



Electric Department

DATE: 5/19/21
TO: City Council
FROM: Chris Croucher, Director of Electric Utility Distribution
RE: Replacement of Relays/Meters at Newton Street Sub-Station

City of Baldwin Council,

I have received the Price of the replacement of the Relays and the IT work at Newton St. Sub-Station. As you all know the only Sub in our town is 21 years old and the protective devices have become antiquated and are in need of replacement. I have set aside \$100,000 for this purchase and installation in the 2021 Budget. This project will cost the City \$116,591 to complete which is over my budget number by \$16,591. Eaton is the company that has quoted this project and due to them designing the software for our SCADA system that interfaces with the current relays it was cheaper to work with them on this job. I was under budget on the Bucket Truck purchase by around \$50,000 so I hope you the Council will let us move forward to insure the reliability of our electric system while still staying under the total electric budget.

Thank You,

Chris Croucher
Director of Electric Utility Distribution



Powering Business Worldwide

Quick Quote

Eaton Electrical
Services & Systems
Power Systems Automation Group
130 Commonwealth Drive
Warrendale, PA 15086

Proposal#: PSAU0459CMS

Rev #: 0

Dated: May 14, 2021

To: Chris Croucher
Company: City of Baldwin City

From: Brian Colletti PSA
Mobile Line.....412-841-7472

Project: SCADA Upgrade 3
Negotiation Number: STB6-210423-01-ARH

Eaton Electrical Services and Systems will furnish the following:

PSA will supply a XP-503 21-inch touchscreen including the Visual Designer SCADA application and the Kepware license will be transferred to it. Customer is responsible for mounting and power in Power Plant 2. PSA will update the graphics to reflect the EESS work: DT3000/IQDP11 combinations will be replaced by a single SEL relay as well as each FP5000 in the Newton Sub. The SEL-751 relays must have Modbus TCP/IP enabled. The Power Plant 1 and 2 PCs will be configured to view the XP-503 over VNC and the PP2 PC will continue to log energy data.

Hardware:

1. XP-503 - 21.5" widescreen, 1.65 GHz CPU (Dual Core), 450MHz GPU, 4 GB DDR3 RAM, 24 GB SSD Internal Drive, 4 GB CF External Drive, Windows 7 Embedded, Visual Designer: 4,000 tags, 5 drivers, 1 web session
2. SAMSUNG MZMTE256HMHP 256GB SATA Gen3 / mSATA 6Gbps Solid State HD PM851 Series 256Gb SATA-III 6.0Gbps
3. SEL-2730M Managed 24-Port Ethernet Switch

Software:

1. SEL-5601 SYNCHROWAVE Event software - Single Seat

Off-Site Services:

XP-503 configuration, Visual Designer graphics changes can be transferred over remote connection during the relay installation process and begin the testing process.

On-Site Services:

PSA can optionally configure and install the new graphics on-site before testing and conclude with training.

Pricing:

The ON-SITE price is **\$30,966.00**. The REMOTE price is **\$25,454.00**.

4/28/2021

PROPOSAL

TO: Chris Croucher
City of Baldwin

RE: **Negotiation Number: STB6-210423-01-ARH**
Subject: Baldwin City SEL Relay Upgrades
Jobsite Location: Baldwin City, KS

Eaton's Electrical Services & Systems (EESS) is pleased to provide the following proposal for the work scope described herein.

SCOPE OF WORK

Eaton's Electrical Services & Systems will provide the necessary field service personnel, tools, materials and approved test equipment to perform the following:

Eaton Engineering Services and Systems will provide and install a quantity of ten SEL-751 Feeder Protection Relays in the 15KV Indoor Substation Switchgear lineup as replacements for the existing DT-3000 overcurrent relays and FP-6000 relays, IQ Data Plus II multifunction meters, and the Basler BE1-79 Recloser relays. EESS will provide and install one SEL-787-2-3-4 Transformer Protection Relay for the Transformer breaker as a replacement for all of the current relays and meter except the Basler 59G (this relay will remain in the circuit for functional protection not available in the SER relay). Eaton will also tie the new relays into the City's EPMS system.

- Additional components necessary for the installation will be provided and installed by Eaton Engineering Services and Systems as follows:
 - Quantity of ten (10) SEL-751 Feeder Protection Relay
 - Stainless adapter plate for the removal of three devices
 - Quantity of one (1) SEL-787-2-3-4 Transformer Protection Relay
 - Stainless adapter plate for new SEL-787 mounting in door

Eaton Engineering Services and Systems will perform the installation, programming, and start-up of the SEL-751 and SEL-787 relays to ensure proper operation and display.

A detailed report of all findings and test results will be provided.

PRICING

- **Price: \$85,625**

Price for the above scope of work is based on performing site work on a weekday-day turn. If the work cannot be performed during regular working hours (6am-5pm) or must be performed on weekends or holidays, you must contact us to adjust the price accordingly.

CLARIFICATIONS AND EXCEPTIONS

- **Seller shall not be responsible for any failure to perform, or delay in performance of, its obligations resulting from the COVID-19 pandemic or any future epidemic, and Buyer shall not be entitled to any damages resulting thereof.**

- EESS will initiate minor corrective actions to equipment to facilitate repairs to the equipment; however, any parts/materials identified during the inspection requiring replacement, such as control power module, fuses, etc., will be submitted on a separate proposal with cost.
- Eaton has not included any applicable sales tax in this proposal

SAFETY CLARIFICATIONS

- Eaton will not perform work activities in situations where the proper level of PPE is not practical. At no time will work be performed when the arc-flash exposure levels are above 40 cal/cm².
- To establish an electrically safe work condition, the customer is to provide an up-to-date site electrical one-line diagram(s) for lockout/tagout purposes showing all sources of power.
- For electrical outages requiring utility isolation, the customer and utility shall coordinate lockout/tagout requirements with Eaton in a written plan of execution.
- Customer shall be responsible to perform all switching. Any requirement of Eaton for perform switching will require customer signature and a minimum of two EESS personnel present. Additional charges will apply.

CUSTOMER-REQUIRED SUPPORT

- The owner/contractor shall make all equipment available upon arrival of EESS personnel, including removal from service, to permit continuous progression of work. Stand by or delays that are out of the control of EESS will be charged at published services rates plus applicable expenses.
- The owner/contractor shall be responsible for maintaining power to vital or necessary plant equipment and processes.
- The owner/contractor will coordinate all outages and perform all switching to de-energize/isolate equipment to be serviced.
- The owner/contractor shall supply a suitable and stable source of power for operation of test equipment at each test site when normal power is removed. EESS shall specify requirements.
- The owner/engineer will supply a complete set of electrical plans, including the plant single-line diagram, specifications and any pertinent change orders EESS prior to commencement of work.
- Customer shall ensure copies of Operations and Maintenance Manuals and related literature for equipment being serviced is available on site for use by EESS personnel.

SAFETY TRAINING OF EESS FIELD PERSONNEL

- All EESS field personnel received training to comply with OSHA CFR1910.269 Electrical Safety Standard, which sets minimum safety rules and practices for the design, operation, and maintenance of high-voltage systems (over 600 volts).

SAFETY TRAINING OF EESS FIELD PERSONNEL

- The customer supplied Arc-Flash study along with their labeled equipment to meet NFPA requirements will be used to determine the Personal Protective Equipment (PPE) required to perform the work required for this proposal. When a current study and labeling is not available, the time required to determine the proper PPE will be at the current rate per hour, unless included within the Eaton scope of work. Eaton will not perform work activities in situations where the proper level of PPE is not practical. At no time will work be performed when the arc-flash exposure levels are above 40 cal/cm².

PROCESS ADJUSTMENTS

- This proposal was prepared based upon EESS understanding of the documentation and discussions listed in EESS Scope of Work. If a change to the system functionality, hardware and/or software is to be used, or work scope is presented to EESS, then EESS will respond by issuing an addendum to this proposal describing the impact on the schedule and cost of the system or work additions or subtractions.
- Work related to the changes will not begin until the impact is mutually agreed upon by customer and EESS.

STAND-BY TIME

- Stand-by time is defined as EESS time spent on-site waiting for personnel or access to equipment necessary to perform the required steps for the service work outlined within this proposal.
- Under the terms of this proposal, stand-by time is not included within the Scope of Work.
- Stand-by or delays that are outside the immediate control of EESS will be charged separately at published services rates plus any applicable expenses.

TERMS AND CONDITIONS

Any order arising out of this offer will be governed by the conditions contained in Eaton Selling Policy 25-000 dated November 1, 2008. This offer is valid for 30 days from date of issue unless otherwise extended, modified or withdrawn, in writing, by Eaton Corporation. Payments are due and payable net within thirty (30) days from the date of each invoice.

To accept this proposal, please:

1. Reference: **STB6-210423-01-ARH**
2. Issue a purchase order to **EATON CORPORATION**
 - Email purchase order to AllenHarkrader@eaton.com

A HARD COPY OF THE PURCHASE ORDER MUST BE RECEIVED BY EESS PRIOR TO SERVICE BEING SCHEDULED.

Should there be any further questions or needs, please contact at any time. It is a privilege to have this opportunity to be of service. Eaton's Electrical Services & Systems looks forward to working with you on this project.

Sincerely,

Allen Harkrader

Allen Harkrader
Service Sales Engineer
Eaton Corporation
Electrical Services and Systems Division