

TECHNICAL SPECIFICATION

PROCUREMENT OF THERMAL IMAGER

A. RATIONALE

ROS

The Regulatory Operations Service (ROS) is primarily responsible for the formulation and enforcement of standards, rules and regulations affecting the electric power industry and guides the Commission in the prescription and enforcement of the adopted principles and standards. Function of the ROS covers the conducts regular monitoring activities including inspection of premises to determine compliance of Distribution Utilities (DU) to the standards, rules, orders, decisions issued by Commission and the conduct of investigation and enforcement activities and takes legal actions for violations of standards, rules and regulations that compromised the safe, reliable and efficient distribution of power to the stakeholders.

Section 7 of the Philippine Distribution Code (PDC) provides the responsibility of the DU to prepare the Distribution Maintenance Program for the maintenance of its Equipment and facilities and to provide and maintain all its Distribution Equipment and facilities. This maintenance program would help DUs to ensure the safe, reliable, secured, and efficient distribution of power. Preventive maintenance is usually part of its program which includes thermal scanning or thermography.

Thermography emerges as a technology whose application to the inspection of the electrical distribution systems will help to identify in advance potential failures in them, thus decreasing the probability of failure of the installation in the future.

With DU preparing its maintenance program, it would be advantageous to the part of the ROS to acquire a thermal imager device for the office to improve the inspection activity and verification process of the condition of a certain DU's Substation and Distribution Line. This will also enhance the technical competency of the ERC staff thus aiding to the evaluation of technical performance and monitoring of compliance of the DUs or other entity.

CAS

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 quality of the supply of electric power delivered 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.

Distribution Utilities are required to comply with the Power Quality Standards specified in Article 3.2 of the Philippine Distribution Code (PDC) 2017 Edition. Poor power quality may result to heating of electrical circuits brought about by over-current and/or over-voltage. A Thermal Imager is a sophisticated diagnostic tool that translate thermal energy into visible light in order to analyze a particular overheating circuit or parts of the power line. It also detects potential faults in the circuit. This equipment is necessary in locating hot spots, not only for distribution transformers, but also for instrument transformers which form part of metering facilities.

B. OBJECTIVE

ROS

The objective of the Regulatory Operations Service (ROS) is to augment the inventory of the existing equipment of the ERC Main Office and to be compliant with requirement of ANSI/NETA-MTS 2007 standards, entitled as "*Standard For Maintenance Testing Specifications for Electrical Power Distribution Equipment and Systems*". It is imperative that a good practice on the maintenance of equipment will prolong the asset life of an equipment, and would entail more safe, reliable and efficient distribution of power to all stakeholders.

Moreover, the ROS aims to fulfill the Commission's mandate in bringing down the systems loss and to ensure the quality and supply of electricity of the industry players. The ROS intends to procure a sophisticated device which measure the natural emissions of infrared radiation from a heated object and produce a thermal picture that will be used in its investigation and assessment of DU's compliance with the PDC. For this reason, the Standard Division (SD) of the ROS needs to procure a Thermal Imager device that would provide information on abnormal heating associated with high resistance or excessive current flow causing many problems in electrical systems. This will allow the ROS-SD engineers to see these invisible thermal signatures of impending damage before the damage occurs. Thus, it will assist in the assessment of the existing conditions of the DU's distribution systems and be able to recommend measures to address safety and power quality problems that will benefits DU's customers.

CAS

The Consumer Affairs Service (CAS) together with the Regulatory Operation Service (ROS) aims to fulfill the Commission's mandate in bringing down the systems loss and to ensure the quality and supply of electricity of the industry players. These Services intends to procure a diagnostic instrument that will be used in its investigation and assessment of DU's compliance with the Philippine Distribution Code. For this reason, the Meter Division (MD) endeavored to cause the procurement of a Thermal Imager that would provide valuable services to consumers by detecting and solving problems including power quality and overloaded distribution transformers, which shall include investigation, recommending solutions, and implementing the recommended solutions using a system perspective to ensure power quality.

D. RESPONSIBILITY 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 destination;
2. Provide an updated Calibration Certificate traceable to NIST upon delivery;
3. Provide After Sales Service and Technical support within five (5) years or within the economic life the equipment;
4. Keep an inventory of consumables/ spare parts and to conduct repairs within seven (7) days from notification for minor issues or those replacements for defective parts that are locally available; or within ninety (90) days for major issues or those replacements for defective parts/items sourced outside the country;
5. Conducts Hands-on Training to a minimum of five (5) Standards Division Personnel and (5) Meter Division Personnel to be conducted in the said site, within one month from delivery, or within Two (2) weeks from the lifting local travel restriction;
6. Coordinate with the ERC General Services Division (GSD), the Standard Division (SD), Meter Division (MD), at least three (3) days before the date of delivery; and
7. Provide Certificate of Warranty for One (1) Year (at least).

E. 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 deliveries of the equipment at the ERC Main Office.

F. SCHEDULE OF DELIVERY

The Winning Bidder should deliver to the ERC Main Office the Equipment, including the updated Calibration Certificate, **within ninety (90) calendar days from receipt of the Notice to Proceed.**

G. SPECIFICATION OF THERMAL IMAGER

Two (2) sets of Thermal Imager with the following specifications:

- High Resolution Infrared Images
- 180° Rotating Optical Block for imaging targets overhead or below
- Touch Screen (at least 4 inches LCD)
- Scan large areas from a safe distance with up to 464 x 348 Infra Red Resolution
- 640 x 480 Image Display
- Accuracy of Measurement $\pm 2^{\circ}\text{C}$ or $\pm 2\%$ of reading
- Built-in Laser Pointer
- Ability to measure distance via Laser
- Includes Three (3) Lenses for different views:
 - a) Normal View; b) Wide View; c) Telescopic View
- Preset Temperature measurements: Hot Spot, Cold Spot, Center Spot, Manual
- Rechargeable (includes charger)
- Includes Spare Share lenses (wide angle to telephoto) across your fleet of cameras
- Capable of at least 6 hours continuous use
- Capable of Image Capture and Review
- Storage Media: Internal Memory &/or Removable SD Card (at least 8GB)
- Wireless Connectivity (Bluetooth &/or WiFi)
- Transport Case (hard shell)
- Portable, weighs not more than 2kgs
- Operating Temperature up to 48°C
- Updated Calibration Certificate traceable to NIST
- Operational Manual (Hard and Soft Copy)
- Certificate of Warranty for one year (at least)

H. MODE OF PROCUREMENT

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

I. FUND SOURCE and APPROVED BUDGET FOR THE CONTRACT

1. The fund for this engagement shall be sourced from the current appropriations for the **fiscal year 2020 and 2021** of the ERC.

2. The Approved Budget for the Contract for the project is **THREE MILLION FOUR HUNDRED THOUSAND PESOS (PhP3,400,000.00)**, inclusive of Importation Fees, Freight Forwarding and Delivery Costs, Incidental and Administrative Costs, and Government Taxes and other Tariffs/Fees/ Charges.

J. PAYMENT SCHEME

1. The Total Contract Price which should not exceed the ABC of **THREE MILLION FOUR HUNDRED THOUSAND PESOS (PhP3,400,000.00)**. Payment shall be released **within thirty (30) days** after the completion of delivery of the item and final acceptance at the ERC Main Office.
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).

K. 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 issue either an Inspection and Acceptance Report, if equipment is in accordance with the required specifications, or a Notice of Test/Inspection Results, if 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 corrective measures. After which, the ERC authorized representative shall test and inspect the equipment again and either issue an Inspection and Acceptance Report, if the equipment is in accordance with the specifications, or reject if it is not found compliant with the required specifications.

L. 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.


M. RESERVATION CLAUSE

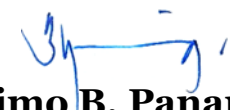
The Energy Regulatory Commission (ERC) reserves the right to reject any and all bids, declare a failure of bidding or not award the contract at any time prior to contract award in accordance with Section 41 of R.A. 9184 and its IRR, without thereby incurring any liability to the affected bidder or bidders.


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