



Rochelle Municipal Utilities
Electric Operations Division

Memo

To: David Plyman

From: Joe Orlikowski

CC: Sue Messer

Date: 2/6/2015

Re: Caron Road Substation 1 Expansion -Transformer Recommendation

On Tuesday January 13 at 11:30 PM , we opened sealed bids for a 138 to 13.8 KV, Two Winding power Transformer including the design manufacture, delivery to the site F.O.B. foundation, dressing out, oil filling and testing one 20/26.67/33.33 MVA ONAN/ONAF/ONAF at 65 degreeC rise, three phase, oil-immersed transformer for the Caron Road Substation 1 Expansion.

Bid packages were received from ABB, Delta Star, Pennsylvania Transformer, and SPX Waukesha.

The proposal prices originally submitted for each transformer are summarized below:

Bidder/ Transformer Mfg	Original Toal Firm FOB Pad Price	Delivery Date
ABB	\$718,090	August 17
Pennsylvania Transformer	\$748,306	November 22-Dec.15
SPX – Waukesha	\$828,819	October 22-Nov. 22
Delta Star	\$946,841	September 17- Oct.22

Sargent & Lundy and RMU reviewed the adders, Spare Equipment and pricing options for the Calisto Monitoring Systems. Please review Sargent & Lundy summary breakdown.

Also Sargent & Lundy and RMU the evaluated cost including transformer losses. See Sargent & Lundy evaluation review.

After Sargent & Lundy's bid evaluation, RMU and Sargent & Lundy recommend that we award the bid to ABB for \$ 775,400 which includes the adder for spare equipment for HV Bushing, LV Bushing, Fan Assembly, Gasket Set Paint, and the Calisto 9 Gas monitoring System. ABB is the lowest evaluated cost and ABB is the only one that can meet the required delivery date.

The engineering estimate for the Power Transformer is \$800,000.

The Caron Road Substation 1 Expansion project is being funded through the bond funds.

Joseph A. Orlikowski

Superintendent of Electric Operations.



Thomas R. Eisenbart
 Project Director
 Phone: (312) 269-6478
 Fax: (312) 269-6494
 e-mail: Thomas.R.Eisenbart@sargentlundy.com

February 4, 2015
 Project No. 12255-012
 Letter No. SL-RMU-CARON-012-15-002X

Rochelle Municipal Utilities
 Caron Road Substation 1 Expansion Project

Specification 12255-012-01, 138 to 13.8KV Two Winding Power Transformer
 Sargent & Lundy Letter of Recommendation

Mr. Joe Orlikowski
 Electric Operations Superintendent
 Rochelle Municipal Utilities
 700 West 2nd Ave
 Rochelle, IL. 61068

Dear Mr. Orlikowski,

This letter summarizes Sargent & Lundy, L.L.C.'s (S&L) evaluation of proposals submitted in response to S&L Specification 12255-012-01, 138 to 13.8 kV Two Winding Power Transformer. Bid packages were received from ABB, Delta Star, Pennsylvania Transformer, and SPX Waukesha.

Scope of Supply

The 138 to 13.8kV Two Winding Power Transformer Specification Scope of Supply includes the design, manufacture, delivery to the site f.o.b. foundation, dressing out, oil filling and testing one 20/26.67/33.33 MVA ONAN/ONAF/ONAF at 65°C rise three phase, oil-immersed transformer.

The proposal prices originally submitted for each transformer are summarized below:

<u>Bidder/Transformer Manufacturer</u>	<u>Original Total Firm FOB Pad Price</u>	<u>Delivery Date</u>
ABB	\$718,090	August 17
Pennsylvania Transformer	\$748,306	November 22 – Dec. 15
SPX - Waukesha	\$828,819	October 22 – Nov. 22
Delta Star	\$946,841	September 17 – Oct. 22

Adders: Spare Equipment

<u>Bidder</u>	<u>Recommended Spares:</u>	<u>Cost:</u>
Delta Star	HV Bushing, LV Bushing, X0 Bushing, Gasket Set	\$5,322
SPX	HV Bushing, LV Bushing, Gasket Set, Fan Assembly	\$7,394
ABB	HV Bushing, LV Bushing, Fan Assembly, Gasket Set, Paint	\$8,310
Penn. Trans.	HV Bushing, LV Bushing, LV Neut. Bushing, HV Arrester (2) Fan Assemblies, Gasket Set	\$15,450

Evaluation

Sargent & Lundy's evaluation of the proposals includes review of the evaluated cost of the transformers based on transformer losses, delivery, technical exceptions, special terms and conditions, liquidated damages, payment policy, and warranty. The evaluated cost includes the cost of the transformer and the losses of the transformers. The detailed cost breakdown for the transformer losses and total costs per transformer is as follows:

<u>Bidder</u>	<u>Total Firm FOB Price</u>	<u>Transformer Losses Cost</u>	<u>Total Evaluated Cost</u>	<u>Difference</u>
ABB	\$718,090	\$258,042	\$976,132	Base
Penn. Trans.	\$748,306	\$364,960	\$1,113,266	\$137,134
Delta Star	\$946,841	\$237,880	\$1,184,721	\$208,589
SPX	\$828,819	\$640,020	\$1,468,839	\$492,707

Based on our initial review of the proposals, we focused on delivery, price, and compliance with the specification. ABB is the only bidder who can meet the mid-August 2015 delivery schedule based on a 12 - 14 week after receipt of approval lead time, while the other bidders cannot meet the date due to longer lead-times. None of these bidders has taken any unacceptable exceptions to the specification. Each of these manufacturers requires partial payments during manufacture and/or the final/full payment within 30 days of shipment. ABB is offering a 5 year warranty from the date of energization, or 5.5 years from delivery; the other vendors are all offering a 5 year warranty from date of shipment. ABB accepts the liquidated damages, but caps the damages to 10% of the contractual amount. ABB identified an exception to Point 19 in the terms and conditions, pertaining to the complete Asbestos Removal and the Handling of Toxic Materials found during installation. Based on ABB's scope of work and discussions with Joe Orlikowski, we recommend that ABB's exception be accepted.

We asked all bidders to provide pricing options for the Calisto Gas Monitoring Systems. Below is a summary of the price adders.

<u>Bidder</u>	<u>Calisto 1</u>	<u>Calisto 2</u>	<u>Calisto 5</u>	<u>Calisto 9</u>
Penn. Trans.	Included in Base	-----	\$28,700	\$37,400
ABB	-----	Included in Base	\$42,000	\$49,000
Delta Star	\$16,973	Included in Base	\$44,349	\$53,445
SPX	Included in Base	-----	\$44,175	\$62,275

The Calisto 5 and 9 relays are diagnostic monitors, where the 1 and 2 models are only detection monitors. Based upon RMU's past experience with the Calisto 1 system, the evaluation focused on the more upgraded diagnostic monitors. The Calisto 5 monitor allows for monitoring of five fault gases and moisture levels and the Calisto 9 is a complete DGA system accurately monitoring all atmospheric and fault gases. Both systems use the Duval triangle measurement for fault detection, have an automated self-calibration feature with a certified primary grade gas; they each come with an intuitive front-panel display interface and provide continuous enclosure and oil conditioning. Each monitor comes with DNP3 and Modbus as standard and IEC 61850 as optional. On the ABB proposal, the price difference between the two monitors is \$7,000, and for the additional features, S&L is recommending proceeding with the Calisto 9 monitor.

Of the two bidders with the lowest evaluated costs, only ABB will meet the required delivery date, and, as a result, we recommend that ABB be awarded the contract. Our review assessed the ABB bid at

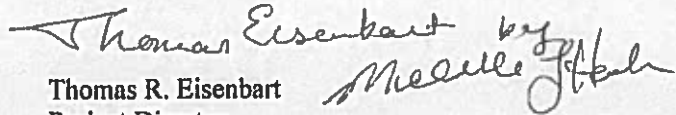
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\$775,400 including the spare parts, the Calisto 9 diagnostic detection monitor, a vacuum type load tap changer and the "dressed out on the pad" delivery.

If you have any questions or want to discuss this matter, please call Michelle Hack at (312) 269-6950 or Zafar Ashrafi at (312) 269-3565.

Yours Very Truly,


Thomas R. Eisenbart
Project Director

MLH/TRE:dg
cc: M. S. Zar
cc: Z. Ashrafi
cc: R. Mrozek