

**COUNCIL ACTION FORM**

**SUBJECT: POWER PLANT SCADA SYSTEM UPGRADE**

**BACKGROUND:**

The City of Ames Electric Services uses a Supervisory Control and Data Acquisition System (SCADA) to monitor status and control power flows, electric generation, interconnections to neighboring utilities, distribution, and transmission. Data from the SCADA is used as the basis for billing of energy transactions. The existing system was installed in 2001 and had routine software updates in 2002 & 2003. In 2008 and 2009 the hardware, operating system, and software were all upgraded. The SCADA system was supplied and is supported by Open Systems International Inc. (OSI) from Medina MN. The software was based on the Microsoft “.NET” technology. Advancements have continued to be made to the software and the current software version is 11 revisions newer than ours.

Microsoft Windows 7 is now the new standard operating system that is installed on new IT computers. The existing SCADA software is only partially compatible with our business system IT managed computers.

The benefits of the proposed upgrade include, but are not limited to, the following:

- Brings our system and operating license up to date with all the latest revisions.
- Gains full compatibility with Windows 7 for use on City business network computers.
- Provides enhanced database and display building tools.
- Provides the audit trail required by MISO (Midwest Independent System Operator) and NERC (North American Electric Reliability Corporation) for energy transaction and reliability issues.
- Takes advantage of recent software operational improvements and security enhancements that our installed software does not have.
- Positions Electric Services to better respond to anticipated NERC and MISO requirements in the near future.

Upgrading our existing SCADA system is more cost effective than replacing the entire system. Another municipal electric utility in Iowa recently replaced its older SCADA system with a new system from our current supplier, Open Systems International, Inc., at a cost in the \$800,000 - \$900,000 range. That utility chose OSI over several competing proposals.

Electric Utility Staff researched equipment from five suppliers, including OSI, for possible system replacement. The cost estimates for a SCADA master upgrade of

necessary system components from the suppliers other than OSI was estimated to be between \$205,000 and \$560,000.

Upgrading our existing SCADA with OSI is the most practical and cost-effective way to meet the new system requirements while gaining more functionality and security. This requires a single-source purchasing arrangement with our current SCADA software supplier.

**For these reasons, staff is requesting that the City Council waive the City's purchasing policies requiring formal competitive bids and award a contract to Open Systems International, Inc., of Medina, MN in the amount of \$93,419.23 for the SCADA software upgrade.** Since Open Systems International, Inc. is not licensed to collect sales taxes for the State of Iowa, the City would pay applicable Iowa Sales Taxes directly to the state.

**The FY 2012/13 budget includes \$85,000 for this SCADA software upgrade. The remaining amount required for this upgrade will come from an existing operational account which includes funding for SCADA supplies.**

**ALTERNATIVES:**

1. The City Council can waive the purchasing policy requirement for formal bidding procedures, and award a contract to Open Systems International, Inc., Medina, MN, for the Power Plant SCADA Upgrade project in the amount of \$93,419.23, plus applicable sales taxes to be paid directly by the City of Ames to the State of Iowa.
2. The City Council can decide to postpone the SCADA upgrade and secure competitive bids for a new system which most likely will cost more than the system upgrade with OSI.
3. The City Council can decide to postpone the SCADA upgrade until the current system is no longer supported, which adds to the risk of non-compliance with MISO operating requirements.

**MANAGER'S RECOMMENDED ACTION:**

The Electric Utility is required to maintain the SCADA system by regulatory authorities. In addition, it is in the City's best interest to improve the SCADA system in a timely and cost-effective manner. The most effective way to complete this SCADA system upgrade is to enter into an agreement with our existing SCADA software supplier to complete the current software upgrade.

Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative No. 1 as stated above.