



Request for Proposal

SCADA Systems

November 5th, 2018
Procurement Contact – Tiffany Morris
supplyandservices@sjenergy.com

1. SAINT JOHN ENERGY OVERVIEW

Saint John Energy is officially known as “The Power Commission of the City of Saint John”. It was formed in 1922 as a Commission of the City to distribute electricity to the citizens of the City of Saint John. Saint John Energy presently serves approximately 36,400 customers. Saint John Energy operates and maintains approximately 590 km of overhead and 170 km of underground distribution lines with 63 - 12.47 circuits that have operating control at the substation level through SCADA. We have a total of thirteen substations, five (5) served from a 138kV transmission system, and eight (8) from a 69kV system. Our total substation capacity is 341 MVA with a peak load of 233 MW. Power purchased accounts for 85% of the annual budget. Saint John Energy does not own or operate transmission or generation assets.

At Saint John Energy, we are passionate about providing value to our stakeholders. Our customers, in particular, are central to every aspect of our operations as Saint John’s premier provider of energy, excellent service and value.

Saint John Energy has obtained the CEA Sustainable Electricity Company™ Brand and have identified core sustainability issues that are important to us and our stakeholders as per ISO 26000 guidance.

Our mission: We provide innovative customer-centered energy and utility solutions

Our vision: To be recognized as an evolving energy and utility leader

More information on Saint John Energy and its operations can be found at www.sjenergy.com.

2. ATTACHMENTS

Appendix “A” – Intent to Respond

Appendix “B” – Specification for SCADA Systems

Appendix “C” – Commercial Pricing Response Form

Appendix “D” – ISO 14001 Environmental Policy

3. PROJECT SCOPE & OBJECTIVES

Saint John Energy (SJE) is seeking proposals to provide recommendations to replace its current SCADA system that is described in Appendix “B”. SJE wants to modernize the system and ensure that it is able to utilize emerging technological opportunities such as those listed in section 7.0 of Appendix “B”.

SJE is requesting responses for a turnkey solution. In responding please provide pertinent information including architecture, detailed costs, and schedule for the recommended components that would comprise a SCADA system supporting a distribution utility of the future. Please include future products and future enhancements of existing products that are in the development funnel as well.

Saint John Energy’s objective is to select a service provider that:

- a) Meets the overall requirements and technical specifications;
- b) Is competitive in terms of upfront and annual maintenance costs;

4. SOLICITATION SCHEDULE

Proponents should base their proposals on the following dates:

RFP issued:	November 5th, 2018
Intent to Respond Forms due:	November 7th, 2018
Questions & Clarifications from Proponents due:	November 14th, 2018
Proposals due:	November 20th, 2018

Please note that the above schedule is subject to change.

5. FORMS & SUBMISSIONS

a) Intent to Respond Forms

Signed “Intent to Respond” forms (Appendix “A”) are due no later than 3:00 p.m. Atlantic Standard Time (AST) on November 7th, 2018. Intent to Respond forms must be emailed to supplyandservices@sjenergy.com

b) Proposals:

Proposal submissions, signed by an authorized company officer, are due no later than **3:00 p.m. AST on November 20th, 2018**. Proposals received after that time may not be accepted and may be returned to the sender.

Proposals are required in two separate parts:

- 1) Technical Proposal
- 2) Commercial / Price Proposal.

The individual sections are to be segregated. The Technical Proposal will be evaluated first. If it is found in order, the Commercial / Price Proposal will be reviewed. The Technical Proposal shall have no direct or indirect reference to any price or financials related to the proposal. Any submissions that are found violating this clause at any stage may be disqualified without further explanation. Both parts of the proposal shall be submitted on or before the due date for submitting the proposal.

Please provide one key contact for all matters relating to the RFP process.

Proposals that have been received by Saint John Energy prior to the issuance of this RFP will not be considered by Saint John Energy under this process and should be resubmitted.

c) Where to send proposals:

Proponents must deliver one (1) copy of the technical proposal and supporting information and one (1) copy of the financial proposal.

The financial proposal is to be submitted separately from the technical proposal.

Email: supplyandservices@sjenergy.com

Mailing address:

325 Simms Street
Saint John, New Brunswick
E2M 3L6

Hand Delivered :

325 Simms Street
Saint John, New Brunswick
E2M 3L6

Saint John Energy reserves the right to reject any proposals that do not meet the requirements of this section.

E-mail: supplyandservices@sjenergy.com

6. QUESTIONS AND ADDENDA

The requirements specified in this RFP reflect those presently known. Saint John Energy reserves the right to modify solicitation documents by issuing addenda at any time prior to the due date for the submission of proposals, for any reason, whether at its own initiative or in response to a clarification requested by a proponent.

All proponents are urged to carefully examine the RFP immediately and contact Saint John Energy at once if there are any items that require clarification. Proponents are expected to be fully conversant with all clauses of the RFP document before responding. All clarifications deemed by Saint John Energy to be material will be issued as written addenda and sent to all proponents. No verbal interpretation provided by Saint John Energy shall be valid and only written addenda shall bind Saint John Energy.

In the event of a conflict between the RFP and any addenda, later issued addenda shall govern to the extent of any such conflict. All addenda shall be deemed to form part of the proponent's submission.

All requests for clarification must be directed in writing via e-mail to Tiffany Morris at supplyandservices@sjenergy.com on or before the date stipulated in the Solicitation Schedule.

Proponents will be expected to respond in writing to any questions or requests by Saint John Energy on any information and data, technical or otherwise that the proponent has submitted in response to this RFP. Failure to respond may be regarded as the proponent's decision to withdraw itself from consideration.

7. PROPOSAL VALIDITY PERIOD

Proposals shall be valid for a period of at least sixty (60) days from the Proposal due date. Proponents agree to accept an order based on the terms of the submitted proposal in the event that a written notification of award is received on or before expiration of the sixty (60) day time period.

8. WITHDRAWAL AND MODIFICATION OF PROPOSALS

Proponents may withdraw their proposal and submit a revised proposal prior to the proposal due date. After the response deadline, proponent-initiated changes will not be accepted. Proposals may be withdrawn from consideration at any time prior to the proposal due date.

9. CONFIDENTIAL OR PROPRIETARY INFORMATION

Saint John Energy's normal business practices will be observed in handling proposal materials. If the proponent considers the Commercial / Price Proposal or any other information contained in its proposal to be confidential or proprietary, then each page of the proposal containing such information must be clearly marked "Confidential".

Saint John Energy shall use all commercially reasonable steps to prevent the disclosure of proponents' aggregated and personally identifiable information to third parties, except as proponents permit, or as may be required by law or its regulators.

Please be advised that this RFP contains the confidential and proprietary information of Saint John Energy for the exclusive use of your company to evaluate and respond to the RFP. Saint John Energy sends your company this RFP on the express understanding that your company shall keep the RFP in strict confidence and not use any of the information contained in the RFP for any purpose other than to evaluate and respond to the RFP. In the event these terms are unacceptable to you, please immediately return the RFP without retaining any hard or digital copies.

10. TECHNICAL PROPOSAL REQUIREMENTS

Responses to all requirements listed below are required, unless otherwise stated as optional. Responses are to be provided in the same order as listed in this RFP, do not re-number or re-organize any section.

10.1 Organizational Capabilities and Process

- a. Provide a brief overview of your company including your company name and headquarters address, the name of any sub-contractors or business partners used as part of this proposal, and length of time in business.
- b. Please detail the size of your team and the number of clients your company currently serves.
- c. Identify key personnel within your management structure who will ultimately be accountable to Saint John Energy for your company's performance.
- d. Estimate timeline and work plan for each Deliverable.
- e. Requirements and responsibilities of SJE during the work plan.
- f. Statement of services, scope, activities, and deliverables that could be provided.

10.2 Qualifications

Please detail your company's experience in the following areas:

- a. Distributed Energy Resources and visibility within a SCADA system

10.3 Quality and Monitoring

- a. Provide a brief description of your quality assurance programs and quality management system.

10.4 Performance Standards

- a. Please indicate your availability to respond to issues relative to Saint John Energy's normal business hours of Monday to Friday, 8 am to 5pm Atlantic Standard Time.
- b. Please indicate the resolution time by the severity of a maintenance issue, the location of your offices, the process in which incidents are managed and a detailed description of what is included and what is out of scope in your service response. Please provide an example of one maintenance issue from start to completion.
- c. What are your standards with respect to resolving service issues?
- d. Explain any contractual issues with unions or affiliates that may affect service levels to Saint John Energy. Indicate costs that may be incurred.

10.5 Specialized Services

- a. Describe any other related services your company supplies.

11. COMMERCIAL / PRICE PROPOSAL REQUIREMENTS

- a. Pricing assumptions should be clearly stated.
- b. Pricing is to include "Everything Necessary" to have the work completed. If a price element is required but has not been specifically requested in this document, proponents are required to include the element and clearly note it.
- c. Specify any additional charges for "out-of-scope" work.
- d. Costs should be in Canadian dollars.

- e. GST or HST should not be included in the quoted prices but will be paid in addition to the contract price.
- f. The prices in the Pricing Proposal shall be the full inclusive value of the work described and requested additional pricing, including all costs and expenses which may be required for the work described together with all general risks, liabilities and obligations set forth or implied in this RFP.
- g. The prices shall be free from any escalation due to labour, material, and exchange rate variation.
- h. Complete and return the following Commercial Response Form attached hereto as Appendix "C".

12. KEY SELECTION CRITERIA

Saint John Energy anticipates using an evaluation process based on any one or more of the following Key Selection Criteria, in no particular order of importance and without limiting Saint John Energy's ability to take into account any other criteria Saint John Energy considers relevant:

- a. Pricing (60%)
- b. Relative Experience (20%)
(provide list of installations at reference sites and project overview)
- c. Quality and Completeness of Response (17%)
- d. Sustainability Practices (3%)

13. GENERAL CONDITIONS

Notwithstanding anything contained elsewhere in this RFP, including any schedules or attachments hereto, this RFP is subject to the following terms and conditions, all of which the proponent is deemed to accept without qualification by the proponent's submission of a proposal in response to this RFP:

- a) **No Obligations:** This is an invitation for proposals and not a tender call. Saint John Energy does not intend to and does not assume or owe any contractual or other duties or obligations as a result of the issuance of this RFP, the preparation or submission of a proposal by a proponent, the receipt, opening and consideration of a proposal, the evaluation of proposals, provision of additional information or conduct of presentations, the proponent's participation in any discussions or negotiations, or on any other basis whatsoever arising out of this RFP. Without limiting the generality of the foregoing and

for certainty, no Contract A is formed by the submission of a proposal in response to this RFP.

b) **Discretionary Process:** Saint John Energy shall have sole and absolute discretion to:

- i) modify or amend the RFP, including without limitation the Solicitation Schedule for the RFP process, the proposal requirements, or any other terms, whether material or not.
- ii) suspend or cancel this RFP at any time.
- iii) reject any or all proposals submitted in response to this RFP and, in that event, at its option, to call for additional proposals.
- iv) accept or reject the lowest price proposal. If only one proposal is received, it may be selected, accepted or rejected at Saint John Energy's discretion.
- v) accept any proposal which in any manner, whether substantially or in a non-substantial or minor way, fails to conform to or comply with any of the requirements of this RFP, whether or not such requirements are expressed in mandatory terms, or reject any proposal for any such non-conformity or non-compliance.
- vi) enter into post-submission negotiations and discussions with any one or more proponent(s) regarding price, project scope, or any other term of a proponent's submission, and such other terms as Saint John Energy may require, and to request additional information and clarification regarding any proposal.
- vii) enter into simultaneous competitive negotiations with some or all proponents or negotiate with individual proponents.
- viii) modify the scope of the project or any component thereof subsequent to the date for submission of proposals, whether in the context of negotiations or otherwise.
- ix) discontinue any negotiations at any time.
- x) solicit new proposals from firms that did not respond to this RFP and enter into negotiations with any such firm including but not limited to negotiations or proposals for components of the scope, if any, that are not included in the scope of any contract negotiated and executed with any proponent as a result of this RFP.

c) **Evaluation and Selection:** Saint John Energy shall have the sole and absolute discretion to:

- i) assess any proposal on the basis of any one or more of the selection criteria set forth in this RFP, which criteria are not intended to be exhaustive, and/or any other criterion or factor considered appropriate by Saint John Energy.

- ii) undertake a comparative evaluation of any proposals received and evaluate such proposals based on considerations which, in the sole opinion of Saint John Energy, would yield the best value to Saint John Energy and its customers.
 - iii) select any proposal considered by Saint John Energy to be in its best interests or the most satisfactory, including without limitation the lowest or any price proposal.
- d) **No Saint John Energy Liability:** Without limiting the generality of Section 13(a) of these RFP General Terms & Conditions and for certainty, by submission of a proposal in response to this RFP, each proponent shall be deemed to accept and agree to the following conditions:
- i) Proponents shall be solely and fully responsible for all costs associated with the development, preparation, transmittal, and submission of any proposal or material in response to this RFP, including without limitation the costs of any in-person presentation of proposals at Saint John Energy's offices which Saint John Energy may require, and all costs incurred by a proponent during the selection process and any negotiations.
 - ii) No proponent shall have any claim against Saint John Energy for any compensation of any kind whatsoever as a result of participating in this RFP process, including without limitation any claim for costs of proposal preparation or participation in negotiations, or for loss of anticipated profits, whether based in contract including fundamental breach, tort, equity, breach of any duty, including, but not limited to breach of the duty of fairness, breach of the obligation to only accept non-compliant proposals or any other cause of action whatsoever.
- e) **Regulatory Approval:** Any contract or contracts entered into as a result of this RFP process shall be subject to regulatory approval.
- f) **Governing Law:** This RFP and proposals shall be deemed to have been made in the Province of New Brunswick and shall be construed and interpreted in accordance with the laws of the Province of New Brunswick.
- g) **Volume of Work:** Saint John Energy shall not at any time be held responsible if the estimated volume of work is found to be inaccurate. Service Providers shall not claim damages or loss of profits because of any difference between the quantities as estimated and those actually achieved in the progress of the work.
- h) **Non-Canadians Performing Short Term Work Assignments:** The proponent, if not a Canadian citizen, is expected to determine the current Canadian government requirements for non-Canadians involved in short term work assignments in Canada and obtain any necessary visas or permits.
- i) **Withholding Taxes and Fees:** All those submitting proposals should note that payments to non-Canadian persons or organizations are subject to the terms of the

Canadian Income Tax Act and related tax treaties. Unless a waiver is obtained from the Canadian Customs and Revenue Agency, Saint John Energy will deduct and remit any applicable withholding taxes, for monies earned by the proponent while the proponent is in Canada.

14. SAFETY MESSAGE

At Saint John Energy, no business objective is more important than safety. Contractors/Constructors, Service Providers and Vendors are required to adhere to the latest version of Provincial, Municipal and applicable Federal laws and regulations. They are to also follow Saint John Energy rules, guidelines, methods, practices and applicable procedures while conducting business on behalf of Saint John Energy or while on Saint John Energy property.

15. ENVIRONMENTAL AND SUSTAINABILITY MESSAGE

Saint John Energy has obtained the CEA Sustainable Electricity Company™ Brand and have identified core sustainability issues that are important to us and our stakeholders as per ISO 26000 guidance.

We encourage our suppliers to review or adopt similar sustainable practices. Please include in your RFP response a statement concerning policies or practices that your company has adopted pertaining to sustainable principles. Examples include, but are not limited to: environmental sustainability, fair labour practices, and health and safety management, gender equality, ethical and social responsibility, respect for ecological health and biodiversity.

Evidence of these practices may include energy efficiency or water consumption reduction programs and their related targets, hiring practice documents, health and safety programs, workplace ethics policies.

As part of our bid evaluation, your response on sustainable practices will be scored and will form a portion of our overall score based on the weighting identified in section 12.

Saint John Energy is committed to conducting a viable business in a manner which is respectful and protective of the Environment and in full compliance with legal requirements. That is why Saint John Energy maintains an Environmental Management System that is consistent with the ISO 14001:2015 international standard. An Environmental Management System allows a company to better manage environmental aspects of its business and improve performance.

It is important to Saint John Energy that providers of goods and services and contractors understand this commitment as they conduct business with Saint John Energy, and that they help Saint John Energy to identify opportunities to enhance environmental initiatives through the use of appropriate products or services. It is also important that external contractors who work with our company understand our environmental practices and risks. While it is not the expectation of Saint John Energy that providers will have acquired ISO 14001 equivalency with

their own environmental management systems, all contractors must operate in alignment with Saint John Energy's Environmental Policy (Appendix D).



APPENDIX "A"

INTENT TO RESPOND

The Company named below intends to submit a proposal in response to Saint John Energy's RFP for SCADA Systems.

Company Name: _____

Contact Name: _____

Contact Title: _____

Telephone No. _____

Contact Email: _____

Signature: _____

Date: _____

Intent to Respond Forms are due no later than 3 p.m. AST, November 7th, 2018.

Please email this form to: supplyandservices@sjenergy.com.

Please Note: Submission of this form indicates the Company intent to respond, however, it does not commit the Company to respond.



Appendix "B"

Specification for SCADA Systems

1. SCADA System Basic Operation

Our SCADA system is made up of dual redundant Masters communicating to remote terminal units (RTU) installed at the 13 distribution substations and 3 remote switches. The SCADA Master polls each RTU for status and analog data to update the Master's point database. Each RTU collects data by polling connected station intelligent electronic devices (IED) and other connected input devices. All communication is currently done using the distributed network protocol (DNP).

SCADA operators using graphical user interface (GUI) client software connected to the Master can view data or alarms and interact with the system to operate controls. Typical control interactions include opening and closing of switches or breakers, resetting peak demands and disabling or enabling breaker reclosing.

SCADA data is replicated to a separate SQL server database for enterprise level consumption and archiving. A web client allows corporate users to read the replicated data and see a near real-time view of the system.

2. SCADA Master Features and Applications

a. Communications & Point Database

The point database is comprised of stations, communication channels, RTU's & IED's.

Stations – There are a number of stations setup for internal use (server and other processes using non-telemetered points) and remote use (representing substations or other locations using telemetered points). RTU's are children of stations and hold a database of telemetered points. RTU properties include the communication settings and addressing.

Communication channel – There are multiple lines of communication used to reach remote devices via serial data radios and Ethernet cell communication devices. RTU's or Single IED's could be linked to any communication channel.

Points – Status points (digital and analog input) are the majority of the points used in our SCADA system. Controls (digital outputs) are also used and are part of the Status point. Point properties are fully configurable including point naming command, status state strings and alarm priority levels. A large number of Status/Control data points and Analog data points exist in the current system.

b. Automated Routines & Automated Calculations

A major component of our SCADA is the use of custom scripts. Scripts are used to perform commands and perform various logic & algebraic calculations. Some custom scripts are written to automate processes such as peak load monitoring or resetting monthly peak demands values. Automated calculations are used for basic functions like continuously calculating total MW loads or calculating a demand value. Calculations can use metered, non-telemetered or just numerical values. Calculations use basic mathematical or other functions.

Our system allows the use of a Command Sequencing scripts. During times of peak demand commands of this type are issued through the SCADA system automatically to substation power transformer's containing tap changers. The objective is to reduce voltage until the overall system demand is lower than the predicted peak – Conservation Voltage Reduction (CVR).

c. Remote Annunciation

Our Distribution System Control Center is not staffed 24/7. Remote annunciation is used in instances where the SCADA system is unattended. It is scheduled to be used by the system after hours and provides notification to a list of users by SMS text or email when a database point reaches alarm level.

d. Tagging, Guarantees & Switching Orders

Tags and guarantee types are fully configurable in SCADA to accommodate our Work Protection Code. Guarantees can associate tags to points or tags alone can be created and attached to a point. Tags applied to status points with control can prevent SCADA control of that point. For example, a “Do Not Operate” tag will apply this functionality.

SCADA operators create step by step switching orders that include a list of apparatus operations, apparatus descriptions and their location. Switching orders are checked by a second qualified person before they are accepted and implemented. Switch operations can be configured to perform the actual command if the switching plan sequence line is attached to a telemetered point. SJE commonly uses open and close switching operations

that physically performs the open and close on the substation breaker. All Guarantees and switching orders are created via the GUI client software and stored on the SCADA master. They are available to be viewed in the GUI client at any time.

e. Outage Management System

We do not have an OMS application installed on our SCADA system. See Section 7.4.

f. Multi-Speak (Data Sharing/Exchange)

Multi-Speak 4.0 Tomcat is installed but is not interfacing with any other systems.

g. User Management & Security

SCADA user accounts are setup under the access section of the SCADA server software. User accounts are configured to limit the amount of control individuals have. Some users have read only access to the system while others have full control including modification of the SCADA system.

h. Historical Data Tables

Local historical data tables are used for short term retention of collected data (typically analog values). The tables are configurable with settings for the frequency and duration of data collection. For example a table can be setup to collect voltage data from one station every 10 minutes for 200 Days. Tables are also used within the GUI for trending graphs. The tables supporting the graphs can be opened and display values by selecting specific dates ranges. Any point in the database can be used in the tables (telemetered or non-telemetered) along with a number of filters that can be applied to each point such as maximum or minimum values between the collection intervals.

i. Reporting

The SCADA system provides a number of customizable reports such as events, tags, operational logs, outages, etc. Generic reports can also be created on any specific SCADA item such as notes, points, etc. Reports can be printed in PDF format to be distributed out. NERC required reports including operation summary log files and substation entry / power system communication logs (currently excel) are generated automatically and stored in the file system.

j. Graphical User Interface (GUI Client)

Our client software provides the operator a customizable view of SCADA alarms and event logs. Operators use a schematic map to view status, analog values and control software macros. The map is fully customizable with available standard symbols as well as custom

symbols. Other features include links to trend graphs, guarantees & tags and switch order creation & viewing. Currently GIS maps are not incorporated into the SCADA GUI client.

3. Station RTU

Remote RTU's are located at all SJE substations. The SCADA Master communicates to the RTU using Ethernet connected cellular modems. A number of station IED's are connected to the RTU and polled for data via an RS485 serial network on different serial ports. Digital input boards are also connected to the RTU to monitor other alarms such as battery charger status or door entry. DNP 3.0 is used as the protocol for all communications, both serial and Ethernet. IED mapping in the RTU is accomplished via an IED wizard application on the SCADA Master which builds the mapping tables automatically when the point database is created. The mapping file is transferred to the RTU through the Master to RTU communication channel. Current RTU's only support a single Master and DNP on all ports. All RTU's and associated equipment are powered by the station battery bank for uninterrupted operation. Significant effort has been spent creating the mapping tables for the connection of devices downstream of the RTUs to the SCADA point database in the legacy system.

4. SCADA Replication Service

The SCADA Replication Server provides replicated historical data tables, a system point database and other resources for the Archiver and SCADA web service.

The SCADA Archiver takes selected short term historical datasets and stores the data in a SQL database for long term historical data storage. Our system can store at least 10 years of historical data such as feeder and station loading (Amps, Voltage and Mega Watt values).

The SCADA web server provides a way for non-control room personnel to view SCADA without having to access the actual SCADA servers. Using a web browser connecting to the web server the user can see near real time data. The user interface on the web server is similar to the interface used by the system operators except control functions are disabled.

5. New SCADA System Requirements

a. Replacement of Legacy SCADA system

All SCADA functionality described in the sections above is required in our new system. These functionalities include:

- Communications to RTU & Point Database
- Mapping of Point Data from RTU and IEDs to SCADA
- Automated Routines and Automated Calculations
- Remote Annunciation
- Tagging, Guarantees & Switching Order Management
- Alarms
- Data Sharing & Data Exchange with other systems. (Multispeak, API, Other)
- User Management and Security
- Historical Data Tables (Local)
- Reports & Trend Graphs (Real Time and Historical)
- GUI Client for Operators
- GUI Client for Non-Operators
- Archiving (Historical Data Storage)
- CVR

Please include these legacy SCADA requirements in your solution proposal.

b. Geographical Information System (GIS)

SJE has an electric geometric network built in ArcGIS / ArcFM 10.2.1. SJE wants the GIS map to be integrated into the SCADA system with minimal rework of the existing GIS network. The GIS network will be used as a base map in a “real world” view of the SCADA system. Please describe the use of GIS in your system solution including the effort to import and update the GIS features.

SJE also uses ArcGIS online as its WebGIS. Many physical maintenance activities on the electrical system are managed using ESRI’s workforce software. Please describe if feature layers from sources like ArcGIS Online or ArcGIS Server can be displayed within your proposed solution.

Please include these GIS requirements in your solution proposal.

c. Distributed Energy Resources (DER)

With the onset of new technology SJE must future proof its SCADA system. We are in the process of connecting both utility scale and consumer grade DERs to the system and need

to have visibility into these systems through a connection to the SCADA system. Please describe the how visibility to DERs is achieved in your system solution.

SJE is exploring third party software for managing DERs resources. If implemented, that software will require real time system loading information from SCADA, and will provide back aggregated values of DER resources available to the system operator. Optimally, the system operator could issue commands to the third party software to dispatch the resources as required through the SCADA GUI. Please describe to what extent your solution can support this workflow. Is an API available to facilitate communication or is this custom software development?

Please include DERMS and System Interoperability for DERs in your solution proposal.

d. Demand Response (DR)

Demand response is very important to SJE because of a large demand cost applied by our wholesale supplier. Demand response software must be included in the SCADA system that will enable SJE to reduce its coincidental monthly peak demand.

Please include Demand Response in your solution proposal.

e. Outage Management System (OMS)

SJE is interested in deploying an OMS over the next four years. Please describe the OMS ability of your system solution. Can it easily be incorporated with our IVR system NuVoxx?

Please include OMS in your solution proposal.

f. Automatic Vehicle Location (AVL)

SJE currently uses Kerr Global as its AVL provider. Please describe how your system solution incorporates AVL. Can our current AVL provider be easily incorporated into your proposed solution?

Please include AVL integration in your solution proposal.

g. Development Environment & Training Simulator

SJE requires a development environment where configurations or modifications can be developed and tested before being promoted to the production system. SJE requires a training simulator where SCADA operators can complete continuous training and skills development against simulated scenarios.

Please include a DEV environment and training simulator in your solution proposal.

h. System Interoperability

SJE requires a SCADA system that has a NERC compliant method of integrating with other systems. Please describe options that your proposed solution has for interoperability with other systems for example Multispeak, APIs etc.

Please include System Interoperability in your solution proposal.

i. Hardware Interoperability

SJE requires that the proposed solution will work with the existing hardware in our substations and on our feeders. Current installed hardware includes the following:

- Schweitzer SEL 351A IEDs on EIA-485 with DNP 3 protocol
- Schweitzer SEL 351R IEDs on EIA-485 with DNP 3 protocol
- Schweitzer SEL 2440 Annunciator on EIA-485 with DNP 3 protocol
- Beckwith M-2001C-6SV Tap Changer on EIA-485
- Survalent Scout 4313322001 RTU on EIA-485 with DNP 3 protocol
- Schweitzer SEL 651R IEDs on EIA-485 with DNP 3 protocol
- Cleveland Price Motor controller
- Basler DGC 2020HD

Please acknowledge your ability to easily interface with the hardware described above in the solution proposal.

j. Maintenance & Support

SJE will require maintenance and support agreement with the SCADA provider. Please provide details on the support agreement levels including what services are provided and details of the annual recurring costs.



Appendix "C"

SCADA Systems

Please include the following:

- pricing for a "Turn Key" solution
- pricing for any annual software / hardware maintenance and support
- pricing for any software upgrades that occur within the first 5 years that the solution is in place
- project schedule and milestone payments if applicable

Commercial Pricing Proposal

SCADA License	\$
Implementation	\$
Training	\$
Hardware	\$
Third Party Software	\$
Additional Cost(s)	\$

VENDOR (PRINT): _____

NAME (PRINT): _____

EMAIL: _____

ADDRESS: _____

TELEPHONE: _____

SIGNATURE: _____

DATE: _____



ISO 14001 ENVIRONMENTAL POLICY

Environmental Motto: We respect the environment we work and live in.

Saint John Energy is committed to the achievement of excellence and innovation in protecting the environment of the City of Saint John, while meeting its mandate to provide economic and reliable energy to the people of Saint John. The Power Commission of the City of Saint John considers that the environmental performance of its system is as important to its customers as the quality of the service which they receive. The following commitments define the overall components by which the Commission will address its environmental affairs:

- SJE will consistently endeavour to comply with, or exceed, all environmental regulatory requirements applicable to its planning and operational functions;
- SJE will monitor all environmental activities associated with its energy distribution, field work, fleet management, building maintenance, purchasing, administration, water heater and heat pump programs and other consumer product programs;
- SJE will conduct its business within a framework of a corporate Environmental Management System (EMS) compatible with the standards and philosophy described in the standard CAN/CSA-ISO 14001, approved by the Standards Council of Canada;
- SJE will reference the ISO 14001 framework to identify its significant environmental aspects and review its objectives and targets on a quarterly basis as per Procedure 3.12;
- SJE commits, as a member of the Canadian Electricity Association, to the principles and requirements defined in its Sustainable Electricity Program and Sustainable Electricity Company Designation;
- SJE will continue to monitor, measure and report its status and progress on meeting the eleven utility environmental indicators as required by the Canadian Electricity Association;
- SJE will conduct its operations to respect the principles of pollution prevention, with the application of environmental risk assessment and management, and with respect to life-cycle management of hazardous materials;
- SJE will seek to continually improve its environmental performance with internal and external audits, and will report its performance to the Board of Commissioners no less than two times per year and to the public at least once per year.
- SJE will make its environmental policy available to its employees and customers. The policy will be revised as operations and activities evolve.

October 18 2017 Revision 4

A handwritten signature in blue ink, appearing to read "Ray Robinson", written over a horizontal line.

Raymond Robinson, P. Eng.
President & CEO

A handwritten signature in blue ink, appearing to read "Wm Edwards", written over a horizontal line.

Wm. Edwards
Chairperson

October 26 2017

Effective Date