



NATIONAL POWER CORPORATION

SUPPLEMENTAL / BID BULLETIN NO. 2

to the Bid Documents for the

**UPGRADING OF ANNUNCIATOR, CONTROL AND PROTECTION SYSTEM OF
UNIT 1 AT AGUS 4 HEP PLANT
(PR NO. MG-A5M23-003 / PB230220-HG00019)**

23 February 2023

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

1. **SECTION VI-TECHNICAL SPECIFICATIONS, PART II-TECHNICAL DATA SHEETS**, under item **2.0 PROTECTION RELAY SYSTEM** shall be revised as attached,(3 pages, VI-TDS-7 to 9)

2. Schedule of Bid Submission and Opening:

FROM	TO
POSTPONED UNTIL FURTHER NOTICE	06 March 2023 @ 9:30 A.M. Kaňao Function 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:


RENE B. BARRUELA

Vice President, Corporate Affairs Group and
Chairman, Bids and Awards Committee



2.0 PROTECTION RELAY SYSTEM

2.1 GENERATOR PROTECTION RELAY

2.1.1 Generator Protection Relay Technical Features & Characteristics

Description	NPC Requirements	Supplier's Data
a. Manufacturer	_____	_____
b. Place of Manufacturer	_____	_____
c. Construction	Microprocessor based and/or numerical	_____
d. Mounting	To be installed inside the panel enclosure	_____
e. Configuration editor and maintenance software for protection relays to be provided	Yes	_____
f. Operating frequency	60 Hz	_____
g. Relays and functions:	_____	_____
1. Generator-Differential (87)	To be included	_____
2. Lock-out (86)	To be included	_____
3. Frequency (81O/81U)	To be included	_____
4. Over voltage (59)	To be included	_____
5. Under voltage (27)	To be included	_____
6. Voltage balance relay (60)	To be included	_____
7. Stator thermal overload (49)	To be included	_____
8. AC Time overcurrent (51)	To be included	_____
9. Instantaneous overcurrent (50)	To be included	_____
10. Negative phase sequence (46)	To be included	_____
11. Loss of excitation (40)	_____	_____

Name of Bidder : _____

Signature of Bidder : _____



V *[Handwritten signature]*

Description	NPC Requirements	Supplier's Data
12. Directional power (32)	To be included	
13. Volts/hertz (24)	To be included	

2.2 TRANSFORMER PROTECTION RELAY

2.2.1 Transformer Protection Relay Technical Features & Characteristics

a. Manufacturer		
b. Place of Manufacturer		
c. Construction	Microprocessor based and/or numerical ⁴	
d. Mounting	To be installed inside the panel enclosure	
e. If individual relays are to be supplied, required no. of protection sets for single transformer (specify one, two, etc.)	One ⁵	
f. Configuration editor and maintenance software for protection relays to be provided	Yes	
g. Operating frequency	60 Hz	
h. Provided with the following relays and functions:		
1. Generator-Transformer-Differential (87GT)	To be included	

⁴ If a numerical protection is proposed, it shall have an integrated overcurrent (if required), overload and over fluxing (if required) relays as backup for the differential protection function.

⁵ The technical data stated are taken from the requirements of both ANSI/IEEE C.37.91 and IEC 255. The Supplier shall fill-up the applicable data requirements stated for the relay to be supplied.

Name of Bidder : _____

Signature of Bidder : _____

Y *[Handwritten signature]*

Description	NPC Requirements	Supplier's Data
2. Generator-Transformer Lock-out (86GT)	To be included	
3. Over voltage (59)	To be included	
4. Over-fluxing (59F)	To be included	
5. Restricted earth fault	To be included	
6. Overcurrent (50/51) ⁶	To be included	
7. Neutral overcurrent (51N) ⁷	To be included	
8. Restraint percentage	20 %	
9. Current taps for winding (for CT ratio matching)	With vector group and CT ratio compensation	

⁶The Supplier to indicate the proposed measuring range i.e. instantaneous and time delay.

⁷The Supplier to give full description i.e. methods of stabilizing for inrush current.

Name of Bidder : _____

Signature of Bidder : _____



Handwritten initials