COUNCIL ACTION FORM

SUBJECT: POWER PLANT SCADA SYSTEM UPGRADE & UPGRADE TO CUSTOMER SUPPORT PACKAGE

BACKGROUND:

The City of Ames Electric Services uses a Supervisory Control and Data Acquisition (SCADA) System 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 energy transactions.

The existing SCADA system was installed in 2000 and had routine software updates in 2002, 2003, 2009 and 2013. In 2008 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, and the software is based on Microsoft ".NET" technology. Advancements have continued to be made to the software every three months and the current software version is three revisions newer than ours.

The primary reasons to upgrade the existing SCADA system are for reliability and maintainability. The proposed upgrades will apply to hardware, OSI Software, the operating system, and the customer support package. The new features will help staff keep current in a world subject to North American Electric Reliability Corporation (NERC) operating requirements. The current software has many custom features that become increasingly difficult to maintain during an upgrade when there are large gaps in time and versions of software. The new system will transition from version 37 to version 40, and the Microsoft SQL Server will be upgraded to the latest edition. This will aid in speed (access to data for reports), programming (new features), and security. Service provided for the existing version of Microsoft SQL is at "end of life" and will no longer include security patches. Upgrading ensures continued support from Microsoft. This upgrade, along with the upgrade from "gold" to "diamond" level on customer support, will allow us to receive more timely updates in the future, which will save money over time.

Microsoft Windows 7 is now the standard operating system 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 and possibly Windows 8 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 for energy transaction and reliability issues.
- Takes advantage of recent software operational improvements and security enhancements that our present software does not have.
- Positions Electric Services to better respond to anticipated NERC and MISO requirements in the near future.

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 the 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 $213,722. This amount is inclusive of $121,290 for the SCADA software/hardware upgrade and $92,432 for Electric Services to move from "gold" level customer service support to "diamond" level. If the City remained on "gold", for which we pay $41,175 each year, the software/hardware upgrade cost from OSI would increase to $190,890 for a total of $232,065. 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 2013/14 budget includes $136,000 for this SCADA hardware/software upgrade and $93,000 for customer support services.

ALTERNATIVES:

1. The City Council can waive the City's 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 $213,722. This amount is inclusive of $121,290 for the SCADA software/hardware upgrade and $92,432 for the move from "Gold" to "Diamond" customer service support. The City will pay applicable sales taxes directly to the State of Iowa.

2. The City Council can 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 postpone the SCADA upgrade until the current system is no longer supported (portions of which occur in March of 2014), which adds to the risk of non-compliance with MISO operating requirements.

MANAGER'S RECOMMENDED ACTION:

The Electric Utility is required by regulatory authorities to maintain a functional SCADA system. 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 hardware/software upgrade and to move to diamond support service.**

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