

To: Honorable Public Utilities Board

Submitted by: / S /
Andre Basler, P.E.
AGM – Engineering and Operations

From: Diosdado Hernandez, P.E.
Engineering Manager

Approved by: / S /
Nicolas Procos
General Manager

Tito R. Nagrampa Jr., P.E.
Senior Electrical Engineer

Subject: By Resolution, Requiring Four-Fifths Vote, Authorize the General Manager to Sole Source the Purchase of 115 Kilovolts Overhead Maintenance Switch and Related Accessories from Southern Electrical Equipment Company in an Amount Not to Exceed \$70,000

RECOMMENDATION

By resolution, requiring four-fifths vote, authorize the General Manager to sole source the purchase of 115 kilovolts overhead maintenance switch and related accessories from Southern Electrical Equipment Company in an amount not to exceed \$70,000.

BACKGROUND

Alameda Municipal Power (AMP) has three 115 kilovolts (kV) overhead line maintenance switches, namely switches 205, 305, and 405, which are normally open during normal configuration of the 115 kV transmission lines. These switches are closed during preventive maintenance work on any one of the substation transformers, breakers, and busses to prevent power service interruption of the 12 kV distribution systems and maintain continuity of the 115 kV transmission loop configuration.

In fiscal year (FY) 2018, AMP replaced the old and deteriorated overhead, non load break switch 405 at Jenney Substation, when its three 115 kV sulfur hexafluoride (SF₆) breakers were replaced. The switch was purchased from Southern Electrical Equipment Company (SEECO). This company is known as the industry leader for transmission and substation sectionalizing products. The new SEECO 115 kV overhead switch was utilized to bypass the Jenney Substation during the breaker replacement work so that the other SF₆ breakers could remain energized while working on one SF₆ breaker.

DISCUSSION

On September 17, 2018, AMP purchased three Siemens SF₆ breakers intended for the replacement of Cartwright Substation breakers. Bid solicitation for the labor contract to replace the SF₆ breakers is ongoing. Staff will recommend to the Public Utilities Board (Board) in its December 2019 meeting to award the contract. Actual construction work will start in April 2020.

AMP will need to bypass the Cartwright Substation breakers by closing switch 305 during the construction work so the other SF₆ breakers and transmission line connected at Jenney substation remain energized while working on any of the Cartwright SF₆ breakers.

Staff assessed switch 305 and found it to be in bad condition. This switch poses a reliability risk during the planned Cartwright SF₆ breaker replacement project and should be replaced. Staff also recommends purchasing a load break and Supervisory Control and Data Acquisition (SCADA) operable switch to significantly strengthen the reliability and resiliency of the 115 kV transmission lines during substation preventive maintenance work, equipment failures, and other operational scenarios.

Sole Source Justification

Staff recommends sole source purchasing of the 115 kV overhead switch and related accessories from SEECO for an amount not to exceed \$ 70,000 including sales tax, for the following reasons:

- *To match existing equipment installed at Jenney Substation.* AMP has invested in SEECO switch products at this substation. Installing a SEECO maintenance switch at Cartwright Substation in FY 20 and at Northern California Power Agency combustion turbine (NCPA-CT) Substation in FY 21 will provide an opportunity to apply existing templates for the switch interface to SCADA application software, operation schemes, and current commissioning test plans used for Jenney Substation. This will result in lower configuration, installation, commissioning and maintenance costs than would be the case with another manufacturer's product.
- *To protect the training investment provided by SEECO to AMP staff.* During the past year, engineering and operations staff has attended commissioning, maintenance, and operations trainings related to the SEECO products installed at AMP.
- *To interface with AMP's existing SCADA systems.* AMP will be spending significant time and resources configuring the new device to interface with AMP's SCADA systems. Integrating another manufacturer's product into an existing SCADA system can be difficult, expensive, and in some cases, simply not possible. Using SEECO switch and Remote Telemetry Unit (RTU) will ensure compatibility for integration to AMP's SCADA system using the same database and control panel templates
- *To standardize the number and types of spare parts for the 115 kV maintenance switches.* This will eliminate storing different types of spare parts for 115 kV maintenance switches in the inventory. Parts can be used interchangeably for Jenney, Cartwright, and NCPA-CT substations.

FINANCIAL IMPACT

AMP has allocated sufficient funds in its FY 2020 budget for the purchase of the 115 kV overhead switches.

LINKS TO AMP STRATEGIC PLAN

Business Resiliency: Strategy 1, AMP will develop an asset management plan to guide efficient capital and maintenance expenditures which improve system operations and resiliency.

EXHIBITS

- A. Resolution
- B. SEECO 115kV Overhead Maintenance Switch Quote

CITY OF ALAMEDA
ALAMEDA MUNICIPAL POWER

RESOLUTION NO. _____

BY RESOLUTION, REQUIRING FOUR-FIFTHS VOTE, AUTHORIZE THE GENERAL MANAGER TO SOLE SOURCE THE PURCHASE OF 115 KILOVOLTS OVERHEAD MAINTENANCE SWITCH AND RELATED ACCESSORIES FROM SOUTHERN ELECTRICAL EQUIPMENT COMPANY IN AN AMOUNT NOT TO EXCEED \$70,000

WHEREAS, on September 17, 2018, Alameda Municipal Power (AMP) purchased three Siemens sulfur hexafluoride (SF₆) breakers intended for the replacement of Cartwright substation breakers; and

WHEREAS, AMP will need to bypass Cartwright substation breakers by closing switch 305 during the construction work so the other SF₆ breakers and transmission lines connected at Jenney substation remain energized while working on any SF₆ breakers; and

WHEREAS, staff assessed switch 305 and found it to be in bad condition. The switch should be replaced before the start of the SF₆ breaker replacement project; and

WHEREAS, staff also recommends purchasing an overhead load break and Supervisory Control and Data Acquisition (SCADA) remote operable switch to strengthen the reliability and resiliency of the 115 kilovolts (kV) transmission lines; and

WHEREAS, staff recommends the sole source purchase of the 115kV overhead maintenance switch from Southern Electrical Equipment Company (SEECO) for the following reasons: to match existing equipment installed at Jenney Substation; to protect the training investment provided by SEECO for products installed; to interface with AMP's existing SCADA systems; and to standardize the number and types of spare parts for the 115 kV maintenance switches; and

NOW, THEREFORE, BE IT RESOLVED that the Public Utilities Board of the City of Alameda, by four-fifths vote, hereby authorizes the General Manager to sole source the purchase of a 115 kV overhead maintenance switch and related accessories from SEECO in an amount not to exceed \$70,000 including sales tax.

Approved as to Form

By: / S /
Alan Cohen
Assistant City Attorney

Quotation



Prepared for:
 Alameda Municipal Power
 Attn: Alex Azares
 2000 Grand Street

Alameda CA
 U.S.A. 94501

Phone Number (510) 748-3900
Fax Number

Quotation Date 01-Oct-19
Expiration Date: 31-Dec-19
Customer RFQ ALA4366
SEECO Qte Nbr 1124366
Credit Terms Net 10 Days
Freight Allowed/Prepaid
FOB Destination
Shipment 05 - 07 Weeks ADA
Drawings 04 - 05 Weeks ARO

We are pleased to offer the following:

Item	Product Description	Quantity	UOM	Unit Price	Extension
1	SMH11512S-U Type "SMH" group operated, side-break disconnect, horizontal upright mounting, 115 kV, 1200 amp continuous, 61 kA momentary, 550 BIL, complete with heavy duty copper and copper alloy live parts, wipe-style arcing horns, TR286 station post insulators (porcelain), steel truss support structure and channel bases, and a manual control mechanism consisting of control rods, rod guides, crank arms, pipe couplers, bearings, operating handle, lockplate and ground strap. Switch is completely pre-assembled and adjusted in a unitized configuration.	1	Each	\$14,241.25	\$14,241.25
2	FIELD INSTALLTN Field commissioning by SEECO factory representative to help insure proper final adjustment of SEECO product. SEECO personnel will review the installation and adjustment performed by the customer's personnel or their chosen contractor. SEECO's factory representative acts primarily in an advisory capacity on proper adjustment methods and our service does not replace the field installation labor of contractors or the customer. The advisory capacity may include demonstration of proper methods and assistance in correcting detected errors on a limited basis. Please refer to the accompanying SEECO Field Service Policy for a more complete description of this service.	2	Days	\$1,200.00	\$2,400.00

SEECO Salesman Caryn Sanders
Representation Young & Company

1124366

Southern Electrical Equipment Company, Inc.
 P.O. Box 668547, Charlotte, N.C. 28266
 Phone: (704) 392-1396 Fax: (704) 392-7033
 E-Mail: sales@seecoswitch.com

Quotation



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 Alameda Municipal Power
 Attn: Alex Azares
 2000 Grand Street

Alameda CA
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We are pleased to offer the following:

Item	Product Description	Quantity	UOM	Unit Price	Extension
3	TRAVEL Estimated travel expense to convey SEECO personnel to and from jobsite (transportation, hotel accommodations, meals). You will be invoiced for actual out of pocket expenses.	2	Lot	\$573.06	\$1,146.12
4	FREIGHT Freight charges	1	Lot	\$488.29	\$488.29
Quotation Summary:					\$18,275.66

Comments

1. Please reference SEECO quotation number 1124366 on your purchase order.
2. Lead time is based on current production and subject to confirmation at time of order entry.
3. Unit prices do not include taxes.
4. SEECO's standard Terms and Conditions of Sale shall apply to all sales.
5. All unit prices are in U.S. dollars
6. SEECO reserves the right to review pricing at any time due to unforeseen changes, such as tariffs, escalated transportation costs, surcharges and other factors.
7. Estimated travel expense to convey SEECO personnel to and from jobsite (transportation, hotel accommodations, meals). You will be invoiced for actual out of pocket expenses.
8. Field assistance or travel on Saturday is invoiced at the rate of \$1,800.00 per calendar day. Field assistance or travel on Sunday or a holiday is invoiced at the rate of \$2,400.00 per calendar day.
9. Please insure that the switch is assembled and mounted on the structure with lines fully tensioned before our representative arrives on site.

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Quotation Date 01-Oct-19
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Customer RFQ ALA4375
SEECO Qte Nbr 1124375

Credit Terms Net 10 Days
Freight Allowed/Prepaid
FOB Destination

Shipment 05 - 07 Weeks ADA
Drawings 04 - 05 Weeks ARO

We are pleased to offer the following:

Item	Product Description	Quantity	UOM	Unit Price	Extension
1	1M11512-4 MONORUPTR® vacuum interrupter for addition to an existing one-way, phase-over-phase, type "G" GOABS®. This four unit interrupter is rated for interrupting duty up to 115 kV at 1200 amps (3,600 operations). The assembly consists of interrupter units with operating arms, pick-up arms, auxiliary load pick-up horns, and hardware for mounting interrupters on the existings switch.	6	Each	\$3,366.85	\$20,201.10
2	FREIGHT Freight charges	1	Lot	\$346.39	\$346.39

Quotation Summary: \$20,547.49

Comments

1. Please reference SEECO quotation number 1124375 on your purchase order.
2. Lead time is based on current production and subject to confirmation at time of order entry.
3. Unit prices do not include taxes.
4. SEECO's standard Terms and Conditions of Sale shall apply to all sales.
5. All unit prices are in U.S. dollars
6. SEECO reserves the right to review pricing at any time due to unforeseen changes, such as tariffs, escalated transportation costs, surcharges and other factors.

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Phone Number (510) 748-3900
Fax Number

Quotation Date 01-Oct-19
Expiration Date: 31-Dec-19

Customer RFQ ALA4376
SEECO Qte Nbr 1124376

Credit Terms Net 10 Days
Freight Allowed/Prepaid
FOB Destination

Shipment 05 - 07 Weeks ADA
Drawings 04 - 05 Weeks ARO

We are pleased to offer the following:

Item	Product Description	Quantity	UOM	Unit Price	Extension
1	MNM2-150243AL Type "MNM2" motor operator mechanism, 15,000 in/lbs torque, 24 volt DC control and motor voltage, 3-5 second operation time, complete with power supply package (120 volt AC input, 10 amp charger, 12 volt gelled, electrolyte batteries), advanced battery test system (loss of AC alarm, low voltage DC alarm, user definable load and check test functions), local/remote switch, open/close push buttons, mounting bracket, 8 form "c" auxiliary contacts for customer use, DC knife switch, adjustable heater with recirculating fan, 15 amp GFI receptacle, convenience light, torque relief knob, swing handle for manual operation, removable door with lift-off hinges, and an aluminum enclosure.	2	Each	\$5,033.23	\$10,066.46
2	MNM-Option D Main AC breaker	2	Each	\$198.00	\$396.00
3	MNM-Option F AC Knife switch	2	Each	\$145.20	\$290.40
4	MNM-Option M Enlarged door (4" depth) to accomodate door mounted equipment such as RTU's and communication devices. Includes lexan cover to protect equipment.	2	Each	\$392.98	\$785.96
5	MNM-Option N Factory install and wire RTU and communication device (radio, modem, etc.).	2	Each	\$484.00	\$968.00

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We are pleased to offer the following:

Item	Product Description	Quantity	UOM	Unit Price	Extension
6	MNM-Option Q Universal operation counter with LCD display. Includes reset (clear) function with user-selectable enable/disable feature, selectable open/close operation count mode, test mode and display contrast adjustment.	2	Each	\$363.00	\$726.00
7	RTU #00 Remote terminal unit (RTU). Please see the comment section of our quotation for the specific brand and model number offered.	2	Each	\$1,999.38	\$3,998.76
8	RTU #00 Remote terminal unit (RTU). Please see the comment section of our quotation for the specific brand and model number offered.	2	Each	\$2,202.15	\$4,404.30
9	FREIGHT Freight charges	1	Lot	\$265.32	\$265.32
Quotation Summary:					\$21,901.20

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Drawings 04 - 05 Weeks ARO

We are pleased to offer the following:

Item	Product Description	Quantity	UOM	Unit Price	Extension
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Comments

1. Please reference SEECO quotation number 1124376 on your purchase order.
2. Lead time is based on current production and subject to confirmation at time of order entry.
3. Unit prices do not include taxes.
4. SEECO's standard Terms and Conditions of Sale shall apply to all sales.
5. All unit prices are in U.S. dollars
6. SEECO reserves the right to review pricing at any time due to unforeseen changes, such as tariffs, escalated transportation costs, surcharges and other factors.
7. Line item 7 RTU: 3505#D4CF SEL-3505-3
Includes one Ethernet port and one fiber optic port.
8. Line item 8 RTU: RuggedCom RS910-24-P-S1-FX05-TX-XX
9. MNM-Option M 4" door is needed for both of the above items.

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