

## **TECHNICAL SPECIFICATION**

### **FOR THE PROCUREMENT OF ERC TEST EQUIPMENT (THREE-PHASE WATT-HOUR METER STANDARD) (Class Accuracy 0.02%)**

#### **A. RATIONALE**

The Consumer Affairs Service (CAS) is primarily responsible in handling consumer complaints and ensuring the adequate promotion of consumer interests pursuant to Section 41 of the EPIRA or Republic Act No. 9136. It is also responsible in ensuring the accuracy of watt-hour meters used by all distribution utilities under the jurisdiction of the Commission pursuant to Section 16 (d), (e), (f) and (g) of Commonwealth Act No. 146 otherwise known as the Public Service Act, to wit:

(d) To fix just and reasonable standards, classification, regulations, practices, measurements, or service to be furnished, imposed, observed and followed thereafter by any public service.

(e) To ascertain and fix adequate and serviceable standards for the measurement of quantity, quality, pressure, initial voltage and other condition pertaining to the supply of the products or service rendered by any public service, and to prescribe reasonable regulations for the examination and test of such product or service and for the measurement thereof.

(f) To establish reasonable rules, regulations, instructions, specifications, and standards, to secure the accuracy of all meters and appliances for measurement.

(g) To compel any public service to furnish, safe, adequate and proper service as regards the manner of furnishing the same as well as the maintenance of the necessary material and equipment.

The accuracy reliability of meter test will ultimately provide consumer protection in terms of accuracy on kilowatt-hour registration of their electricity consumption. To ensure the optimum accuracy of kWhr meters being used by regulated entities, these revenue meters installed at the consumers' premises are tested on-site with the use of testing equipment. A set of three-phase (polyphase) testing equipment comprises of a three-phase standard meter and a stable three-phase voltage and current generating equipment or a Phantom Loader. The

procurement of three-phase watt-hour meter standards is in accordance with the provision of Section 5.5.2 of ANSI C12.20 which states that:

“For polyphase loading, the meter shall be tested with voltage and current phase angles similar to actual service installations. Polyphase loading will be mandatory for testing of polyphase meters effective January 1, 2020.”

Polyphase testing requires a three-phase watt-hour meter standard. Presently, ERC VAOD and MAOD do not have three-phase test equipment set. These three-phase watt-hour meter standards will be deployed in the Visayas and Mindanao Areas of Operation Division (VAOD and MAOD), in order for them to respond to request for testing/accuracy verification of three phase or polyphase meters of Distribution Utilities' (DUs) commercial and industrial customers, contestable customers in their areas of jurisdiction as well as polyphase meters brought to the VAOD and MAOD meter laboratories.

## **B. OBJECTIVE**

The objective of the Consumer Affairs Service (CAS) is to build up and standardize the Commission's field offices by giving them test equipment that would make them compliant with requirements of international standards. As a regulatory agency mandated to prescribe sufficient meter standards, it is imperative to have a reliable true three-phase meter testing equipment to produce accurate meter test results, and to provide quality service to all stakeholders.

## **C. RESPONSIBILITIES OF THE WINNING BIDDER**

The following are the responsibilities/obligations of the winning bidder:

1. It shall be responsible for the safe-keeping of the items until it reaches the final destinations;
2. Provide After Sales Service and Technical support within seven (7) day for minor issues and within ninety (90) days for major issues;
3. Conduct one (1) Hands-on Training on each in VAOD and MAOD for a minimum of three (3) VAOD/MAOD Personnel within one month from acceptance, or within Two (2) weeks from the lifting local travel restriction;
4. Coordinate with the ERC General Services Division (GSD), the Meter Division (MD) at least three (3) days before the date of delivery to the VAOD and MAOD offices; and

5. Provide Certificate of Warranty for One (1) Year (at least).

#### **D. RESPONSIBILITY OF THE ERC**

1. Acknowledge receipt of items, after testing and acceptance by the ERC Technical Property Inspection Committee (TPIC), including pertinent details such as quantity, date and condition of the items received;
2. Prepare payments due to the Winning Bidder after the delivery of the test equipment, including the updated Calibration Certificate to the VAOD and MAOD offices; and
3. Return the Performance bond to the Winning Bidder after it had complied with the requirements.

#### **E. SCHEDULE OF DELIVERY**

The Winning Bidder should deliver the Equipment, including the updated Calibration Certificate, at the Visayas Area of Operation Division office, located at Saint Mary's Drive, Banilad, Cebu City, and at the Mindanao Area of Operation Division office, located at the Mezzanine Floor, Mintrade Building, Monteverde Ave. corner Sales St., Davao City within sixty (60) calendar days from receipt of the Notice to Proceed.

#### **F. SPECIFICATION OF THE TEST EQUIPMENT THREE-PHASE WATT-HOUR METER STANDARD**

**2 sets** Test Equipment Three-Phase Watt-Hour Meter Standard

1. Single Phase Fusible Power Supply:  
Voltage : 90 ~ 260 VAC, 60Hz or better  
Hard Plastic Casing
2. System Accuracy :  $\pm 0.02\%$
3. Measurements Ranges:  
Current : 60mA ~ 120 Amps or better  
Voltage : 70 ~ 520 Volts or better  
Frequency : 45 ~ 65 Hz  
Phase Angle :  $0^\circ \sim 359.99^\circ$   
Power Factor : -1.0 ~ +1.0
4. Programmable Pulse Output

5. Ability to perform True Three-Phase accuracy testing  
3- and 4-Wire Three-Phase kWhr meter
6. Complete set of 100A (or better) Clamp-on CT
7. Complete set of stackable current & potential leads
8. Complete set of connectors, adapters & accessories
9. Optical & Visible Light Scanning Heads
10. Capable of Automatic % Error Calculation
11. Capable of transferring/storing data via USB & Ethernet
12. Capable of measuring Harmonics; Vector Diagram; PF
13. Removable Compact Flash Card Memory
14. Power Supply Cable
15. Instruction Manual
16. Certificate of Warranty for one (1) year (at least)
17. Certificate of Calibration traceable to International standards body  
(to be provided upon delivery)

## **G. MODE OF PROCUREMENT**

The procurement shall be undertaken through Public Bidding pursuant to RA No. 9184 and its 2016 Revised IRR.

## **H. FUND SOURCE and APPROVED BUDGET FOR THE CONTRACT**

1. The fund for this engagement shall be sourced from the General Appropriations Act (GAA) for the fiscal year 2019 of the ERC.
2. The Approved Budget for the Contract for the project is **NINE MILLION FOUR HUNDRED FIFTY THOUSAND PESOS (PhP 9,450,000.00)**, inclusive of all government taxes, fees and charges.

## **I. PAYMENT SCHEME**

1. The Total Contract Price which should not exceed the ABC of **NINE MILLION FOUR HUNDRED FIFTY THOUSAND PESOS (PhP 9,450,000.00)**. Payment shall be released at the ERC Main office within thirty (30) days after the completion of deliveries of the items, including the Certificate of Calibration issued by the subject calibration laboratory and final acceptance at the VAOD and MAOD offices.

2. Since the above payment shall be subject to the usual government accounting and auditing requirements, the Winning Bidder is expected to be familiar with the Government Accounting and Auditing Manual (GAAM).

## **J. ACCEPTANCE/REJECTION PERIOD**

Testing/Inspection and Acceptance or Rejection: Within 15 calendar days from the actual delivery date, the ERC authorized representative shall test and inspect the equipment and indicate in the Inspection and Acceptance Report that equipment is in accordance with the required specifications, or if not, indicate in the said Report that there are parts or functionalities that need to be replaced or adjusted. The supplier shall be given a reasonable number of days to make the necessary replacement or adjustment. After which, the ERC authorized representative shall test and inspect the equipment again and either issue an Inspection and Acceptance Report stating that the equipment is in accordance with the specifications, or Reject the equipment if it is not found compliant with the required specifications.

## **H. LIQUIDATED DAMAGES**

1. Where the service provider refuses or fails to satisfactorily complete the work within the specified contract time, plus any extension time duly granted and is hereby in default under the contract, the service provider shall pay ERC for liquidated damages, and not by way of penalty, an amount, as provided in the conditions of the contract, equal to one tenth (1/10) of one percent (1%) of the cost of the unperformed portion for every day of delay. The maximum deduction shall be ten percent (10%) of the amount of the contract, of which ERC shall have the discretion to terminate the contract without prejudice to any other action or remedy it may take to recover the losses incurred as a result of the service provider's failure/non-performance, including but not limited to forfeiture of performance security and/or blacklisting of the latter.
2. Entitlement to such liquidated damages, ERC need not prove the damages actually incurred. Said damages in any amount shall be deducted from any money due or which may become due the service provider under the Contract and/or collect such liquidated damages from the retention money or other securities posted by the service provider at the ERC's convenience.


## **I. RESERVATION CLAUSE**

The Energy Regulatory Commission (ERC) reserves the right to reject any and all bids, declare a failure of bidding or not award the contract at any time prior to

contract award in accordance with Section 41 of R.A. 9184 and its IRR, without thereby incurring any liability to the affected bidder or bidders.

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