



City of Arts & Innovation

Land Use, Sustainability, and Resilience Committee

TO: LAND USE, SUSTAINABILITY, AND RESILIENCE COMMITTEE

DATE: SEPTEMBER 12, 2022

FROM: PUBLIC UTILITIES DEPARTMENT

WARDS: ALL

SUBJECT: ELECTRIC SUPERVISORY CONTROL AND DATA ACQUISITION SYSTEM UPGRADE PROJECT

ISSUE:

Recommend that the City Council approve Professional Consultant Services Agreement for the upgrade of existing Open System International Based Electric Supervisory Control and Data Acquisition System and Energy Management Systems with Open Systems International, Inc. of Medina, Minneapolis, in the amount of \$2,121,116 with an additional \$45,000 for tangible taxable items.

RECOMMENDATIONS:

That the Land Use, Sustainability, and Resilience Committee recommend that the City Council:

1. Approve Professional Consultant Services Agreement for the upgrade of existing Open System International Based Electric Supervisory Control and Data Acquisition System and Energy Management Systems with Open Systems International, Inc. of Medina, Minneapolis, in the amount of \$2,121,116 with an additional \$45,000 for tangible taxable items; and
2. Authorize the City Manager, or designee, to execute the Agreements, including making minor, non-substantive changes, and to sign all documents and instruments necessary to complete the transactions.

BOARD OF PUBLIC UTILITIES RECOMMENDATION:

On August 22, 2022, the Board of Public Utilities unanimously voted to recommend that the City Council approve a Professional Consultant Services Agreement for the upgrade of existing Open System International Based Electric Supervisory Control and Data Acquisition System and Energy Management Systems with Open Systems International, Inc. of Medina, Minneapolis, in the amount of \$2,121,116 with an additional \$45,000 for tangible taxable items; and recommend that the City Council authorize the City Manager, or designee, to execute the Agreements, including making minor, non-substantive changes, and to sign all documents and instruments necessary to complete the transactions.

BACKGROUND:

The Electric Supervisory Control and Data Acquisition (Electric SCADA) system is a key operational tool for continuous safe and reliable operation of the Riverside Public Utilities (RPU) electric transmission and distribution grid. SCADA is a sophisticated software-based system used primarily by the electric system operators to provide real-time information and remote control of many system functions and devices. Remote control of infrastructure systems improves response times and costs less than manual operations response.

RPU uses the Open Systems International, Inc. (OSI) Monarch software for Electric SCADA. Like all major software systems, the manufacturer provides frequent updates to maintain system performance, cyber security, and functionality. Also like all major software systems, Electric SCADA requires continuous software support and patch management services to remain fully operational and security compliant. OSI recommends system patches be conducted monthly with a system upgrade every 4-5 years. The last upgrade of RPU's Electric SCADA system was in 2013 and therefore, it is significantly overdue for a major system upgrade.

OSI was selected through a competitive procurement process with the initial contract approved by the City Council on May 3, 2005. This system has been continuously used since the 2005 installation.

DISCUSSION:

The Electric SCADA upgrade project will bring the system up to date with the latest release of the OSI Monarch software as well as update the associated hardware. The goal is to maintain all functionality present in the current system while taking advantage of the enhancements and standard features available with the new release. OSI's Electric SCADA system is a proprietary product and is not sold or serviced by other vendors. OSI is the only vendor qualified to provide software upgrades, maintenance, support, updates, and patch management of the current software. This is typical and industry practice for SCADA systems in general due to the complexity of the systems.

OSI SCADA Software Upgrade and Services

The competitive bidding process was waived for the procurement with OSI, per Section 702 (u) of Purchasing Resolution 23812, which provides that competitive procurement through the informal and formal procurement process shall not be required when the procurement is for the renewal of maintenance, license(s), support, or a similar need for existing technology systems, including hardware, and the items are procured a vendor/reseller that was originally selected based on the City's procurement standards, provided that: 1) the vendor has been used consecutively since then; and 2) if there are any non-substantive changes to the procurement, the Manager is satisfied that the best price, terms and conditions have been negotiated. Both conditions were met for the procurement with OSI.

The Professional Consulting Services Agreement (Agreement) with OSI includes a complete update of all software and hardware components associated with Electric SCADA as well as services to support the upgrade, including implementation, testing, and training (Attachment 1). The implementation will take approximately two years to complete from contract signing. The

total cost for the upgrade is \$1,169,510. Tax on tangible items (hardware) in the amount of \$45,000 will be included in the purchase order with OSI.

The Agreement also includes support and patch management services for five years which will begin when the current support agreement expires on November 15, 2022. The support and patch management services include 24x7 technical support, help desk support, unlimited support tickets, webinar training, license assurance, patch management, and a system upgrade in year four. This will ensure that RPU's electric SCADA system is always up to date with the latest patches and updates, and consistently remains in compliance with the City of Riverside's IT/security requirements. The annual support agreement fees total \$951,606 for the five-year term, to be paid on an annual basis as follows:

Support and Patch Management Service Period	Cost
Year 1: November 16, 2022 – November 15, 2023	\$147,184
Year 2: November 16, 2023 – November 15, 2024	\$149,392
Year 3: November 16, 2024 – November 15, 2025	\$151,143
Year 4: November 16, 2025 – November 15, 2026	\$348,671
Year 5: November 16, 2026 – November 15, 2027	\$155,216
Total over the 5-year term	\$951,606

AESI - Cyber Security - Review

RPU's cyber security consultant, AESI, reviewed the Electric SCADA architecture, procurement process, and contractual documents, and provided input (Attachment 2). AESI agreed that the planned architecture for RPU's OSI Monarch SCADA upgrade reflects standard OSI practices as well as industry standards and best practices related to reliability and cyber security. AESI agreed that the current version of the OSI Monarch software continues to meet all RPU's functional requirements; however, the current software is an old version which is no longer supported and will not receive security updates or enhancements, and therefore, the OSI Monarch software needs to be upgraded.

AESI notes that although comparable products exist in the market from several vendors with similar pricing for the software itself, however, a transition from one vendor to another would incur significant additional migration costs. AESI reviewed the contractual documents and agree that they appropriately meet industry requirements, RPU's technical requirements, and cyber security requirements.

Project Cost Summary

The total cost of the Electric SCADA Project included in Work Order No. 2205440 and the ongoing support and patch management services is \$2,287,567 over a five-year term. The total cost of the Professional Consultant Services Agreement with OSI is \$2,121,116 with an additional \$45,000 for tangible taxable items.

Item	Cost
Professional Consultant Services Agreement	
OSI Monarch SCADA Upgrade	\$1,169,510
Tax on Tangible Items	\$45,000
5-Year Support and Patch Management with OSI	\$951,606
Total Professional Consultant Services Agreement	\$2,166,116

The Purchasing Manager concurs that the recommended actions are in compliance with Purchasing Resolution No. 23812 and that the best price, terms and conditions have been negotiated for all items.

STRATEGIC PLAN ALIGNMENT:

This item contributes to **Strategic Priority 6 - Infrastructure, Mobility and Connectivity** and **Goal 6.2** – Maintain, protect, and improve assets and infrastructure within the City's built environment to ensure and enhance reliability, resiliency, sustainability, and facilitate connectivity.

This item aligns with each of the five Cross-Cutting Threads as follows:

1. **Community Trust** – RPU is committed to the highest quality water and electric services at the lowest possible rates to benefit the community. This project helps ensure that we have up-to-date technology to continue delivering safe and reliable service to our customers.
2. **Equity** – The Electric SCADA system is critical to the delivery of reliable power and ensures equitable distribution of services to every member of the community so that all have equal access to share the benefits of community progress.
3. **Fiscal Responsibility** – Reliable systems that track and monitor system performance help prevent system outages, therefore keeping operating costs low for the utility and customers.
4. **Innovation** – This project ensures that RPU's most critical electric operating and monitoring system is up to date with the most current technology and security settings available.
5. **Sustainability & Resiliency** – This project was designed with the future in mind, to include on-going system patching and upgrades as to remain current with OSI's prevailing versions to enhance system reliability, sustainability, and resiliency.

FISCAL IMPACT:

The total fiscal impact of this action is \$2,166,116. Sufficient funds in the amount of \$1,214,510 are budgeted and available in the Electric Fund, Public Utilities Electric Capital Program, SCADA Project Account No. 6130000-470672, which will be carried forward into Fiscal Year 2022/23 for the capital portion of the project.

The annual support and patch management costs will be funded out of the Electric Fund, Public Utilities Operational Technology Account No. 6003000-424310 with sufficient funds available for Year 1 in the amount of \$147,184 and Year 2 in the amount of \$149,392 included as part of the biennial budget. Future years' costs will be included as part of the budget process.

Prepared by: Todd M. Corbin, Utilities General Manager
Certifies availability
of funds: Edward Enriquez, Interim Assistant City Manager/Chief Financial
Officer/City Treasurer
Approved by: Kris Martinez, Assistant City Manager
Approved as to form: Phaedra A. Norton, City Attorney

Attachments:

1. Professional Consultant Services Agreement
2. Cyber Security Consultant Memo
3. Presentation