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SUBJECT- Corrigendum-3 TO NIT No.12233

DATE 28.08.2012

- | | | | |
|----|--------------------|---|---|
| 1. | Project | : | PGCIL, N.E. AGRA |
| 2. | Equipment / Item | : | 1500 KVA GAS GENSET |
| 3. | Enquiry No. / Date | : | 312E136 Dtd. 05.07.2012, Due on: 04.09.12 |

- (i) With reference to the above tenders, kindly note that Due date of tender submission date has been extended from **04.09.2012 to 11.09.2012** upto 2.00 PM.
Opening of the tender shall be at 2:30 PM on same day.
- (ii) Enclosed herewith corrigendum to Technical specification.

All other terms and conditions of tender shall remain same. Kindly ensure to submit your offer by due date.

Corrigendum to Technical Specification ref. TB-343-558-038 Rev. 01

Following clauses of the above technical specification stands amended in the manner described below:

Cl. 1.1 (a) : Stage testing is not required. Only final inspection & testing shall be carried out at works.

Cl. 1.1 (i) : The following clause is added “Contract shall be on lumpsum basis for the scope defined in the technical specification. Post contract variations due to change in inputs by BHEL shall be settled on the basis of mutually agreed rates.”

Cl. 1.3 (c) : Clause stands amended to “Piped supply of CNG required for simultaneous running of all four CNG generators at Agra shall be arranged/ provided by ‘Owner’. Piping between the gas tap-off to each genset shall be provided by ‘contractor’.” Refer the attached layout for location of gas tap-off. Unit price for pipe shall also be quoted to settle any post contract variation due to change in location of tap-off or CNG building.

Cl. 1.3 (e) : Clause stands amended to “All four Gensets shall be housed in a single building. Bidder in their bid shall indicate the building dimensions required to accommodate CNG sets and associated auxiliaries. Required ventilation of these buildings shall be provided by ‘contractor’.” Refer the attached layout for location of Genset Building.

Cl. 1.4 (b) : Clause stands amended to “Necessary provisions shall be made by contractor to keep the auxiliary systems, associated with gensets, in hot conditions so that Gensets start instantly on mains failure without any delay. Considering block loading requirement, Genset should be able to take first lot of motor load of 160kW (class-I Induction motor with star- delta starter) within 50 seconds (max) after starting. Balance load shall be added gradually”

Cl. 1.6.1. A(ix) : Clause stands amended as “AMF control panel and all other panels for auxiliaries of 1500KVA Gen set complete with all standard protection, alarm/ annunciations and meters etc.”

Cl. 1.6.1. A(xv) : Clause added “Common lattice type GI structure to support 30 mtrs exhaust stack, if required as per CPCB norms or any other statutory guidelines, shall be provided. Bidder shall quote for standard stack and support structure under the lumpsum offer. Besides, additional stack and support structure, to make it 30 mtrs, shall be separately quoted so that the same can be deleted during contract stage, if not required.

Cl. 1.6.1. E (i) : Clause stands amended to “Bidder in his offer shall furnish the requirement of feeders i.e. number, type & rating for CNG system. Purchaser will lay the main incomer/s to this area, however termination of these cables in the respective panels shall be in contractor’s scope. All cabling (laying & termination) further from these panels to various equipments and for control & interlocking of these equipments shall also be in contractor’s scope.

Cl. 1.6.1. E (ii) : Clause stands amended to “Power & Control cables for the system will be supplied on free issue basis to contractor. BHEL shall procure various sizes of cables for complete requirement of sub-station. Contractor shall indicate their approximate requirement of various cables beforehand for the purchase to account for during procurement.

Cl. 1.6.1. E (iii) : Clause stands amended to “Since laying & termination of all power & control cables is in contractor’s scope, supply of cable accessories such as lugs, glands, cable tags & markers etc. shall be included by the bidders in their offers.

Cl. 1.8 : Clause stands deleted. Performance guarantee requirements shall be governed by relevant clauses under commercial terms & condition of the enquiry.

Cl. 2.4.2 : Para 2 “It shall also be capable of satisfactory driving the alternator at 10% over load at the rated speed for one hour in any period of 12 hours of continuous running” stands deleted.

Cl. 2.4.9 : Acoustic enclosure for genset is not required. Only the building housing the gensets shall be acoustically sealed.

Cl. 2.4.12 (b) : The clause stands deleted.

Cl. 2.4.12 (f) : Clause stands amended to “Lubricating oil filters and air filters.”

C. 2.8 : The new clause is added “Commissioning Checks”

In addition to the checks and test recommended by the manufacturer, the Contractor shall carryout the following commissioning tests at site.

1. Load Test

The engine shall be given test run for a period of atleast 6 hours. The set shall be subjected to the maximum achievable load as decided by Purchaser without exceeding the specified Genset rating.

During the load test, half hourly records of the important parameters like voltage, current, speed, temperature, pressure etc shall be made.

The necessary load to carryout the test shall be provided by the purchaser.

2. Insulation Resistance Test for Alternator

Insulation resistance in mega-ohms between the coils and the frame of the alternator when tested with a 500V megger shall not be less than $IR=2x(\text{rated voltage in KV})+1$

3. Insulation Resistance of Wiring

Insulation resistance of control panel wiring shall be checked by 500V Megger. The IR shall not be less than one mega ohm.

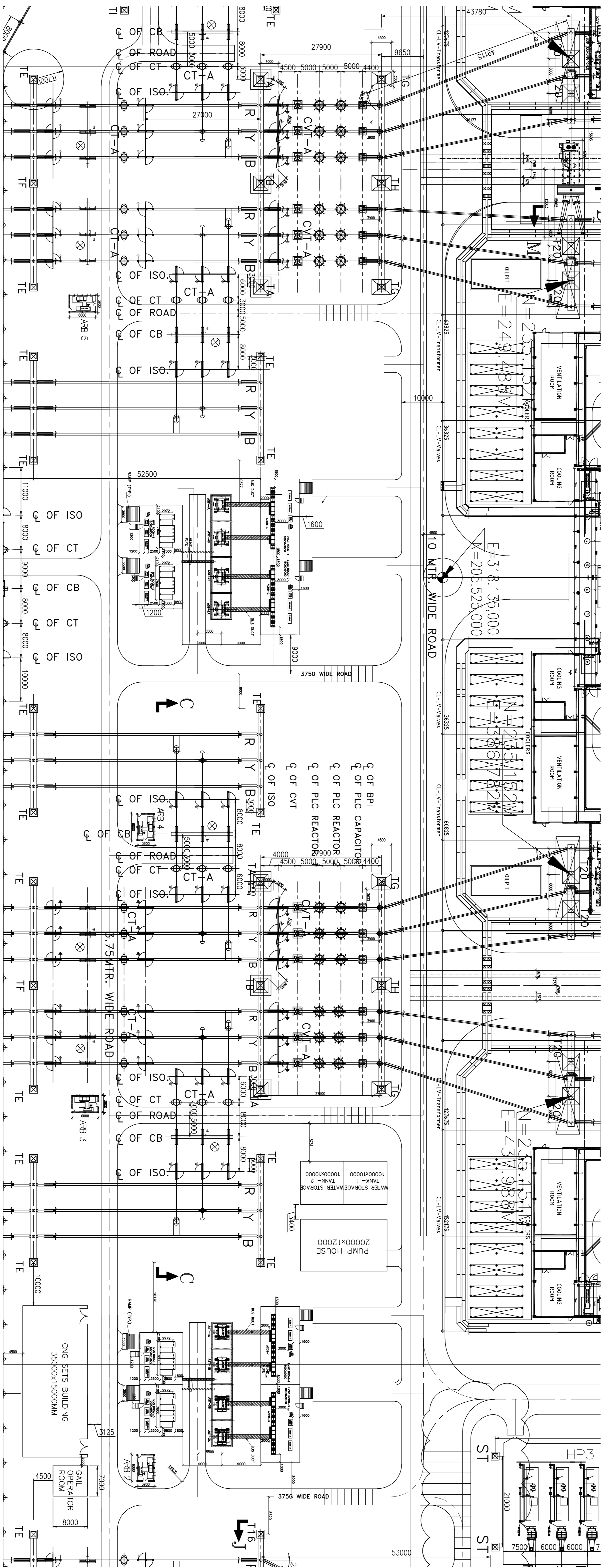
4. Functional Tests

- a. Functional tests on control panel.
- b. Functional test on starting provision on the engine.
- c. Functional tests on field devices.

ENCLOSURES:

- a) Powergrid’s vendor list for DG set, which may be referred to for CNG sets.
- b) 400kV Switchyard Layout showing coordinates for Gas tap-off & CNG building
- c) AC Loads for CNG Set.
- d) SLD for 415V Aux. AC System

Issued on: 27th August, 2012



AC LOADS - NEA AGRA HVDC (on Pole-1)

S. No.	COMPONENTS	KW Rating	Power Factor	KVA
I	Essential loads			
A.	Converter transformer cooling			
1.1	Pumps per Pole considering 1.33 p.u. O/L	95	0.79	120
1.2	Fans per Pole considering 1.33 p.u. O/L	204	0.74	276
B.	ICT Cooling			
2.1	Pumps and Fans	31.00	0.85	36
C.	Valve cooling			
3.1	Valve cooling Pumps per Pole considering 1.33 p.u. O/L	160.00	0.95	168
3.2	Valve cooling Fans per Pole considering 1.33 p.u. O/L	269.00	0.7	384
D.	UMD	13.00	0.9	14
E.	Ventilation Loads			
5.1	Valve Hall Ventilation	45	0.85	53
5.2	DC Hall Ventilation	40	0.85	47
F.	Air Conditioning Loads			
6.1	Control Room in Main Service Building	52	0.85	61
6.2	Auxiliary Service Building			
6.3	Auxiliary Relay Buildings and Filter Relay Buildings			
G.	Fire Fighting			
7.1	Jockey Pump and Compressor			
H.	Indoor Lighting for Main And Auxiliary Service Buildings			
I.	Water Supply Pump Load			
J.	CNG Set Auxiliary Loads	4	0.85	5
K.	UPS Loads for HMI, Printers, Computers, SCM, BMS, VPS etc (For 2 set of UPS running)	28	0.85	33
Sub total - Essential loads per pole		941	0.8	1198
II	Emergency loads			
1	Battery chargers	70	0.85	82
2	MK Loads (Aux power in Switchyard & Air conditioning in ARB & FRB)	35	0.85	41
3	Emergency A.C. Lighting	10	0.85	12
4	Sub total - Emergency loads per pole	115	0.85	135
III	Non Essential Loads			
1	Lighting/outlets control and Switchgear cubicles	5	0.85	6
2	Ventilation – Other Areas	10	0.85	12
3	Air Conditioning Loads – Other areas in Main Service Building	143	0.85	168
4	Outdoor Lighting			
5	Fire Fighting			
5.1	Hydrant Pump			
5.2	Spray Pump			
6	Transformer Oil Filtration Machine	175	0.85	206
7	Sub total – Non essential loads per pole	333	0.85	392
IV	Assuming a diversity factor of 0.85 due to non-simultaneous operation of non-essential loads such as oil handling, Air conditioning, Lighting, fire fighting, CNG set auxiliaries etc.	283	0.85	333
Total non-essential Load per pole become				
V	Summation of Loads (Essential + Emergency+ Non Essential)	1339	0.80	1667
VI	Proposed Auxiliary Transformer rating			2000
VII	CNG SET SIZING			
	Essential Loads			1198
	Emergency Loads			135
	Summation of Loads (Essential + Emergency)			1334
VIII	Proposed CNG Set rating			1500

