



CITY HALL • 109 NORTH MAIN STREET • HARTFORD, WI 53027

AGENDA
CITY OF HARTFORD UTILITY COMMITTEE
WASTEWATER TREATMENT PLANT, 1600 West Liberty Avenue
Monday, December 5, 2022
6:00 pm

This is a regularly scheduled meeting of the Utility Committee of the City of Hartford. Prior to this meeting, notice was given to the public by posting an agenda on the City Office Meeting Board, Library Bulletin Board, and Police Bulletin Board. In addition, the Daily News (the official City newspaper) was given notice of this meeting and an agenda was placed in their City Office mailbox at least 24 hours ago.

- 1) Call to Order
- 2) Public Comment Period
- 3) Tour of Wastewater Treatment Plant
- 4) Update on electric service interruptions and water main breaks
- 5) Discussion and consideration of purchasing four G&W Viper-S substation reclosures from RESCO for a price not to exceed \$107,596 (Executive Summary attached)
- 6) Adjournment

“Persons with disabilities requiring special accommodations for attendance at the meeting should contact the City Clerk at least one (1) business day prior to the meeting.” “Members of the Common Council may attend the above meeting. Pursuant to State ex rel. Badke v. Greendale Village Board, 173 Wis. 2d 553, 494 N.W.2d 408 (1993) such attendance may be considered a meeting of the Common Council. This notice is given so that members of the Common Council

EXECUTIVE SUMMARY

TITLE: Substation Reclosure Replacements at Monroe Avenue Substation

BACKGROUND: The approved 2023 Capital Improvement Program includes funds to replace four substation reclosures at the Monroe Avenue Substation. The new reclosures will reduce the time the substation is out of service for maintenance and improve reliability for the customers served by this substation. The current reclosures are part of the original substation equipment installed in the mid-'80s.

Substation equipment is subject to testing and inspections based on the manufacturer's recommended maintenance cycle. The most recent assessment, completed earlier this year, identified several components requiring replacement. Due to the age of the equipment, locating replacement parts has become challenging, resulting in equipment being taken out of service longer than expected.

To remedy this problem and reduce the time equipment is out of service, our consulting engineer, Forster Engineering, Inc., recommends replacing four reclosures at the Monroe Substation.

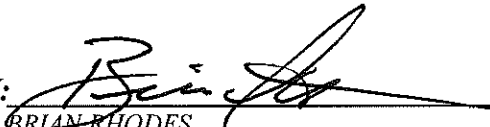
Quotes to purchase four new substation reclosures that meet our specifications are listed below.


<u>Vendor</u>	<u>Price</u>
RESCO	\$107,596
Border States Electric	\$118,780

Forster Electrical Engineering, Inc. reviewed and evaluated the bids. Based on the lowest responsible and responsive bid of \$107,596, Forster Electrical Engineering, Inc. recommends awarding the contract to RESCO for purchasing four G&W Viper-S substation reclosures. Hartford Electric has similar reclosures at Wilson Avenue Substations, and staff is familiar with the operation and maintenance of these devices.

FISCAL IMPACT: \$107,596 to be derived from the 2023 Electric Utility Capital Improvement Program budget.

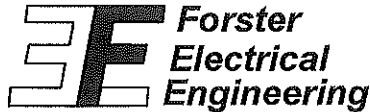
RECOMMENDATION: To purchase four G&W Viper-S substation reclosures from RESCO for a price not to exceed \$107,596.

PREPARED BY:  11/16/2022
BRIAN RHODES
UTILITY DIRECTOR
DATE

REVIEWED BY:  11/21/22
DAWN TIMM
FINANCE DIRECTOR
DATE

APPROVED BY:  11/21/22
STEVE VOLKERT
CITY ADMINISTRATOR
DATE

Routing: Utility Committee



550 N. Burr Oak Ave
Oregon, WI 53575
(608) 835-9009
(608) 835-9039 fax

"Excellence in electrical distribution design since 1981"

SENT BY EMAIL

November 4, 2022

Mr. Michael Thimm
Utility Superintendent
Hartford Utilities
620 W Sumner Street
mthimm@hartfordutilities.org

Subject: Monroe Substation - Breaker Recommendation

Dear Mike:

This letter provides our recommendations regarding the quotes for the 15 kV breakers for the Monroe Substation.

The Monroe Substation will require four (4) circuit breakers, one for each feeder to replace the existing four breakers within the station. We received two (2) quotes for the circuit breakers as follows:

Border States Quote

Cooper/Eaton:	\$115,000
<u>Adder for mounting kits:</u>	<u>\$ 3,780</u>
Cooper/Eaton Total:	\$118,780

Resco Quote

<u>G&W – With New Stands Q1:</u>	<u>\$ 110,744</u>
G&W (W/Retro Fit kits)Q2:	\$ 107,596

We would like to note that SEL will no longer supply the 351R after the end of 2022. G&W quoted the direct SEL replacement model of 651R A.

Based upon our review of the quotes, G&W is the lowest responsible bidder. G&W quoted the new reclosers two different ways. The first quote includes all new stands for the reclosers at a cost of \$110,744. The second quote would be for the reclosers and retro fit kits to install the reclosers on the existing stands at a cost of \$107,596 or a difference of \$3,148 compared to supplying brand new stands. Please note that the stands come unassembled so, you would be responsible for assembling the new stands at the substation.

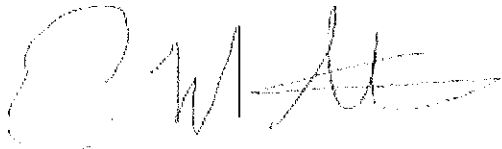
Please contact Adam Kuechle or Michelle Whyte and issue a purchase order for the option that you choose. We would recommend that you order all four (4) now and replace them so, that they all match to avoid any future issues with configuration. In addition, please make sure that you request approval drawings from G&W and have them sent to FEE for approval prior to manufacturing of the units.

Please note that the manufacturers referenced their own terms and conditions, which in general appeared to be roughly the same. We are finding this to be relatively common with equipment quotes and procurement. Both manufacturer's terms and conditions were included with each of the quotes. Thus, about the only way to purchase the equipment is by agreeing to those conditions.

If, you need anything further from us, please let us know.

Kind Regards,

FORSTER ELECTRICAL ENGINEERING, INC.

A handwritten signature in black ink, appearing to read 'E. M. Anthon', with a stylized flourish at the end.

Eric M. Anthon

Attachments: Border States Quote, dated 10/28/2022
 RESCO Quote, dated 10/31/2022

cc. Bruce Beth - Forster Electrical Engineering



Engineered to order. Built to last.

G&W Electric Company
305 W. Crossroads Pkwy
Bolingbrook, IL 60440 USA
Tel: 708.388.5010
Fax: 708.388.0755
www.gwelec.com

ISO 9001 Certified
ISO 14001 Certified

Customer:	RESCO
Date:	Nov 4, 2022
Validity:	Dec 30, 2022
Quotation Number:	SQ-75183A
Customer Reference:	Hartford Electric

Item 1: G&W Electric Viper-S Solid Dielectric Recloser, Catalog No. VIP378ER-12S to retrofit kit to mount on Westinghouse Type ESV or McGraw Edison WE Frame at 90 degrees

Similar to previous order G&W drawing number D3670 SS1L CB0

Standard Features:

- Three (3) epoxy insulated vacuum interrupter modules
- One (1) three phase magnetic actuator operator, providing three phase operation
- Manual trip and lockout handle with mechanical block, capable of physically blocking electronic and manual operation
- Contact position indicator
- Three (3) 1000/500:1 (factory set to 1000:1) current transformers, encapsulated within the solid dielectric insulation, exclusively for use with the recloser control
- Operation counter

Additional Features:

- L-shaped vacuum interrupter modules
- Six (6) 800A deadbreak Apparatus Bushing per IEEE 386 interface 13
- Six (6) 15kV screw-on silicone insulators
- Aerial lugs included: NEMA 4-hole pads
- Deadline operation not included
- **10-foot** 14 pin control cable connectorized on both ends
- **10-foot** 2 pin AC power cable, connectorized on both ends
- No potential transformers included
- Two (2) grounding connectors with a range of 2/0 to 250 AWG
- **SEL-0651RA01XBAXE1A232C111X** control with the following features:

Category	Selection
Firmware	Standard
Conformal Coat	None
Secondary Input Voltage	(3) 8 Vac Max LEA Inputs and (3) 300 Vac Max Inputs
Secondary Input Current	1A phase .2A Neutral
Extra Inputs/Outputs	None
Communications Interface	(2) 10/100BASE-T, EIA-485
Communications Protocol	Standard

User Interface	Configurable Labels
Enclosure	Painted Aluminum With GFCI Outlet
Battery Option	12 V 40 Ahr
Accessory Infrastructure	Accy Mtg Kit w/ 12 V Aux TB and 100 W Heater
LV Close and Secondary Input Voltage Connectors	Low-Voltage Close Connector (2-Pin Female)
Accessories	3-Pin Male Connector for Incoming Power (MS5015 Size 22)
Bundled Accessories	None

Note: The SEL-651RA requires 120/230 Vac or 125/250 Vdc With for control power, to be provided via connection to a user supplied source

Included SEL-651RA Relay Functionality:

- 50 (P, N, G, Q) – Overcurrent (*Phase, Neutral, Ground, Negative Sequence*)
- 51 (P,N,G,Q) – Time Overcurrent (*Phase, Neutral, Ground, Negative Sequence*)
- 79 – Autoreclosing

Price Each: \$26,899.00

Ratings:

Maximum design voltage	15.5kV
Impulse level (BIL)	110kV
Continuous and load break current	800A
8 Hr. Overload at 20°C	960A
60Hz Withstand, kV rms Dry, 1 min	50kV
60Hz Withstand, kV rms Wet, 10 sec	45kV
Interrupting Rating RMS (kA)	12.5kA
Making Current, RMS, asym, KA	20kA
Peak, asym (kA)	32kA
Short Circuit Current, kA sym, 3 second	12.5kA
Mechanical Operations	10K

Operating Temperature Range: Temperature range, -40°C to +65°C (-40°F to 150°F)

Exceptions/Clarifications:

- 2.04.C: When the recloser is mounted in the substation frame, the lowest live part of the recloser shall be a minimum of 7.25' from ground. The highest live part of the recloser shall be a maximum of 12.42' from ground.
- **Rev A has these changes:**
- **Deleted item #2 and made its design/features into item #1**
- **10 foot control and AC power cables to match what was provided on previous order which resulted in a reduction of price**
- **Added drawing number to description**

Commercial Terms and Conditions

Lead Time

- **Submittal drawings (if required):** Submittal drawings and wiring diagrams will be issued for approval after receipt of order
- **Lead time for shipment:** Lead time is estimated after receipt of order and release to production. Submittal and shipment lead time is subject to change at time of order due to dynamic component lead time and factory loading conditions

See drawing lead time tracker below for detailed information

Validity: G&W reserves the right to pass through price increases from SEL or other major suppliers

Shipping Terms: FOB-Destination

Freight: Prepaid and Allowed on a standard closed top trailer

Payment: Net 30 days from time of invoice; Payment terms are subject to G&W Finance Department approval

Purchase Order Submission: Purchase order should be addressed to:

G&W Electric Co.
305 W. Crossroads Parkway
Bolingbrook, IL 60440-4938

Terms & Conditions: Warranty and all other terms and conditions are as per SM-F-1 Rev 7