COUNCIL ACTION FORM

SUBJECT: POWER PLANT SCADA SYSTEM UPGRADE

BACKGROUND:

The City's Power Plant has a Supervisory Control and Data Acquisition (SCADA) system to monitor and control electric generation, distribution and transmission from the Power Plant to critical power substations throughout the City and to interconnection points with neighboring electric utility systems. The existing system was installed in 2001 and had software updates in 2002 and 2003. No software updates had been done since 2003 due to hardware and operating system constraints.

In January of 2008 the City awarded a contract to Open Systems International, Inc. (OSI) in the amount of $126,674.00 to upgrade our current SCADA system to support INTERCONTROL CENTER COMMUNICATION PROTOCOL (ICCP) to allow for exchange of real time information between Ames and our region's electric transmission scheduler, the Midwest Independent System Operator (MISO). This involved hardware upgrades as well as software revisions.

To complete the upgrade to the City's SCADA system, it is now necessary to migrate to a new platform. The upgrade performed in July of 2008 was a necessary prerequisite to be able to perform this upgrade. Our SCADA vendor is planning an "end of life" path for our existing software platform. Future upgrades would be based on the new platform. **As you view the attached proposal, this is the license migration to .Net, and the accompanying project implementation and network installation work at a cost of $28,400. The SCADA system is a live data base which collects information from a number of data points in the Plant as well as the distribution system (particularly the substations). The software options in the attached proposals will allow Electric Services staff to access data from multiple data points at one time during maintenance work or future improvements. Option 2 collects alarm data in a way that we do not need. Staff is recommending Option 1 as the best way to meet our needs. The upgraded platform and software together will cost $51,444.25.**

The benefits of the new platform/upgrade include, but are not limited to, the following:
- Control based clients are easier to upgrade/maintain in the future, saving time and money
- Adding/updating/maintaining "view only" clients processes is simplified with less security concerns on the corporate network
- Database and display building tools will be greatly enhanced
- Visual aides include showing the plant operator which direction power is flowing

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- This upgrade provides a better audit trail required by MISO and the North American Electric Reliability Corporation (NERC)
- Updating of SCADA system software takes advantage of recent operational improvements and security enhancements
- This upgrade positions the City's Power Plant to better respond to anticipated NERC requirements in the near future

As you may recall, 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. (OSI) at a cost in the $800,000 - $900,000 range. That utility chose OSI over several competing proposals. Prior to the January 2008 contract award to OSI, Electric Services 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 system is the most practical and cost-effective solution to meeting the new NERC requirements while gaining more functionality. We would also benefit from not having to upgrade the existing platform again and only performing simplified upgrades on the new platform into the future. Accomplishing all this will require a single-source purchasing arrangement with our current SCADA software supplier, OSI.

Due to these factors, Electric Services staff requests that the City Council waive the City's purchasing policies requiring formal competitive bids and award a contract to Open Systems International, Inc., Minneapolis, MN, for the Power Plant SCADA Migration Upgrade.

The 2008/09 Capital Improvements Plan has $100,000 budgeted for work on this project.

ALTERNATIVES:

1. The City Council can waive the purchasing policy requirement for formal bidding procedures and award a contract in an estimated amount of $51,444.25 plus applicable sales taxes and approved travel expenses, to Open Systems International, Inc., Minneapolis, MN, for the Power Plant SCADA Migration Upgrade project.

2. Postpone the SCADA migration upgrade and secure competitive bids for a new system.

3. Postpone the SCADA migration upgrade entirely. Update existing platform software on an annual basis until OSI forces the current platform to "end of life" status. Then migrate to a new platform.

MANAGER'S RECOMMENDED ACTION:

The Electric Utility is required to improve 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.

City staff received two options for completion of the software upgrade from OSI. Staff feels that the lower cost option is the optimum system and is recommending its implementation.

Therefore, it is the recommendation of the City Manager that City Council adopts Alternative No. 1, waiving the purchasing policy requirement for formal bidding and awarding a contract in the amount $51,444.25 plus applicable sales taxes and approved travel expenses, to Open Systems International, Inc., Minneapolis, MN, for the Power Plant SCADA Migration Upgrade.

Quotation

Quote Number:
QT00000846

Date:
February 19, 2009

Bill To:
City of Ames
PO Box 811
Ames, IA 50010
USA

Ship To:
City of Ames
PO Box 811
Ames, IA, 50010
USA

Attn: Finance Dept. - Accounts Payable

Attn: Paul Burja

Reference: AMES2008-Q04-Rev2
Contact: Jennie Wolff

Terms: Net 30 Days

Description	Qty	Unit Cost	Unit	Extended Cost
Software				
License Migration to .NET	1	0.00	EA	Free of Charge
Replacement-In-Kind License for OpenView™				
Covered under Gold Support				
Includes: .NET-based Graphical User Interface, Base, System Explorer and				
Design Studio.				
Software Subtotal:				
Project Implementation				
Project Preparation and Planning (at OSI)	1	12,000.00	EA	12,000.00
Display and data conversion				
Deviation review and testing				
On-site Implementation	1	14,000.00	EA	14,000.00
2 Engineers on-site				
Project implementation				
Network Configuration				
Training				
Post Implementation Support	1	2,400.00	EA	2,400.00
Project Implementation Subtotal:				28,400.00
Total:				**28,400.00**

OSI

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Option #1

Software				
OpenDE™ (Data Explorer) - License	1	14,995.00	EA	14,995.00
Software Subtotal:				**14,995.00**
Project Implementation				
Preparation, planning and project management (at OSI)	1	2,400.00	EA	2,400.00
On-site Implementation and Training	1	2,800.00	EA	2,800.00
Post Implementation Support	1	600.00	EA	600.00
Project Implementation Subtotal:				**5,800.00**
Support				
monarch™ Support Adder - For OpenDE	1	2,249.25	EA	2,249.25
Support Subtotal:				**2,249.25**
Option #1 Total:				**23,044.25**
Option #2				
Software				
ViewPoint™ (Alarming) License	1	30,000.00	EA	30,000.00
30% Courtesy Discount				
Discount:		-9,000.00		-9,000.00
Software Subtotal:				**21,000.00**
Project Implementation				
Preparation, planning and project management (at OSI)	1	4,200.00	EA	4,200.00
On-site implementation and training	1	5,600.00	EA	5,600.00
Post Implementation Support	1	600.00	EA	600.00
Project Implementation Subtotal:				**10,400.00**
Support				
monarch™ Support Adder - For ViewPoint	1	4,500.00	EA	4,500.00
Support Subtotal:				**4,500.00**
Option #2 Total:				**35,900.00**

Other

Special Terms
1) It is assumed AMES will provide all third party hardware, software, licensing
and configuration not specifically mentioned in this quote.

Proprietary and Confidential

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2) Quote assumes AMES will have dedicated personnel assigned to assist in the installation and implementation effort.
3) AMES shall provide all relevant system information required for the work as needed (i.e. databases, displays, reports, networking information, etc.).
4) If required, quote assumes AMES will handle any custom display and database work, and will test and verify all external links and interfaces.
5) Quote assumes AMES will provide remote access to server and console hardware if needed (VPN, Remote Desktop Connection, etc.).
6) Quote assumes a purchase order will be received by OSI at least 2 months prior to commencement of monarch.NET implementation.
7) Should either Option be selected, quote assumes it will be purchased and implemented with the base quote.
8) Before AMES can migrate to the monarch.NET platform, its entire system must be operational on hardware that meets or exceeds the minimum requirements for a 6-month period.
9) Minimum Requirements:
    Server (Assuming Standalone)
      -CPU: Dual 2.8GHz Xeon Processors
      -RAM: 4GB
      -OS: Current OEM Version
    Workstation
      -CPU: 3.0GHz Pentium 4 Processor
      -RAM: 2GB
      -OS: XP Pro or Vista Business
      -PC Video Card: 128MB w/OpenGL Support
  Recommended Requirements:
    Server (Assuming Standalone)
      -CPU: Dual 2.0GHz Quad-Core Intel Xeon
      -RAM 4GB
      -OS: Current OEM Verson
    Workstation
      -CPU: 2.0GHz Intel Core 2 Duo Processor
      -RAM: 2GB
      -OS: Vista Business
      -PC Video Card: 256MB w/OpenGL Support
      -OS: Current OEM Version

Comments:
Payment Milestones: 50% Upon Receipt of Purchase Order; 50% Upon Cutover

See Totals Above

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Terms and Conditions

1.   This quotation is valid for 30 days, unless otherwise agreed.
2.   Travel costs are not included in this quote. All travel and associated administrative costs will be billed as incurred.
3.   All quoted prices are in US Dollars ($), unless otherwise noted.
4.   OSI will schedule all work upon receipt of the purchase order subject to OSI's resource availability.
5.   Unless otherwise stated, Customer shall pay all applicable shipping.
6.   Training, if applicable, will be provided at OSI's facility, unless otherwise agreed.
7.   Quoted price does not include applicable taxes.
8.   Customer shall provide all relevant system information required for the work as needed (i.e. databases, displays, reports, IP addresses, networking information, RTU channel information, etc.) and shall be responsible for all delays caused by Customer's failure to do so in a timely manner.
9.   Unless otherwise stated, Customer will have dedicated personnel available to assist OSI in the work.
10. OSI does not guarantee that third-party goods will be available at time of quote acceptance. If third party goods are not available, upon Customer's authorization, OSI will provide suitable replacements and bill any resulting cost differences to the Customer. Failure to timely authorize replacements may result in delays and/or need to re-quote.
11. When applicable, Customers subscribing to Gold or above Support Plans may be entitled to new software version updates without charge. With the exception of Diamond Plan subscribers, the Customer will be responsible to pay for any engineering services required to implement the software upgrades.
12. Unless otherwise agreed and quoted, Customer is responsible for all preparations for OSI's installation of software, hardware or services and   any post-installation compatibility testing and compliance issues.
13. Customer will provide adequate environmental and power conditions onsite, unless otherwise stated.
14. Cutover is defined as the quoted functionality being operational with no outstanding critical incidents.
15. Any Quote(s) for system upgrade services require(s) that at the time of actual implementation Customer has a valid premium monarch™ Support plan which includes software upgrade privileges and that the system size or scope does not change dramatically between the issuance of the quote and implementation of the service.

> **Notice:**   OSI's quote is based upon Customer's acceptance of all applicable Terms and Conditions. Requests for additions to, deletions of, or different Terms and Conditions, may require a revised quote and/or additional costs or schedule delays.