



Parts & Service: 1-888-434-7378

QUOTATION NO.	MB-QT-23-686675.R1
DATE	July 26, 2023

NOTICE: This quotation is void unless accepted within 14 days from date hereof and is subject to change upon notice. However, if ABB elects to perform the services covered by the quotation, in response to an order placed 30 or more days after the date of the quotation, the terms of the quotation will apply.

BUYERS INFORMATION:

Quote Requested by	Chavante J. Marsh
Company	V.I. Water and Power Authority
Address	Charlotte Amalie St Thomas 00802, U.S. Virgin Islands
Phone	340.774.3552 ext. 2278
Email	Chavante.Marsh@viwapa.vi
Service Contact	
Phone	
RE	<i>East End Transformer Repair Project</i>
SAP NO.	

**SUBMIT PURCHASE ORDER TO:
ABB INC.**

ABB Contact	Milenko Bistic
Address	305 Gregson Drive Cary, NC 27511
Phone	661.433.0854
Email	milenko.bistic@us.abb.com

**PLEASE REFERENCE PROPOSAL NO. ON ALL
PURCHASE ORDERS**

**REMIT PAYMENT TO:
ABB INC.**

29713 Network Place
Chicago, IL 60673-1297

Work Services Description

ABB appreciates the opportunity to provide this proposal for refurbishment of one (1) MagneTek Transformer, (S# A1472T) at VIWAPA St. Thomas East End Substation located in St. Thomas, US Virgin Islands 00804.

Site Address:

Charlotte Amalie Street
St. Thomas, US Virgin Islands 00802

Scope of Supply:

1. Services:
 - a. Upon receipt of an acceptable purchase order, ABB will schedule the appropriate resource to perform the services once the customer provides a firm date of service.
 - b. Upon completion ABB will provide a field service report detailing the services performed, test results, and recommendations for future service.
2. Site Equipment:
 - a. (1) MagneTek power transformer 34.5kV/13.2kV – 30MVA (s/n A1472T)
3. Work Scope:
 - a. Recommended Service for the MagneTek S# A1472T Transformer:
 - i. ABB recommends the following transformer services solutions due to the current status, history, and manufacturing date of the transformer. ABB recommends performing all NETA-recommended acceptance tests prior to performing any work on the transformer to establish a baseline. With the potential for moisture ingress, ABB recommends draining the transformer and performing an internal inspection to perform a thorough and adequate condition assessment. The transformer was manufactured in 1992 and ABB assumes that the original OEM gaskets are currently installed. Generally, when temperatures and pressures are manipulated on a transformer this can disturb and affect the gasket composition and

create leaks. ABB recommends a full re-gasket of all oil and gas connections. ABB recommends the inspection/service and/or replacement of all valves associated with the transformer. ABB recommends a detailed inspection and assessment of the LTC and all controls associated with the transformer. ABB recommends performing high vacuum dehydration and degasification of the transformer windings and the transformer oil. ABB recommends cleaning, prepping, masking, and painting the transformer main tank, and flow-coating the radiator banks. ABB recommends all NETA recommended commissioning tests post-re-gasket to ensure the electrical integrity of the transformer.

b. Transformer Refurbishment:

- i. Pre-test transformer, PF, Insulation resistance, TTR, Megger, Bushings, to establish if the insulation has degraded further due to lack of nitrogen pressure. Drain the entire transfer through oil purification processor into clean, dry, oil storage tanks, chasing with dry-air >-55c.
- ii. Perform transformer internal inspection, replace H3 bushing, (supplied by WAPA), re-gasket all bushings, thermal wells, OLI gauges, eight (8) radiators, flapper/cooling isolation valves, repack and-or replace all drain valves and fill valves. Verify the functionality of all controls and alarms.
- iii. Drain the transformer LTC tank of the existing transformer oil, open LTC tank and inspect and clean load tap changer unit and tank, replace all worn and damage seals and gaskets then seal LTC. The Authority will provide empty metal 55-gallon tanks, new transformer mineral oil to re-fill the LTC tank and new gasket seal kit for the LTC.
- iv. Pull eight (8) hour tail vacuum under 1Torr and then pressurize the transformer with 5psi of nitrogen for a twenty-four-hour pressure test and dewpoint hold to calculate transformer insulation moisture content.
- v. Depending on the calculated transformer moisture content, determine hot oil circulation duration, (if needed) and vacuum hold times. Once desired/calculated hot oil circulation and/or vacuum hold times have been achieved based on moisture content calculations, vacuum hot fill transformer at 1,000-1,200 gph at a temperature of 60c, keeping the vacuum below 1Torr, fill LTC and break vacuum with nitrogen and purge until the O2 content is verified at <5.0%.
- vi. Replace the bad Siemens/ITT 15-amp, single pole breaker with a new breaker of the same type. Breaker will be provided by VIWAPA and contractor will test for proper functionality.
- vii. Provide transformer electrical maintenance testing to verify that transformer equipment test values are now within ANSI/NETA, MTS-2019 operating standards for transformer insulating oil and prepare a written report of the findings with recommendations as needed with shipment to.

c. The following tests will be performed:

- i. Insulation resistance – megger (two winding to winding and each winding to ground) Determine insulation between individual windings and individual windings to ground.
- ii. Insulation resistance – megger core (if accessible)
- iii. Percent of Oxygen in Nitrogen Gas Blanket
- iv. Transformer Turns Ratio (TTR) on as found tap.
- v. Insulation power factor & capacitance – windings
- vi. Insulation power factor & capacitance – bushings (C1/C2) if test taps available.
- vii. Excitation in as found tap.
- viii. Dissolve Gas Analysis Testing

d. Transformer Painting and Radiator Flow-Coating, Transformer Refurbishment:

- i. Ensure all electrical boxes and control cabinets have adequate gaskets and are sealing correctly prior to pressure washing the transformer.
 - ii. Pressure wash transformer and remove all dirt, oil, contaminants, and residue utilizing a low Ph environmentally safe degreaser/cleaner. Allow transformer to dry and mask all bushings, nameplates, labels, and cords to protect from paint and overspray.
 - iii. Remove fans from radiators and prep transformer and radiators, remove rust and flaking paint, spot prime all areas w/epoxy primer, ensure adequate adhesion by sanding previous topcoat.
 - iv. Flow-coat radiators utilizing ANSI 61 epoxy paint and roll out the excess paint on the transformer tank to avoid runs, drips, and cracking paint. Spray transformer body utilizing ANSI 61 epoxy paint, being mindful of overspray concerning adjacent equipment, vehicles, buildings, etc. while taking wind speeds into consideration.
 - v. Install all fans, terminate wiring, and function test, remove all paint masks from bushings, nameplates, labels, and cords. Perform touch-up painting as necessary, and ensure all paint and materials are properly labeled for customer disposal.
- e. Final Project Walk-Through and Final Report Submittal:
- i. A final project walk-through will be performed with the customer and their associated agents to ensure all expectations have been met and the project has been completed according to the scope outlined in this proposal, or per a signed approved change order.
 - ii. The final project report will be submitted within 30 days of project completion.
 - iii. VIWAPA will be responsible for disposing of all project trash, excess transformer oil, excess paint and materials, gaskets, crating, chemicals, oil diapers and rags.
- f. ABB Understands and Assumes the Following Supplied by Customer VIWAPA:
- i. VIWAPA will supply 120V power supply for ABB for the duration of the project.
 - ii. VIWAPA will supply the power for the oil purification processing equipment, power supply needed will be (480V 3-Phase, 350Amps) for the duration of the project.
 - iii. VIWAPA will supply the LTC Seals and Gaskets per the VIWAPA RFP.
 - iv. VIWAPA will supply the replacement 15A single-pole breakers per the VIWAPA RFP.
 - v. VIWAPA will supply the ABB H3 Replacement bushing per the VIWAPA RFP, bushing pre-testing is preferred prior to the start of the project to minimize potential delays.
 - vi. VIWAPA will supply the Transformer and LTC make-up oil per the VIWAPA RFP.
 - vii. The ANSI 61 epoxy paint is not available at the Sherwin Williams that is located on the Island, and Sherwin Williams is unable to order the paint. With this material being categorized under Hazmat, this would add additional delays and lead-times to the equipment shipping container due to additional measures that would need to be taken because it is a Hazmat chemical. To keep this schedule, ABB will need VIWAPA will be responsible for procuring the oil and paint, as well as disposal of the excess oil and paint due to them both being controlled under Hazmat. We can help locate the materials and assist VIWAPA with the order, especially the quantities as we outlined in our proposal, but it would need to be ordered and shipped to your location.
 - viii. VIWAPA will supply the disposal of all transformer and vacuum pump trash oil, ABB will place oil in designated containers identified and labeled by the customer.
 - ix. VIWAPA will supply all nitrogen gas; adequate notice will be given by ABB for delivery and quantity.
 - x. VIWAPA will supply water source for transformer pressure washing.
 - xi. VIWAPA will supply disposal of all excess paint and thinners.
 - xii. VIWAPA will supply disposal of all excess painting supplies.
 - xiii. VIWAPA will supply dumpster for daily project trash.
 - xiv. VIWAPA will supply restroom and handwashing facilities for the duration of the project.

- g. ABB Understands and Assumes the Following Supplied by Contractor ABB:
 - i. ABB will supply the trained and experienced manpower and tools to perform this work.
 - ii. ABB will supply all the test equipment to perform this work.
 - iii. ABB will supply the mobile oil processing plant (MOPP) to perform this work.
 - iv. ABB will supply oil storage containers to perform this work.
 - v. ABB will provide all painting equipment to perform this work, (Excluding paint, thinners, and cleaners).
 - vi. ABB will supply all project consumable supplies unless otherwise specified in this proposal.

4. Comments / Exceptions:

- a. Customer VIWAPA will provide:
 - i. Switching and outages as required with safe lock out and tag out of equipment being worked upon.
 - ii. Free and clear access and egress to the worksite.
 - iii. Power for tools, lighting, and measurement equipment.
- b. This quotation is based on working (12) hour days, Sunday thru Saturday.
- c. Pricing reflects cost of one (1) site mobilization.
- d. Travel, accommodations, and living expenses for quoted personnel are included.
- e. ABB is not responsible for any delays due to the transport carrier; It is the customer's responsibility to immediately communicate any delays/changes in delivery.
- f. ABB requires all switching, LO/TO, and isolation to be performed by others.
- g. If additional repairs are required to ensure the system functions as originally intended, additional charges may apply.
- h. Any delays beyond ABB's control will be considered a change order and billed per the current ABB standard rate sheet.
- i. If within (24) hours of scheduled work, the project is canceled, ABB will bill for travel and per diems.
- j. ABB assumes that the equipment is functioning as intended with no major issues. If additional repairs required to ensure system functions as originally intended, additional charges may apply.
- k. Any applicable taxes are not included in our price.
- l. Any Covid requirements for the site will need to be provided to ABB upon receipt of order.
- m. Any additional expenses associated with requirements for employee testing or security screening prior to working on site, IE. drug testing, respirator fit tests, TWIC ID Card, Covid Testing, temperature monitoring will be bill at the standard ABB rates.
- n. **This quote is valid until July 26th, 2023.**
- o. Quote number must be on the purchase order before acceptance.
- p. The labor has been quoted using ABB non-union labor.
- q. Any delays beyond ABB's control will be billed at the applicable rate(s) per ABB's Field Service Commercial Rate Schedule (attached).

5. Schedule:

- a. ABB estimates the work scope (section 3) to take place over a mutually agreed to schedule, Monday - Friday. Any additional time, including delays, shall be invoiced at the applicable rate(s).
- b. Quoted work assumes all work to take place during regular business hours excluding weekends and ABB recognized holidays.
- c. Working hours are defined as follows:
 - i. Straight time shall consist of eight (8) hour workdays, Monday through Friday, 8 AM to 5 PM exclusive of ABB holidays.
 - ii. Overtime shall consist of any hours worked on a daily basis beyond the normal workweek hours, and work or travel performed on Saturday, in excess of eight (8) hours worked on Saturdays, excluding Sunday.



- iii. Double time shall consist of hours worked or traveled over twelve (12) hours performed on weekdays and all hours worked on Sundays and on ABB holidays.
- d. All service quoted on contingent upon straight time (normal business) hours. If services are required to be performed on an overtime and/or double time schedule, prices quoted are subject to increase.
- e. Please note that advanced notice of four (4) weeks is required for assigning local field engineering resources. Less than four (4) weeks' notice may require the use of non-local resources resulting in additional travel and living costs.
- f. Any delays or extra work incurred while the quoted work is being performed as a result of malfunctions or deficiencies encountered with equipment, unless caused by ABB will be addressed in the form of a written change order and charged at ABB's currently published rates.

Price, Terms and Conditions

ABB will accomplish the above-described work scope for the firm fixed price as laid out below. Pricing includes the cost of travel, travel time and accommodations utilizing local resources.

Description	Unit Price, USD
MagneTek Transformer Refurbishment (S# A1472T) As noted in Section 4.0	\$ 1,756,422.00
Gross Receipt Tax (5%) -	\$ 87,821.00
Imported equipment (4%) -	\$ 70,257.00

Billing Milestones:

- 20% Upon Issuance of Purchase Order
- 20% Upon the Submittal of the Project Schedule
- 20% Upon the Shipping of Project Equipment
- 20% Upon Mobilization
- 20% Upon Project Completion Report

The sale of any service and products, and the integration thereof, ordered by the Buyer is expressly conditioned upon the terms and conditions contained in this quotation and **Contract No. SC-25-22** General Terms and Conditions of Sale. Any additional or different terms and conditions proposed at any time are expressly objected to and will not be binding upon ABB unless specifically agreed to in writing by ABB's authorized representative. Any order for, or any statement of intent to purchase hereunder, or any direction to perform work and ABB's performance of work shall constitute assent to the terms and conditions. Oral agreements and/or commitments to perform services are not enforceable.

Additional Services

Should the Buyer desire to have ABB perform additional services beyond the scope of services described in this proposal, a change order request will be submitted for the additional associated costs. No additional services shall proceed without written authorization from the Buyer. Additional services will be performed per our



published rates for Service, applicable at the time that work is performed, including work that extends through the weekend / holiday. The current rates for Service can be found in Attachment “Electrification USA Service Rates, January 1, 2023”.

Consideration on 2019-nCoV (Coronavirus Outbreak)

If after submission of ABB’s bid or during the term of the agreement there are any measures taken by authorities, by ABB or others in connection with the current coronavirus (2019-nCoV) outbreak which affect the performance of the agreement, the parties agree that ABB will be entitled to cost compensation, time extension, or other reasonably required contract adjustments if any consequences in any way related to the coronavirus outbreak lead to delays in delivery of goods or provision of services or otherwise affect ABB’s contractual obligations or duties.

Consideration for Material Supply

The Parties are aware of the shortage of raw materials, electronic components worldwide which is likely to last for the foreseeable future, as well as of market fluctuations in the availability and cost of other raw materials, commodities, other critical components, and transportation capacities. Notwithstanding anything to the contrary in the contract/terms and conditions/purchase order, if after the date of ABB’s proposal / offer or during the term of the performance of the contract/purchase order there are any changes to availability and / or market conditions for electronic components, raw materials, commodities and transportation capabilities directly or indirectly affecting ABB’s performance, ABB shall be entitled to relief in the schedule of the performance or delivery of the directly or indirectly affected scope of work under the contract/purchase order. In such circumstances, the Parties shall meet without delay and discuss in good faith to find a mutually agreeable solution, with equitable adjustment to the contract/purchase order date of delivery or completion. Customer hereby acknowledges and agrees that in said circumstances ABB may not be able to comply with the originally agreed delivery or completion schedule and that ABB shall not be liable for any liquidated or actual damages in connection thereto.

ABB INC.

By:	Milenko Bistic		
Title:	Business Development Manager		
Email:	milenko.bistic@us.abb.com		
Phone:	661.433.0854	Fax:	N/A

VIWAPA:

By:				(Name)
By:				(Signature)
Title:				
Email:		Date:		

This proposal and specification are submitted in confidence solely for use in consideration of the merits of the offering and for no other direct or indirect use by Buyer and its contents are proprietary to ABB. In taking receipt of this document, Buyer agrees not to reveal its contents except to those in its own organization who must evaluate it, to use this document and the information that it contains exclusively for the above-stated purpose and to avoid disclosure of the information to competitor of ABB.

ABB Electrification U.S.A. Service Rates



Jan 1, 2023

ABB's field service engineers and consulting experts are on call to provide a wide range of service and repairs on both ABB and non-ABB equipment and engineered systems in Industrial and Balance-Of-Plant Power Plant Systems.

8-Hour Daily Rates

Classification	Weekday	Saturday	Sunday Holiday
Field & Service Center			
Class I - Specialized Field Engineer/Specialized Field Technician	\$2,900	\$4,360	\$5,730
Class II - Field Engineer/Service Center Specialist	\$2,450	\$3,550	\$4,650
Class III - Service Technician	\$1,914	\$2,746	\$3,578
Phone Support			\$1,620/case
Emergency Standby Retainer			\$6,000/month

Tooling Rates

IR Camera	\$100/day, \$400/week
Vibration Test Set	\$150/day, \$600/week
Online Motor Test Set	\$300/day, \$1,200/week
Offline Motor Test Set	\$300/day, \$1,200/week
Primary Current Injection Set	\$400/day, \$1,600/week
Relay Test Set	\$550/day, \$2,200/week
Power Factor Test Set	\$550/day, \$2,200/week

Class I - Specialized Field Engineer

These services include installation, commissioning, repair, service, maintenance, and upgrade work associated with:

- Medium voltage motors, & generators
- Paralleling Switchgear
- Synchronous motors & generators, including excitation
- Legacy control systems including: Series 5 & Series 6
- Specialty power system studies, including: Harmonic, Transient Switching & Grounding
- Shipboard and offshore work, with a minimum 14-hour/day billing. Platform work requires a pay differential.
- Gas Insulated Substation (GIS)

Class II - Field Engineer & Service Center Specialist

Service is technical advice and counsel from field personnel based on sound engineering, manufacturing, installation, and operation practices as applicable to the equipment. Such services may include analysis, adjustment, programming, and other similar services. They do not include supervision or management of purchaser's employees, agents or other contractors and design effort.

Class III - Service Technician

Craftsmen experienced in the inspection, test, installation, service, and repair of one or more of the following equipment types:

- Transformer (Mechanical, Electrical, Fluid)
- Motors, Electrical & Controls Equipment
- Switchgear
- Mechanical
- Hydro (Electrical, Mechanical & Controls)

Typical Installations, Services, Repairs, and Products

- Transformer (Including Mechanical, Electrical, Fluid)
- Power Delivery Equipment
- Motors, Electrical and Controls Equipment
- Distributed Control Systems and Programmable Logic Controls
- Instrumentation Related to Process Control and Automation Systems
- Marine Electrical Systems
- Power System Studies

Rate Terms

1. Work greater than 8 hours per day is billed per hour:	Overtime	Double Time
Class I - Specialized Field Engineer	\$513.75	\$885.00
Class II - Field Engineer/Service Center Specialist	\$412.50	\$550.00
Class III - Service Technician	\$312.00	\$416.00

For less than 24-hour response, a 1.40 multiplier is used for all rates.

Overtime applies to billable weekday hours 9-12 or outside of 7:00am to 6:00pm. Double Time applies to billable weekday hours greater than 12, Saturday hours greater than 8, Sundays and holidays.

- Preparation, travel, and report writing time will be charged at the applicable rate (i.e., daily rates, overtime and double time) on a round trip basis with point of departure based on the location of the ABB Representative's office/service center.
 - Additional travel and living expenses include:

Overnight stay	\$220 per day
Air Travel / Rental Car charges	Cost + 20%
- Notes: Additional T&L charges may apply for high cost of living areas.
- Travel and living expenses outside the continental U.S.A., will be billed at a cost plus 20% minimum, or consult with your local ABB representative for a local per diem rate.
 - Materials, subcontract labor and equipment if required will be provided at cost + 35%.
 - All equipment is F.O.B. shipping point, seller's dock, with freight prepaid and charged 3% of material price (a minimum per shipment charge of \$100.00 shall apply). Seller reserves the right to select the method of transportation provided for all products unless specified by the client not less than 72 hours prior to shipment. Any premium transportation or required special handling is in addition and shall be for the account of the Buyer.
 - Consult with local ABB office to determine applicable charges for other special tooling and/or test equipment or any taxes, fees or VAT that may be in addition to the above rates. Minimum daily billing of 8 hours for all services provided including standby time. A minimum order of \$500.00 shall apply for a parts/material only order.
 - All rates are for hours worked, traveled, or on standby and are based on ABB's standard terms and conditions of sale. Price and data subject to change without notice. This quotation is not valid for PCB services, off shore or confined locations.
 - Phone Support is a service provided on the phone by a Field Engineer for limited hardware and software troubleshooting services.
 - Employee screening costs as required by the customer will be provided as follows:

Custom drug screen or background check	\$110
TWIC Card	\$250
BOSIET + HUET	\$2,250

All travel time to complete the screenings will be billed at the applicable hourly rate as set forth in 1 above plus expenses. All other specialty training will be billed at cost + 20%.

- All time to complete site specific training will be billed at the applicable hourly rate as set forth in 1 above plus expenses.
- A Critical Power Emergency Standby Retainer provides access to a qualified ABB Field Engineer at the customer site on the same day the need is identified by the customer. All time to support the emergency service, including travel to and from the customer site, will be billed at the applicable hourly rate as set forth in 1 above, however the 1.40 multiplier applied to work with less than 24hrs notice is waived.
- The Standard and Applicable rates shown on this sheet assume that services are being performed at a location that is not subject to a Location Premium which is an additional charge/rate that may be assessed for remote, inconvenient, confined or offshore work sites. Please contact ABB to see if a Location Premium applied to your location.

For more information contact your local ABB office or call our 24x7 customer service center at

1-888-434-7378 or 540-387-8617 for legacy GE products
1-800-HELP-365 (1-800-435-7365) for legacy ABB products