QUEZON I ELECTRIC COOPERATIVE, INC.
Brgy. Poctol, Pitogo, Quezon
Telefax: 042-318-8156

ISC-2023-036

INVITATION FOR SEALED CANVASS

December 07, 2023

Sealed Bids/Proposals/Quotations for the Supply and Delivery of the following item for QUEZELCO 1 shall be received by the Bids and Awards Committee until 5:00PM of December 12, 2023 . The bids/proposals/quotations will be opened on December 13, 2023 at 9:00AM.

Quantity	Unit	Item Description	Unit Cost (Php)	Total Amount (Php)
1	set	Portable Three-Phase Meter Test Bench		
GRAND TOTAL				

Instruction to Bidder and Terms of Condition:

The following shall be included in the offer:

1. Warranty statement. The bidder obligates, guarantees and warrants that the items to be delivered are within the standards and specifications set by the cooperative. Warranty shall be at least 2 years. Longer warranty period will be considered in the evaluation.
2. Brochure or any document showing the technical specifications of the materials offered.
3. Authorization from the manufacturer to supply the goods valid for the current year.
4. The materials offered shall comply with the required specifications (See attached material specifications)
5. Delivery period shall be within ninety (90) calendar days after receipt of Notice to Proceed.
6. The financial offer shall be listed on the space provided above.
7. The financial offer shall not exceed the total Approved Budget Cost of **Php 1,990,000.00**
8. The ABC is VAT inclusive and the bid price should be VAT inclusive.
9. Term of payment – 90 calendar days upon complete delivery.
10. Term of Delivery – FOB Pitogo.
11. Peformance Bond of 5% of contracted price shall be posted within 5 days upon receipt of notice of award.
12. Price validity - 60 calendar days
13. Penalty Clause – 1/10 of 1% (0.1%)of the cost of the unperformed portion of the contract for every day of delay)

Additional Instructions:

1. Please send your quotations thru email using the designated BAC email address **quezelco1_bac@yahoo.com.ph** and shall be addressed to "The Bids and Awards Committee".
2. The subject shall bear the word **"Bids for the Supply and Delivery of Portable Three-Phase Meter Test Bench for MIACR"**
3. The quotation shall be password protected. Password shall be sent on the day of opening (8:00 am).

QUEZELCO 1 reserves the right to reject any or all bids without offering any reason, waive any defect therein and accept the offer most advantageous to the cooperative.

For further inquiries you may contact our QUEZELCO 1 BAC Secretariat, Ms. Maria Teresa Caraig and/or Ms. LovelyJean Baldoz at mobile number 09688520659.

GERARD P. BAUTISTA
BAC – Chairman

Noted by:

VICTOR R. CADA
Acting General Manager

QUEZON I ELECTRIC COOPERATIVE INC.,
Poctol, Pitogo,Quezon
ENGINEERING DEPARTMENT

Portable Three-Phase Meter Test Bench

November 16, 2023

Item	Parameters
A. Basic Function	ERC-Tested/Calibrated and Stickered
	Brand New (Country of Origin: US)
	Automatic Generation of all ANSI C12.20-2016 waveforms
	Single-phase and Three-phase Testing
	Can test all meter forms, IEC and ANSI
	Sinusoidal and Arbitrary harmonically defined waveforms
	True ZERO insertion force socket with automatic closure on meter insertion
	Universal Meter Socket
B. TEST CAPABILITIES GENERAL FEATURES	Capable to test the following meter forms: 1S-6S, 8S-17S, 25S, 26S, 29S, 32S, 35S, 36S, 45S, 46S, 56S, 66S, 76S, 103S, 112S, 116S, 125S, 135S, 136S, 145S, 166S, 1A, 9A, 48A
	Simple, electronically controlled loading of meters
	Digital Waveform Generator (Per Phase)
	Integrated Reference Standard (for equipment with accuracy tests)
	Convenient PC Software Interface to quickly select test sequences, meter elements, and all service types is installed on every equipment. Seamlessly save and export test results. Ask us about the option to interface and pass data to your system of record.
	Every socket can be independently controlled, or you can have bank control
	Voltage and current routed to the proper locations on the meter socket based on form selected
	Each test bench comes with a PC program that can be loaded onto a customer's computer connected to the equipment's ethernet port to replicate the functionality of the display and keyboard on multiple chassis.
	Controller: ✓ Powerful multi-core, 32-bit Processors. ✓ User friendly 5.0" diagonal, 800x480, TFT color display ✓ Integrated control keypad. ✓ Ethernet connectivity.
	Test Types:
	➢ Accuracy Test
	➢ Demand Test
	➢ Timed-Run/Timed-Registe Test
	➢ Energy Delivered Test
	➢ Single/Three Phase REFERENCE STANDARD Measurement Accuracy:
	➢ Built in, one voltage, three current reference standard traceable back to NIST
C. ACCURACY TESTING	Run standard meter accuracy tests ✓ Accuracy ±0.04% at unity power factor from 0.2A to 50A, ±0.02% typical ✓ Optional: 0.02% & 0.01% accuracy boards available upon request
	Run complex meter accuracy tests under widely varying loading conditions
	➢ Voltage : ±0.02%
	➢ Current: ±0.02%
	➢ True Power Watts: ±0.04%, ±0.02% typical
	➢ Apparent Power VA: ±0.04%, ±0.02% typical
	➢ Reactive Power VAR: ±0.04%, ±0.02% typical
	➢ True Energy WHrs: ±0.04%, ±0.02% typical
	➢ Apparent Energy VAHrs: ±0.04%, ±0.02% typical
	➢ Reactive Enenrgy VARHrs: ±0.04%, ±0.02% typical

	➢ Single/Three Phase PHANTOM LOAD:
	➢ Voltage per Phase: 30-350V RMS, 490V PK (line to neutral)
	➢ Current Drive per Phase: 0.01A to 50A RMS, 75A PK
	➢ Power Factor/Phase Angle: Fully Adjustable by 0.1
D. INTEGRATED REFERENCE STANDARD	Three voltage and three current channels
	Measurements per ANSI C12.31 Definitions (C12.31 is in development)
	Measurement Accuracy* ✓ Voltage: ±0.02% typical ✓ Current: ±0.02% typical ✓ Active Power (Watts): ±0.02% typical (±0.04% max) ≠ ✓ Apparent Power (VA): ±0.02% typical (±0.04% max) ≠ ✓ Reactive Power (VAR): ±0.02% typical (±0.04% max) ≠ ‡ - Traceable only for sinusoidal waveforms
	Other Measurements ✓ Harmonics to 50th ✓ Power Factor
	Time domain and frequency domain measurements
E. METER SHOP FUNCTIONS with FULL FUNCTIONAL AMI/AMR METER TESTING CAPABILITY	Full functional testing capability of meters including AMI/AMR meters tables
	Meter Program Updates. Check for correct firmware version on all meters vs. incorrect firmware
	Software revision checking for both the meter and the communications module
	Meter communications performance and module troubleshooting
	Checking of problem meters for open/shorted elements
	Check for correct vs incorrect predefined settings
	Check that all alarms and errors clear
	Check for correct ANSI
	Standard disconnect/reconnect functionality (AMI meters). Check remote disconnect operation and confirm the state of the disconnect.
	Checking of problem for open/shorted elements
	FUNCTIONALITY/ ACCEPTANCE TESTING
	Ability to check meter response to: ✓ Varying loads over long periods of time to simulate brown out and surge conditions. ✓ Harmonic waveforms (can download custom harmonic waveforms through PC interface). ✓ Meter power on/off cycling ✓ Phasor distortion
	One voltage and three isolated current channels are all either in phase or 180 degrees out of phase with each other. This allows true series-parallel testing of all common meter forms.
F. METER DISCONNECT SWITCH TESTING	Disconnect test mode powered by high current auxiliary transformer
	Test disconnect under any load current
	Disconnect mode indicator LED
	Voltage present LEDS for stab 2 and stab 4
	Software detection of voltage present on stab 2 and stab 4
	Ability to apply back voltage to stabs 2 and/or 4 for reconnect testing
G. DIGITAL WAVEFORM GENERATORS	• Waveform Synthesizer: ✓ Fundamental frequency adjustable from 45 to 60 Hz ✓ Create & synthesize waveforms
	• Sinusoidal (THD < 0.5%) (0.1% typical)
	• Defined by harmonic amplitudes o Harmonic indices (1 through 25) o Either amplitude and phase or Fourier coefficients (a, b) ✓ ANSI C12.20-2015 test waveforms ✓ Dropped cycle waveforms: 1:1, 2:2, 4:4 any combination m:n where m+n=8 ✓ Arbitrary waveforms: defined by an array of 4096 points representing 8 cycles
	• Arbitrary Waveform Generator 6 kHz Bandwidth.
	• Dropped cycle testing.
	• Power Factor is fully adjustable 0 to 359.9 degrees. NOTE: For three-phase, voltage to voltage phase angles can be independently adjusted phase to phase as can current phase angles.

H. VOLTAGE DRIVE	• Voltage Drive (For Single Phase)
	✓ Single Channel, one side at ground
	✓ Dual range: (1)30 to 250V(rms), 353V(peak), (2) 200 to 350V(rms), 707V(peak)
	✓ Adjustment resolution: 0.02% of full scale (approx. 0.1V)
	✓ Setting Accuracy 1.0%
	✓ Output power: 45VA at 240V or 350V
	• Voltage Drive (For Three Phase)
	✓ Three Channel, one side of each at ground
	✓ 350V (rms) phase to neutral, 600V (848V PK) phase-to-phase
	✓ Adjustment resolution: 0.01V
	✓ Output power: 100VA at 240V, 0.6 amps peak
	✓ No fuses, automatic recovery from overloads, even shorts
I. CURRENT DRIVE	• Current Drive (Single Phase)
	✓ Single Channel, fully isolated
	✓ Single range 0.01 to 50A(rms), 70A(peak)
	✓ Adjustment resolution: 0.02% of full scale (approx. 0.1V)
	✓ Accuracy 0.5% ✓ Compliance voltage: 1.0V
	✓ Current is only provided to phase A • Current Drive (Three Phase)
	✓ Three Channel, fully isolated
	✓ Single range 0.01 to 50A(rms), 70A (peak)
	✓ Adjustment resolution: 0.01A
	✓ Accuracy: 0.5% ✓ Compliance voltage: 1.0V
	✓ No fuses, automatic recovery from fault conditions
J. Country of Origin	Europe / USA

Prepared By:

Edison A. Engay
TWG

Noted By:

Gerald P. Bautista
ED Manager / BAC Chairman

QUEZON I ELECTRIC COOPERATIVE, INC.

Brgy. Poctol, Pitogo, Quezon

Accreditation Requirements

Name of Company/Supplier/Representative: _____

Address: _____

Contact Number : _____

EMAIL ADD: _____

	DOCUMENTS	
1	DTI Registration name registration or SEC Registration Certificate	
2	Valid and current Mayor's Permit/Municipal License	
3	Taxpayer's Identification Number,	
4	BIR Value Added Tax Registration	
5	Certification that the bidder is not "blacklisted" or banned from bidding by the government or any of its agencies, officers, corporation or LGU's and other private corporations or electric cooperatives	
6	Compliance with EO # 398	
	a.) Proof of VAT Payments for the past six months	
	b.) Tax Clearance for the last two quarters	
7	On-going, completed or awarded contract not yet started within the relevant period specifying the following:	
	a. Name of contract	
	b. Date of contract	
	c. Amount of the contract and value of outstanding contracts	
	d. Date of delivery	
	e.End user's acceptance if completed	
8	Company Profile	
9	Latest Income Tax Return	
10	Complete set of Audited Financial Statements, stamped "received" by the BIR or its duly accredited and authorized institutions, for the immediately preceding calendar year, showing, among others, the prospective bidder's total and current assets and liabilities	
11	Articles of Incorporation, Partnership or Cooperation, whichever is applicable	
12	A certification under oath from the bidders responsible officers that the bidders is free and clear of all liabilities with the government	
13	Valid Registration with Philippine Contractor Accreditation Board (PCAB) with specialization in electrical works and with at least small B size range Classification (C and D category)- for contractor only	

Email Address:

quezelco1_bac@yahoo.com.ph