

**POWER GRID COMPANY OF BANGLADESH
LIMITED**

**Bidding Document
for
Procurement of
Design, Supply, Erection, Testing &
Commissioning of Upgradation of the Existing
132kV Madunaghat Substation to 230kV GIS
substation on Turnkey Basis**

(Bid Identification No.: PGCB/DCMPGSP/Madunaghat/SS/03).

IFB No.: 27.21.0000.101.07.123.19.5084

**Project: Dhaka-Chittagong Main Power Grid Strengthening
Project**

Clarification 2

Issued on: 21.11.2019



The Power Grid Company of Bangladesh Limited (PGCB)

IFB No. 27.21.0000.101.07.123.19.5084 dated 17 September, 2019

Design, Supply, Erection, Testing & Commissioning of Upgradation of the Existing 132kV Madunaghat Substation to 230kV GIS substation on Turnkey Basis

Contract No. PGCB/DCMPGSP/Madunaghat/SS/03

ICB No. PGCB/DCMPGSP/Madunaghat/SS/03

Clarification-2

Pre-Bid meeting was held on 10th October 2019 at 11:00 o'clock at the PGCB Headquarter
All comments, queries and requests for clarification, regarding the Tender documents, received from prospective Bidders, and relevant replies and clarifications prepared by PGCB, and associated addendums (if any), are part of Tender documents

No.	Volume / Section / Clause / Item / Page	Bidder's comment / Query / Clarification	PGCB's Reply / Clarification
1	Clarification-1, Sl no. 19	As per referred clarification, Switchyard panel room shall be sized considering 7# future bays. However, as per, Vol.2, Section-1- Scope of work, Clause no. 1.2, space shall be provided for 4# transmission line GIS bays & 1# transformer bay. In this regard, we understand that all future bays shall be cable connected because there is no space available in the plot for line termination gantries. Please confirm the no. future bays also as both above clauses are contradicting.	Clarification-1, query no. 19 is the final reply.

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2	Addendum-1, Attachment -06, Schedule -1, SI no. 1B.2	As per referred addendum, we understand that all 230kV transformer bays shall be connected with SF₆ to air bushing via Bus duct. However, there is no line item available for Bus duct in BPS. Please check and include a separate line item for Bus duct of 230kV transformer bays.	Bus duct for transformer bays is included in Price schedule item 1B.2. The length of bus duct can be calculated from the bid drawing and dimensions of offered switchgear and transformer. The length of Bus duct for line feeders can vary and will be defined during contract execution.
3	Clarification-1, SI no. 89, Vol.2, Section-4, clause no.4.3.4 Vol.3, Schedule-I, clause no. 2.5	As per referred clarification, we understand that calculation for dynamic short circuit capability of transformer is not acceptable for bidding purpose. We need to submit dynamic short circuit test report of minimum 220kV, 225MVA, three phase transformer. However, after award of contract we are not envisaging repetition of dynamic short circuit test of transformer. The same shall be proved with the help of calculation for offered transformer along with dynamic short circuit test report of 220kV, 225MVA or higher rating, three phase transformer. Please confirm whether bidder's understanding is in order.	Confirmed
4	Volume-3, Appendix -A1-1 - 230kV Gas insulated switchgear and associated equipment - SI no. 9 - Circuit breaker - Percentage of DC component	Our GIS is type tested for 47% of DC component. Please accept the same.	As per tender requirement.
5	Volume-3, Appendix -A1-1 - 230kV Gas insulated switchgear and associated equipment - SI no. 9 - Circuit breaker - Rated breaking current, small inductive currents- unloaded transformers : 25A- transformer	Small inductive current switching test is not specified in IEC. Our GIS is not type tested for this requirements. Please accept the same.	It shall be as per bid documents

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	loaded with reactor : >200A shunt reactors : >250A		
6	Volume-3, Appendix -A1-1 - 230kV Gas insulated switchgear and associated equipment - SI no. 9 - Circuit breaker - Rated breaking current, small capacitive currents capacitor bank : 160A	Since no Capacitor bank is connected to 230kV GIS. We understand that type test for capacitor bank switching capability is not required. Please accept the same.	It shall be as per bid documents
7	Volume-3, Appendix -A1-1 - 230kV Gas insulated switchgear and associated equipment - SI no. 10 - Disconnector Rated breaking current (capacitive) : 2 A	Maximum bus charging current switching capability shall be 0.5A in line with relevant standard. Please accept the same.	It shall be as per bid documents
8	Addendum-1, Attachment -06, Schedule -1, Mandatory spare, SI no. 2.2.1 & 2.3.1	As per referred item, Complete set of 196kV/120kV Surge arrester shall be provided. Please clarify that whether 1 set equal to 1 no. of surge arrester or 3 nos. of surge arrester.	One set equal to three nos
9	Addendum-1, Attachment -06, Schedule -1, Mandatory spare, SI no. 2.3.2	As per referred item, 1 set of 132kV outdoor cable termination shall be provided. Please clarify that whether 1 set equal to 1 no. of outdoor cable termination or 3 nos. of outdoor cable termination.	One no. of outdoor cable termination

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No.	Volume / Section / Clause / Item / Page	Bidder's comment / Query / Clarification	PGCB's Reply / Clarification
10	Addendum-1, Attachment -06, Schedule -1, Mandatory spare, SI no. 2.3.3	As per referred item, 1 set of 132KV GIS cable termination shall be provided. Please clarify that whether 1 set equal to 1 no. of GIS cable termination or 3 nos. of GIS cable termination.	One no. of GIS cable termination
11	Clarification-1, SI no. 81	As per referred clarification, All the 230KV bays shall be integrated to NLDC separately. As per vol.3, schedule-A, SI no. 1N1, Page no. SA-12, One more Industrial Gateway shall be installed and configured as hot-stand-by. Hence we understand that all new 230KV bays shall be integrated with NLDC with new industrial gateway which will be supplied under this contract. Please under whether bidder understanding is in order.	Bidder understanding is not correct. Both, new and existing Industrial Gateways shall be integrated for the whole 230/132kV SS. The new Gateway will be configured as hot-stand-by.
12	Clarification-1, SI no. 106	As per referred clarification, we understand that tertiary winding of 225/300MVA, 230/132/33kV transformer shall be rated for 75/100MVA. However, tertiary side of transformer shall not be connected to any load. Please confirm whether bidder's understanding is in order.	Bidder understanding is correct.

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13	Clarification-1, Sl no. 122	We are not envisaging any terminal box at gantry, ODF (Optical distribution board) & underground FO cable at remote end station. Please confirm whether bidder's understanding is in order.	Bidder's don't have to install anything on the remote end gantry, but they have to perform configuration of entire Multiplexer equipment to establish overall communication link and to fulfil protection requirement.
14	Clarification-1, Sl no. 132	As per the referred clarification, price for site preparation including cleaning, grubbing, stripping of topsoil, landfilling, and retaining wall, cutting or filling works shall be included in item 1K3. However in price schedule (No.4) under item number 1K3, the above works are not included. Please include the same. Also, the proposed substation is to be constructed in the existing substation area. We trust that, major site levelling is not required, only micro grading need to be done for the proposed area. Please confirm. If major site levelling is required. Please include the item for the same in unit basis.	Price of these works where applicable, shall be included in subitems 1K3.
15	Clarification-1, Sl no. 176	It is replied in the referred clarification that, the existing equipment pile foundation has to be completely dismantled. We trust that, if the existing pile will overlap with new pile/foundation then only the existing pile need to be dismantled. Please confirm. Also, please furnish the existing substation pile layout, in order to understand the pile location.	Your understanding is not correct. The scope of this contract is removal of all underground foundations and piles to enable freeing ground for future 230kV transformer and GIS bays.
16	Clarification-1, Sl no. 135	It is replied in the referred clarification that, Septic tank is required for SPR. However in SPR drawing (Drg. No: DCMPSGP/PKSS-3/MAD/010), toilet requirement is not shown. Please clarify.	Septic Tank is not required.

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		If the same is required, please furnish the revised drawing of SPR.	
17	Vol 3 Schedule-1, BPS-Fire alarm & Firefighting 1K.5	As per the referred clause, Firefighting system need to be provided. We presumes the term "Firefighting system" means Fire detection system & Portable fire extinguishers only. Kindly confirm the bidder understanding is correct.	Your understanding is correct.
18	Volume-2, part-1, Fire Protection system 164/452 4.16	We presume that there is no requirement of water based fire protection system (Hydrant & HWWS for transformer) as Nitrogen injection system has been proposed. Please confirm.	Your understanding is correct.
19	Volume-2, part-1, Air conditioning and ventilation 361/452 13.3	As our scope is limited to Switch yard panel room for air conditioning system. Kindly clarify which type of AC to be used (AHU with DX or console type AC units).	Conventional best quality split AC is sufficient.

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