include new modules or monitoring and control points without modification by the vendor.

The specific objectives of the SCADA replacement are to select a system that provides:

- Effective monitoring and control of the City's distribution and sub-transmission;
- Modular upgrade path for future functionality;
- Ability to configure SCADA to include additional monitoring and control points; and
- Improved level of service, maintenance, and system reliability.

A Request for Proposal (RFP) was issued for this project because of the specialized professional services required to install SCADA components, configure the software to model Pasadena's distribution system, integrate SCADA with other software applications, and commission this mission critical system. The RFP was distributed to a total of 19 bidders. The RFP distribution included eight (8) prospective SCADA bidders, of which three (3) responded.

SELECTION PROCESS:

While the proposed contract is exempt from competitive bidding pursuant to Subsection 1002(f) of the City Charter, Professional or Unique Services, a competitive selection process was utilized based on the proposal evaluation criteria stated in the RFP.

The results of the evaluation of the proposals received are as follows: *

<u>BIDDER</u>	<u>BASE PRICE**</u>	<u>EVALUATED SCORE</u>
Advanced Control Systems	\$807,226.00	87
Open Systems International	\$879,663.00	82
Seimens	\$783,077.00	71

* (A more detailed bid evaluation matrix is attached.)

** (Base Price excludes integration with scheduling system)

ACS was the lowest and most responsive bid that met all of the requirements of the RFP (Seimens existing product does not include all required functionality), and also represents the lowest risk for on-time delivery of this Y2K critical system. The product proposed by ACS has a broad installed user base of over 130 utility installations, several of which are in neighboring Southern California utilities including Anaheim, Imperial Irrigation District, and San Diego Gas and Electric.

Due to a combination of quality functional implementation, strong product support, an excellent record for rapid and successful product installation, positive user reviews, and corporate strength and experience in the SCADA field, ACS received the highest evaluated score and is therefore recommended for award of the proposed contract.

The state of the art hardware proposed by ACS is largely comprised of "off-the-shelf" products that may be upgraded and maintained through ordinary distribution channels. The hardware components built by ACS use open protocols and are compatible with other vendors' products. ACS software applications are expected to remain current with industry changes through regular product upgrades and modular expansion. It is anticipated that the ACS SCADA is likely to remain viable and maintainable well into the future.

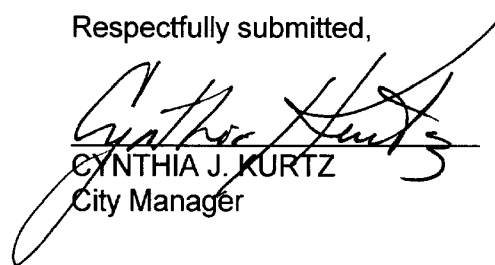
The proposed contract price of \$957,226 dollars includes a Base Price of \$807,226, and an additional \$150,000 for professional services to support Pasadena-specific customization and integration with energy scheduling and related applications.

ACS has completed the required affirmative action forms. The proposed contract complies with the Affirmative Action in Contracting Ordinance, P.M.C.4.09, and the Rules and Regulations promulgated thereunder.

FISCAL IMPACT:


Funding is from the Capital Improvement Program, Electric System, Budget No. 3073 for Dispatch Center SCADA replacement. The expenditure for the project was anticipated in the 10 year financial plan.

Respectfully submitted,




CYNTHIA J. KURTZ
City Manager

Prepared by:




ERIC R. KLINKNER
Principal Engineer, Power Supply

Concurrence:



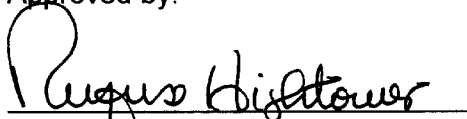
ROBERT K. PERSON
Director of Information Technology

Recommended by:



MANUEL A. ROBLEDO
Business Unit Director
Power Supply

Approved by:



RUFUS HIGHTOWER
General Manager
Water and Power Department