



National Power Corporation

SUPPLEMENTAL/BID BULLETIN NO. 3
to the Bid Documents for the:

SUPPLY AND DELIVERY OF PARTIAL DISCHARGE ANALYZER AND POWER QUALITY ANALYZER FOR SOUTHERN PALAWAN SUBSTATION AND 69KV TRANSMISSION LINE UNDER PR NO. S1-SPS22-001/ REF. NO. PB220321-NA

18 MAY 2022

All prospective bidders and authorized copy holders of the Bid Documents of the above mentioned project are hereby advised of the changes in the bid documents, to with:

A. REVISED SECTION VI – TECHNICAL SPECIFICATIONS PART I and PART II – TECHNICAL DATA SHEET OF ITEM NO. 1 PARTIAL DISCHARGE ANALYZER

Please see attached revised pages:

- Pages VI-EW-I, VI-EW-1 to VI-EW-5
- Pages VI-TDS-2 to VI-TDS-4

B. SCHEDULE OF 2nd PRE-BID CONFERENCE

25 MAY 2022
09:30 A.M.
KANA O ROOM

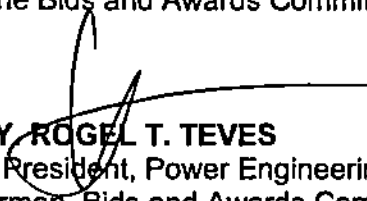
C. SCHEDULE OF BID SUBMISSION/OPENING

FROM	TO
Postponed until further notice. <i>(Supplemental/Bid Bulletin No. 2 dated 17 March 2022.)</i>	06 JUNE 2022 09:30 A.M. KANA O ROOM

All other terms and conditions shall remain the same.

For the information and guidance of all authorized copy holders of the Bid Documents and prospective bidders.

For the Bids and Awards Committee:


ATTY. ROGEL T. TEVES
 Vice President, Power Engineering Services and
 Chairman, Bids and Awards Committee



SECTION VI - TECHNICAL SPECIFICATIONS

PART I - TECHNICAL SPECIFICATIONS

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Section VI – Technical Specifications

PART I – TECHNICAL SPECIFICATIONS

TS-1.0 GENERAL

This specification covers the technical requirements for the *Supply and Delivery of Partial Discharge Analyzer and Power Quality Analyzer for Southern Palawan Substation and 69kV Transmission Line.*

All supplied equipment and accessories shall be new and unused. They shall be suitable for the intended purpose and shall comply with all applicable regulations, quality, and dimension standards.

The Supplier shall accept full responsibility for his work including documentation, preparation for shipment, inspection, warranty provisions and compliance with the applicable codes and standards and the requirements of this Specification.

TS-2.0 SCOPE OF WORK

The scope of works shall cover but not limited to the Supply and Delivery of Partial Discharge Analyzer and Power Quality Analyzer for Southern Palawan Substation and 69kV Transmission Line.

TS-3.0 DELIVERY PERIOD AND LOCATION

The delivery period shall be **Sixty (60) Calendar Days** reckoned from receipt of Notice to Proceed.

The materials to be supplied shall be delivered to **Palawan Operations Division (POD) Warehouse, Tiniguiban, Puerto Princesa City, Palawan.**

The Supplier shall be responsible for taking particular reference to its accessibility, means of transportation and all other factors that could hamper the smooth execution of the contract.

Any and/or all expenses arising through the lack of knowledge of the Supplier regarding the existing conditions of the delivery site shall be his responsibility and no additional payment thereof shall be made by NPC.

TS-4.0 CODES AND STANDARD

The equipment furnished shall be in accordance with, but not limited to, the latest issues of the following codes and standards, including all addenda, in effect at time of purchase order unless otherwise stated in this specification:

- | | |
|---|------|
| 1. American National Standards Institute | ANSI |
| 2. Institute of Electrical and Electronic Engineers | IEEE |
| 3. American Society for Testing and Materials | ASTM |



4. National Electrical Manufacturer's Association	NEMA
5. Underwriters Laboratory	UL
6. International Electro-Technical Commission	IEC
7. International Standards Organization	ISO
8. National Electrical Code	NEC
9. National Electrical Safety Code	NESC
10. Philippine Electrical Code	PEC
11. Illuminating Engineering Society	IES
12. Philippine National Standards	PNS

The latest edition of each standard shall mean the latest edition available at the date of contract signing.

In addition to the above codes and standards mentioned, the Supplier shall comply with all National and local laws, codes, regulations, statutes and ordinances.

Equipment or materials meeting other internationally accepted standards, which ensure an equal or higher quality than the standards mentioned, will also be accepted.

In the event of any apparent conflict among standards, codes or this specification, the Supplier shall refer the conflict to NPC for written resolution before start of fabrication. Final decision regarding the acceptance of proposed standards is the prerogative of NPC.

Standards listed in the equipment specification are used mainly for NPC's references. Other internationally known standards however, shall also apply, provided such standards are equivalent in all respect to the standard prescribed and to the specific requirements described in the individual equipment specification. The Supplier shall submit copies of such standards for NPC's review and approval.

TS-5.0

GENERAL TECHNICAL REQUIREMENTS

The supplied Equipment shall have the following functions, capabilities, and requirements:

- a. The partial discharge tester shall be automatically detect and map/locate partial discharge activity for Medium Voltage and High Voltage assets including transformers, metal-clad and air insulated switchgears, and cables.
- b. The partial discharge analyzer shall be able to download all measurements to enable report writing and analysis;
- c. The power quality analyzer shall be used for monitoring all electric parameters on single and three phase installations;
- d. The power quality analyzer shall have safety rating of CAT IV 600 V;
- e. The power quality analyzer shall be a stringent international IEC 61000-4-30 Class A standard compliant; and
- f. All other works not specified in the technical specifications / technical data sheets but are necessary for the complete and reliable operation of the equipment shall be provided by the supplier.



TS-6.0 ACCEPTANCE CRITERIA

The Supplier shall perform at his own expense all inspection required to ensure adequacy of material, workmanship and conformance of the equipment and accessories to the requirements of the specifications and standards.

The equipment/component shall be subjected to the Manufacturer's Standard Factory Tests prior to delivery.

Upon arrival of the materials/equipment and accessories at delivery site, NPC and the Supplier or their authorized representatives, shall jointly verify the instruments and accessories following the steps below:

- a. Inspection and verification of the packing list;
- b. Visual inspection of the condition of the packing and its surfaces; and
- c. Partial opening of the crates/boxes and plastic sheet protection of instrument to verify the content and its physical condition and to check pilferage or damage during shipment and storage.

A record shall be prepared carefully noting all eventual shortages, defects or damages, signed by the Supplier and concurred by NPC. All shortages and damages noted shall be immediately replaced by the Supplier at his own cost and shall ensure the timely delivery of replacement without affecting the agreed overall contract implementation schedule.

Acceptance certificate shall be issued only upon completion of the following:

- a. The required equipment/component is satisfactorily inspected and delivered to POD Warehouse. Inspection result is acceptable to NPC's authorized plant personnel;
- b. Submission of documents as specified hereto in Clause TS-7.0.

If the equipment delivered failed to pass inspection, NPC may at his own judgment, direct the Supplier to make necessary replacement.

TS-7.0 DOCUMENTS TO BE SUBMITTED

- a. To be submitted with the bid/proposal for evaluation:
 - a.1 Completely filled-out Technical Data Sheets (TDS).
 - a.2 Original Copy of Manufacturer/Distributor Authorization to Bid, directly addressed to the BAC-NPC, indicating therein the PR/Reference number.

In case of authorized Distributor issuing the authority to bid, it shall be accompanied by a Certificate of Authorized Distributorship from the Manufacturer.



Note: Authorization to bid and Certificate of Distributorship from the Manufacturer shall be current and valid on the date of bid opening as advertised.

- b. To be submitted during post qualification:
- b.1 Manufacturer's Brochures/Catalogues/Drawings which contain information/data to support the Supplier's submitted and filled-out Technical Data Sheet.
 - b.2 Letter of Confirmation from the Manufacturer that a local agent or representative is available to provide "After Sales Service" to the supplied components/parts/accessories during and after the warranty period. Name, address and contact number shall be provided.
 - b.3 Certificate from their customer (End-user) duly addressed to the Bidder that the supplied equipment of the same brand to be offered has performed satisfactorily in service. The certification must indicate in the PR/Reference Number and date of issuance.

Note:

1. Authorization to bid shall be current and valid for at least Six (6) months from the date of bid opening as advertised.

- c. To be submitted before or upon delivery:
- c.1 "Certificate of Origin" from the Manufacturer;
 - c.2 "Warranty Certificate" for one (1) year against factory defects/workmanship;
 - c.3 User Manual in Three (3) copies;
 - c.4 Calibration Certificate Traceable to National/International Standards;
 - c.5 Characterization Curve / Calibration Data.

Note: All documents in **Clause TS-7.0** shall be submitted to the **Plant Superintendent – POD** for evaluation and/or approval prior to issuance of acceptance certificate.

TS-8.0 GUARANTEE

The Supplier shall guarantee to complete the repair, and/or replacement within **Sixty (60) Calendar Days**, of the supplied instruments and accessories at his own expense against defect in design, workmanship and materials for a period of **One (1) Year** after acceptance by NPC. The Supplier



must guarantee that the unit will perform in the manner as set forth in the manual and the Contract.

The Supplier shall submit a Warranty Certificate (**At Least 1 Year**) effective from the date of acceptance by NPC.

After the lapse of the warranty period, provided that there are no defects found and/or pending repair works, NPC shall release the warranty security/certificate.

TS-9.0**MEASUREMENT OF PAYMENT**

Payment will be made at the contract unit price for each corresponding item in the Schedule of Requirements. Payment thereof shall constitute the full compensation for supply and delivery of the equipment including accessories.

1.0 PARTIAL DISCHARGE ANALYZER

Item	Description	NPC 's Requirements	Supplier's Data
1.1	Manufacturer	By Supplier	
1.2	Place of Manufacture	By Supplier	
1.3	Brand/Model	By Supplier	
1.4	No. of Unit/s	1	
1.5	TEV Sensor		
1.5.1	Measurement Range (Peak)	0 – 70 dBmV or higher	
1.5.2	Measurement Range (Cumulative Activity)	0 – 350,000 mV/cycle or higher	
1.5.3	Frequency Response	≤5 MHz to ≥60 MHz	
1.5.4	Resolution	1 dB or better	
1.5.5	Accuracy	±1 dB or better	
1.6	HFCT Sensor		
1.6.1	Measurement Range (HFCT 100/50, Ztr=3.9)	≤100 pC to 100 nC	
1.6.2	Measurement Range (Cumulative Activity)	≤200 pC to ≥20,000 nC	
1.6.3	Frequency Response (-3 dB response)	≤100kHz to ≥20 MHz	
1.6.4	Resolution	1 dB or better	
1.6.5	Accuracy	±1 dB or better	
1.7	AA Sensor		
1.7.1	Measurement Range	0 – 70 dBµV or higher	
1.7.2	Resolution	1 dB or better	
1.7.3	Accuracy	±1 dB or better	
1.8	Hardware		
1.8.1	Enclosure	Polycarbonate ABS / TPE or equivalent	
1.8.2	Display	Maximum of 3.5 inch display, 320 x 240 65k colour LCD or better	

Name of Bidder: _____

Signature of Bidder: _____



SECTION VI – TECHNICAL SPECIFICATIONS

PR NO. S1-SPS22-001

Item	Description	NPC 's Requirements	Supplier's Data
1.8.3	Control	5-button membrane keypad	
1.8.4	I/O Connections	BNC for HFCT (High Frequency Current Transformer), LEMO or equivalent for external AA (Air Acoustic), USB Micro B or equivalent for charger, 3.5mm jack or equivalent for headphones	
1.9	Power Supply	Rechargeable battery complete with charger 90 – 250 V AC, 60 Hz	
1.10	Operating Temperature	up to 50 °C or higher	
1.11	Storage Temperature	up to 50 °C or higher	
1.12	IP Classification	IP 54	
1.13	Accessories		
1.13.1	Android Tablet PC		
	a. Processor	Quadcore (1.6 GHz) or higher	
	b. Display	10 – 12 Inch LED WXGA (1280 x 800) HD IPS display or better	
	c. Camera	at least 2 MP rear camera and 1.2 MP front camera (both cameras with at least 720p video recording)	
	d. RAM	minimum of 1 GB	
	e. On-board memory	minimum of 8 GB	
	f. Charging PC connection	Micro USB or equivalent	
	g. Communications	Bluetooth & Wi-Fi ready	
	h. Battery Life	up to 8 hours or better	
1.13.2	Headphones for acoustic noise cancelling	Included	
1.13.3	Complete set of test probes and other accessories	Included	

Name of Bidder: _____

Signature of Bidder: _____



SECTION VI – TECHNICAL SPECIFICATIONS

PR NO. S1-SPS22-001

Item	Description	NPC 's Requirements	Supplier's Data
1.14	Manuals	User manuals (operation and maintenance) / troubleshooting guides/handbooks	
1.15	Calibration	Calibration certificate traceable to International Standards	
1.16	Training Requirements	Hands-On Training (Local at end-user site) for at least 3 personnel	
1.17	Equipment and Manufacturer's Experience		
1.17.1	The Manufacturer should have been in the business of manufacturing the equipment for not less than: years	10	
1.17.2	The same type of equipment being offered should have been in the actual service for not less than: years	5	
1.18	Warranty	One (1) Year Minimum	

Name of Bidder: _____

Signature of Bidder: _____

