



Notice of Solicitation for Qualifications
Electric Department
SCADA System HMI Software

Prepared by: Advanced Enterprise Systems Corporation

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OVERVIEW

Greenville Utilities Commission (GUC) invites proposals from companies that specialize in the development and manufacture of Supervisory Control and Data Acquisition (SCADA) Human-Machine Interface (HMI) software capable of monitoring and controlling electric utilities and their associated power systems. Proposers will provide details on their Firm, experience with electric systems, references of previous projects, and details on their software as outlined in this Request for Qualifications (RFQ).

It is the goal of the GUC to acquire a commercial-off-the-shelf product that will be configured to provide the full range of interoperability and integrated solutions using proven state-of-the-art technology that will provide the ability to monitor and control GUC's electric distribution system(s). This RFQ focuses on the SCADA HMI software only; services associated with procurement, configuration, installation, testing, commissioning and startup will be addressed through a separate procurement.

INQUIRIES

Inquiries shall be written, preferably by email. Proposers and their representatives shall not make any contact or communicate with any employees, Directors, and consultants of GUC other than Todd Rouse in regard to any aspect of this solicitation unless authorized in writing by Todd Rouse. All questions must be received no later than seven (7) calendar days in advance of the submittal due date. All questions regarding this RFQ shall be directed to:

Mr. J. Todd Rouse, P.E.
rouset@guc.com, 252-551-1570

ADDENDA

GUC has a web site for disseminating information and documentation regarding this RFQ at <http://www.guc.com/Vendors/Default.aspx>. An overview of the business process and related announcements and documents shall be posted on this website under the Vendor tab. All Proposers can access the website to obtain overview information.

Proposers have the responsibility of visiting the website frequently and keeping themselves apprised of any information relevant to the RFQ requirements, timelines, addenda, meetings, and related documents. The RFQ and addenda will be delivered to proposers electronically via email.

Responses to inquiries that materially change the scope or intent of this RFQ will be issued via addenda and posted to the website. Oral statements or clarifications shall be non-binding and without legal effect. It is the Proposer's sole responsibility to review and incorporate any addenda into their proposal response. Failure to include acknowledgement of all addenda may be cause for rejection of the proposal.

SUBMITTAL

Proposers shall provide to GUC details on their company, product, features and the like as prescribed in the Questionnaire section of this document. Responses shall be structured in the same organizational format, and shall be submitted in a single, 1-inch thick three-ring binder using single-sided 8.5 by 11 paper. Proposers may include additional supplemental information on a DVD;

however, the review will primarily focus on the written responses to the questionnaire. Submissions not meeting this requirement will be rejected without review.

Proposers must submit information that shows in detail how their proposed SCADA HMI software complies with GUC's minimum requirements. Proposers are also encouraged to submit any information that indicates how their proposed system would provide GUC with features and enhancements that exceed the minimum system requirements as set forth in this RFQ.

Proposers shall submit seven (7) copies of their qualifications and questionnaire responses addressed to:

Mr. J. Todd Rouse, P.E.
Greenville Utilities Commission
801 Mumford Road
Greenville, NC 27834

All responses must be received by 2:00 pm Eastern Daylight Time, January 20, 2012. Proposals and amendments to proposals received after the date and time specified above will not be considered.

All correspondence and transmittals should be clearly marked as "Greenville Utilities Commission Electric Department SCADA HMI Software Evaluation."

PRODUCT SELECTION PROCESS

GUC staff will review the RFQ responses to determine the highest ranked products based on alignment with their business goals. From the reviews, GUC will develop a short-list of the top three products, and then invite these Proposers in for a demonstration and interview. After demonstrations and interviews, GUC may choose to conduct site visits to locations using the top listed products. Upon completion of the proposal review, demonstration/interview, and site visits, GUC will select a single product for use in their new electric SCADA system and enter into negotiations with the top ranked product/company on pricing and terms. If GUC and the selected vendor cannot agree on terms and price, GUC will end negotiations and go to the next highest ranked vendor or reject all proposals. Once agreement is reached, GUC will sole-source specify the selected product in their Electric SCADA System Upgrades project.

SELECTION CRITERIA

Proposer responses will be evaluated using a scoring methodology based on three specific criteria areas as follows:

1. The ability of the Proposer's products to meet the requirements of interfacing to all existing systems described in attached Technical Memoranda
2. How well the proposed software meets the business goals outlined below
3. The strength of the Proposer's company, and the acceptance and use of the Proposer's products in the electric industry

The weighting of selection criteria will be determined later and shared with the short-listed Proposers prior to any demonstrations or interviews.

COST OF SUBMITTAL PREPARATION

Greenville Utilities Commission will not pay any costs incurred in the preparation, presentation or return of submittal, including demonstration/interview time and site visits.

WAIVER OF CLAIMS

Each proposer, in submitting a proposal is deemed to have waived any claims for damage by reason of the selection of another proposal and/or the rejection of his proposal.

Responders are requested to provide responses to the questionnaire in the same order, using the same paragraph numbers to simplify review by the GUC. Responses shall be limited to fit into a single, one-inch thick 3-ring binder, using single sided pages and font no small than 11 point.

BACKGROUND

Greenville is located in Pitt County in the Coastal Plain region of eastern North Carolina. It is approximately 85 miles east of the state capital of Raleigh. In 2011, the population of Greenville was approximately 84,000 with Pitt County being 168,000.

Greenville Utilities

The Greenville Utilities Commission (GUC) was initially chartered by the North Carolina General Assembly in 1905. The latest amendment to the Charter occurred in 1992. It is organized as an independent agency of the City of Greenville and operates the City's electric, water, sewer, and gas utilities. Each of the four utilities is required to be accounted for through four individual budgets.

The Commission members are appointed by the City Council. Five members represent the City and two members represent the County. The members are appointed on three-year staggered terms with eligibility for an additional three-year appointment. The City Manager serves as the eighth and full voting member of the Board of Commissioners. GUC presently employs approximately 430 people in nine departments.

Electric Department

The Electric Department presently employs approximately 138 people in seven sections: administration, engineering, substation and controls, distribution, systems dispatch and load management, and meter.

The Electric Department serves the citizens of Greenville and approximately 75% of surrounding Pitt County, and is the second largest public power system in the state in terms of both the number of customers served and quantity of electricity purchased and distributed. GUC is a member of the North Carolina Eastern Municipal Power Agency (NCEMPA) and participates in the purchase of electricity from generation facilities jointly owned by NCEMPA and Progress Energy. Greenville is the largest of the 32 cities participating in NCEMPA.

GUC takes power delivery from Progress Energy at 230 kV from two different locations. GUC steps the voltage down to 115 kV and delivers power to various distribution substations on six transmission circuits. The delivery substations are designed with transformer differential, bus differential, breaker failure, bus overcurrent and circuit overcurrent protection. The distribution substations are designed with transformer differential protection, bus breaker protection and a main-and-transfer bus scheme.

GUC operates and maintains 33 miles of 115 kV transmission and 30 miles of 34.5 kV sub-transmission lines. GUC also operates over 1,400 miles of 12.47 kV overhead distribution lines and 950 miles of 12.47 kV underground distribution lines. In addition, the department maintains 19 distribution substation sites with combined base rating capacity of 540 MVA, two sub-transmission sites (115-34.5 kV) at a combined base rating capacity of 50 MVA, two point of delivery substations (230-115 kV) with a combined base rating capacity of 480 MVA.

GUC distributes electricity to approximately 65,000 customers with an annual peak demand of 350 MW. Additional details on the system layout, statistics, and other technical memoranda are available upon request.

BUSINESS GOALS

The following business goals and objectives are intended for the new SCADA system. All aspects of system design and procurement shall incorporate these core goals and objectives. As part of the selection process, these business goals will be used, along with other items, as the baseline criteria for evaluating both SCADA products and services by potential vendors.

Reliability. The SCADA system shall be designed without single points of failure that would require operations staff to immediately rely on emergency repair or increased staff to effectively continue to operate the system. The system shall tolerate momentary disruptions and power quality issues found in industrial and commercial environments. The system must be designed to endure failures and issues related to power quality, utility disruptions, and electro-magnetic interference.

Maintainability. The SCADA system shall be designed to eliminate the need to immediately rely on increased staff to effectively continue to operate the system systems while any one subsystem or component is being repaired or maintained. System hardware and software shall be of like manufacture and shall conform inherently without special or atypical configuration and programming.

Accessibility. The SCADA system shall be configured as a system and allow full access to any and all functionality from any interface. The system shall incorporate various infrastructure intended for user interface, including but not limited to; local client workstations, wireless workstations and remote area computers.

Intuitive Operability. All non-local interfaces shall use HMI client infrastructure of the same manufacture and software versions as the HMI Servers. All HMI interface User Interface (UI) shall utilize the same or duplicate files created during HMI Server development. HMI GUI development shall be performed from a single location and be applicable to all HMI client interface infrastructure

without additional configuration or duplicate development effort and shall meet the business objectives described in this section.

Enterprise Interoperability. SCADA shall be developed using standard configuration functionality contained within SCADA software packages to be used for in the development of the systems. The system shall be designed for enterprise interoperability via standard communication technology. All data collected related to the systems shall be consumable by other enterprise systems without need for proprietary drivers or regard for operating systems, client licensing, or platforms. The system shall include a system enterprise data server containing enterprise functionality including but not limited to Extensible Markup Language (XML) web services.

Scalability. SCADA subsystems and infrastructure shall be designed to be scalable and open. This applies to networking, software, and other subsystem considerations. The system shall be easily expandable through use of applicable and open technology, for example transmission control protocol and internet protocol (TCP/IP) Ethernet networking, Client-Server architecture, distributed intelligence architecture and other lower-tier level standardized communication infrastructure.

Performance. SCADA subsystems and infrastructure shall be designed for performance in speed, responsiveness, accuracy and data access now and in the future. Performance shall apply to all aspects of the system including but not limited to: operations, maintenance, and enterprise data integration.

Security. The SCADA design shall address all aspects of system vulnerability as well as system access and monitoring provisions. The system design shall accommodate infrastructure requirements for network and enterprise security and authentication subsystems.

Data Acquisition and Analysis. The SCADA subsystems and infrastructure shall be designed for performance in accuracy, speed and responsiveness now and in the future. The system shall keep comprehensive databases associated with all process variables (physical and calculated), system health status and alarm-event data. The system shall make all data available using open and non-proprietary methods of reporting. Methods shall include XML Service query mechanisms able to mine data from any data source on demand.

SCHEDULE

This RFQ addresses the first phase of the overall project – SCADA HMI Software Evaluation and Selection. Subsequent phases will include selection of a vendor to procure and configure software, and then to install, test and commission the new system at GUC facilities.

TASK	DATE
Distribute RFQ to potential software suppliers	December 23, 2011
Receive responses from proposers	January 20, 2012
Evaluate and short-list proposers	February 10, 2012
Schedule and conduct demonstration and interviews	February 21, 2012
Site Visits	March 6, 2012
Select Vendor	March 9, 2012
Finalize Negotiations	March 16, 2012

VENDOR QUESTIONS

Company Profile and Product Overview

Contact Name:
 Position or Title:
 Company:
 Email Address:
 Phone Number:

1. Qualifications package including company information.
2. Experience with your SCADA HMI product in electric power industry.
3. Details on number of units in place, and market share for SCADA products in the electric power industry.
4. List of software distributors and their service capabilities that are located in the Greenville, NC area. If none, please provide a listing of suppliers located in North Carolina and the eastern United States.
5. List of recently completed electric SCADA projects in the Mid-Atlantic region, and in the United States. Please include a reference name, current phone number, and current email address.
6. Price list for your software, services and accessories.
7. Detailed information on your HMI software product highlighting alignment with business goals.

Questionnaire

The questionnaire is designed to provide answers to specific questions in a clear, concise manner. Answers to the questions may be covered elsewhere in your proposal, such as in the overview on your product. However, the intent is to receive a concise listing with responses to allow for ease of comparison to other vendor products. Proposers will provide responses to the questionnaire in a single section within their proposal response.

General

1. What is the name of the software package and version related to this survey?
2. How is the software priced? Physical I/O? HMI Tags? Displays? Other?
3. What is the system requirement for the HMI server?
4. What is the system requirement for the HMI operator workstations?
5. Describe the standard features of your software product.
6. Describe the system's capabilities to integrate with other open-system software products.
7. Describe the system's failure recovery features.
8. Describe the system's failure avoidance features.
9. Describe the system's security features.
10. Describe your company's approach to training and provide details on training offerings and locations.

Hardware

1. What I/O Drivers are included with the package? (Attach list if necessary)
2. Can OPC drivers be used?
3. Can your software share HMI tag name database directly with a PLC/RTU? Are there any limitations?
4. Does your HMI software support the use of any mobile devices such as the iPad?

Historical Data

1. Does the HMI package have integral Historical Trending? Describe.
2. Does the historical trending use an external database? SQL? Proprietary Database?
3. Is an additional historical package available? If so, describe additional feature included.
4. Does the additional historical trending use an external database? SQL? Proprietary Database?
5. Can historical data on the system be accessed via an open protocol without a license from another network connected PC? If so, describe.

Alarms

1. Describe the program's alarming system.
2. Can alarms be setup with different priorities to discern high priority alarms from low priority alarms?
3. Please describe how an alarm event can trigger the launch of other applications, open up new windows, or open a specific web page in your software product.
4. Provide details on integral alarm notification features including Audible Alarm on PC, Voice pager, Email, Text paging, and any other similar features.
5. Can you check alarms via a telephone?
6. Does your system support historical alarm archiving and retrieval? Provide details.
7. Does your system support automatic dynamic alarm priorities and setpoints to match different operating scenarios? Please describe this feature.

Visualization

1. Does your software come with any prebuilt symbols or libraries that are specific to the electric industry? Explain.

2. Does the HMI have web server capabilities? Is any additional software required to support this feature? Describe.
3. Can the software support multiple displays on one PC?
4. Can the software support multiple display resolutions for the same application?

Programming

1. Does the software support simultaneous multi-user development? Describe.
2. Can the software be customized using Visual Basic or other programming tools? Describe.
3. Is an internal scripting language used or other programming language? Describe.
4. Does the software have a change management system? Describe.
5. Describe any programming efficiency techniques that are included in the package.

Reports

1. Describe the software's report generation features.
2. Can your report generation tools integrate with Microsoft Excel?
3. Does the package support external report generation packages? If so, describe.

Accessibility

1. Does the software include multi-language support?
2. What accessibility options for sight, hearing, or physical disability are included?
3. Can a user assign specific functions to the mouse buttons and keyboard function keys within your system? Please describe this feature.

Other

1. Provide any other details or comments to describe your software product and how it can help the GUC Electric Department achieve their business goals, improve operations, improve efficiency, reduce costs, or bring other relevant value to their organization.

Minority Business Participation Program

1. GUC has adopted an Affirmative Action and Minority and Women Business Enterprise Plan (M/WBE) Program. Firms submitting a proposal are attesting that they also have taken affirmative action to ensure equality of opportunity in all aspects of employment, and to utilize M/WBE suppliers of materials and/or labor.