The Power Grid Company of Bangladesh Limited (PGCB)

IFB No. 27.21.0000.101.07.129.19.4935 dated 08 Sep 2019

Design, Supply, Installation, Testing and Commissioning of 400kV outdoor GIS Substation at Bogura (west) &Rahanpur and Upgradation/Extension of Gopalganj and Chapainawabganj (old) Substation on turnkey basis

Contract No. PGCB/ADB/ 3683 /400KV/BOG-RAH-GOP/SS

ICB No. PGCB/ADB/ 3683 /400KV/BOG-RAH-GOP/SS

Clarification 2

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	Add. Y/N
Commercial queries				
1	ITB 10.1 – Section 2 – Volume 1 of 3 Page 2-3	Following supporting documents and documents submission requirement defined in section-3 shall be in English notarized version dully certified by certificated translator. If the	Yes your understanding is correct. If the original version of supporting documents is English, the bidder may submit these documents directly without notarization.	

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		original version of supporting documents is English, the bidder could submit these documents directly without notarization. Please Clarify.		
2	ITB 19.1 – Section 2 – Volume 1 of 3 Page 2-4	(a) The prices shall be quoted either in the currency of Bidder's home country, or in any fully convertible currency of up to three foreign currencies. Please clarify whether the Bidder could quote in RMB as one of three foreign currencies when the Bidder's home country is China.	Please follow the bid documents	
3	2.6 – Section 3 – Volume 1 of 3 Page 3-11	All GIS shall be from same factory All Power transformer shall be from same factory All Circuit breaker shall be from same factory All disconnectors shall be from same factory All current transformer shall be from same factory All voltage transformer shall be from same factory All surge arrester shall be from same factory All post and disc insulator shall be from same factory. Please clarify whether the **'same factory'** means that delivery record in reference list should be from same factory or the Bidder should purchase each kind of equipment from the same factory after the Bid is awarded.	Please follow the bid documents	
4	Vol.1 Section 3 - Evaluation and Qualification Criteria Gas Insulated Switchgear (GIS)	Bidder understands that the GIS Manufacturer's proposed factory shall be have at least one evidence from end users for satisfactory service of GIS with same specification (kV, rated current, short circuit current) or above for a minimum of three (3) year outside manufacturer's country as on the date of bid opening. Kindly confirm.	Yes. Your understanding is correct.	

5	Vol.1 Section 3 - Evaluation and Qualification Criteria Power Transformer	Bidder understands that Transformer Manufacturer's proposed factory shall have at least ten (10) years of manufacturing experience prior to the date of bid submission of 380 kV or higher voltage rating power transformer with minimum delivery of at least Six (6) nos. 750MVA (Three phase or single phase 250MVA×3) 380KV or higher rating (kV, MVA) Power transformer over the last ten (10) years outside the manufacturer's own country or in Bangladesh. At least one (1) evidence from end users for satisfactory service of 750MVA (Three phase or single phase 250MVA×3) or higher rating (MVA, KV) equipment for a minimum of three (3) years outside the manufacturer's own country as on the date of bid opening.	Yes. Your understanding is correct.	
6	Vol.1 Section 3 - Evaluation and Qualification Criteria Power Transformer	Since it is few transformer manufacturers have type test report including 420kV 750MVA Power transformer issued by STL. For the purpose to involve more competitive high-quality manufacturers, we would like to suggest the requirement of transformer type test report can be corrected as follows: Since the project requires 750MA three phase Power Transformers or 3 unit of 300MVA single phase Power Transformers, for short circuit withstand test, the rating of Transformer shall be 380kV, 300MVA, single phase/ 750MVA three phase or higher rating. And for other test, the rating of Transformer shall be 380kV, 300MVA, single phase/ 750MVA three phase or higher rating, the test report shall be issued by any independent STL member testing laboratories or from manufacturer's own testing	Please see addendum-2.	

		laboratory. Test carried out at manufacturer's own testing laboratory must have been witnessed and certified by a representative from STL member laboratories. Kindly confirm.		
7	Vol.1 Section 3 - Evaluation and Qualification Criteria Power Transformer	Is it possible to submit type test report during execution stage, If bidder fails to submit any type test report for power transformer during bid submission?	Please follow the bid documents	
8	Volume I, Section-3, Clause 1.3.7	We understand that the domestic margin preference shall be applicable for plants and equipment supplied from within the Employer's Country. For price bid evaluation the respective equipment or items prices of all the bidders (Who will quote the item or equipment outside the Employer's Country) shall be increased by 15% incase any bidder offer that equipment or items from Employer's country. The quoted prices for other items / equipment offered from outside Employer's country will be considered for bid evaluation without any increase. Kindly confirm.	Please follow the bid documents	

Bogura substation

9	Bogura 400 kV GIS	Line item 1A1 (i) - Current rating 5000A but line item 1A1 (¡¡) current rating 4000A. Please clarify.	Please refer to the item no. 02, 07 & 08 of addendum 01 and revised price schedule (item no. 11 of addendum 02).	
10	Bogura 400 kV GIS	Line item 1A1 (¡¡) - Voltage rating 4420kV, Line item 1A2 (v) - Voltage rating 2420kV, line item 1A3 (vi) - Voltage rating 4420kV, Please clarify.		

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11	Bogura 400 kV GIS	Line item 1A2 (vi) - In price schedule current transformer is in 4-core but in SLD current transformer is in 5-core. Please clarify.		
12	Bogura 400 kV GIS	Line item 1A3 (iii) - 420kV, 4000A, 63kA/3s, three phase busbar disconnector complete with motor operating mechanism require 06 Nos. but as per SLD it is 08. Please clarify.		
13	Bogura 400 kV GIS	Line item 1A3 (v) - 420kV, 4000A, 50kA/3s three phase high-speed earth switch complete with motor operating mechanism require 02 set but as per SLD it is 01. Please clarify.		
14	Bogura 400 kV GIS	Line item 1A3 (v) - 50kA/3s or 63kA/3s. Please clarify.		
15	Bogura 400 kV GIS	Line item 1A9- As per price schedule single-phase wave trap are 12 Nos but required Nos are 18. Please clarify.		
16	Bogura 400 kV GIS	IN SLD of Bogura 400/230kV SS, the CVT is used in GIS. But it is impossible to use CVT in GIS. Please confirm the VT used in GIS will be inductive voltage transformer.		
17	Bogura 400 kV GIS	In SLD of Bogura 400/230kV SS, the number of 400kV CVT is 30, the number of 400kV surge arrester is 30. But in Schedule B1, the number of CVT and SA is 27.(SLD show CVT /SA are equipped in BUS REACTOR BAY IN FUTURE). Please confirm the number of 400kV CVT and 400kV SA is 27.		
18	Bogura 400 kV GIS	In SLD, for the Bogura substation, the two extension transformer bays of 230KV are in the same bus section. Bidder assumed that they will be in different section. Please confirm.		
19	Bogura 400 kV GIS	In SLD, current rating for 400kV bus-bar is 4000A, but in		

		price schedule B1, it is 5000A. Please clarify		
20	Bogura 400 kV GIS	In Price schedule B1, item vi, there's one dis-connector with high speed earth switch. But in SLD, there just has one high speed earth switch. Considering with other OHL bays, bidder will offer one high speed earth switch rather than dis-connector with high speed earth switch. Please confirm.		
21	Bogura 400Kv REACTOR	In SLD, the bushing neutral CT core is 4, but in volume 2 of 3,the bushing neutral CT core is 3. We will offer 3 core. Please confirm.	Confirmed	
22	Bogura 230 kV GIS	The equipment current rating of SLD and price schedule differs from each other. Which should we use as refer-ence?	Please refer to the item no. 02 & 08 of addendum 01 and revised price schedule item no. 11 of addendum 02).	
23	Bogura 230 kV GIS	Line item 1B2 (ii) - As per price schedule CB are 02 set but from SLD set 01. Please clarify which one is correct.		
24	Bogura 230 kV GIS	Line item 1B2 (iv) - As per price schedule ES is 01 set but as per SLD it is 02 set. Please clarify.		
25		Line item 1B2 (v) - As per price schedule unit of ES is re-ferred as Nos, but we think that it should be set and as per SLD it should be 02 set, but in price schedule it is mentioned as 3 Nos. Please clarify		
26	Bogura 230 kV GIS	Line item 1B3 (ii) - As per price schedule CB are 02 set but as per SLD it is 01. Which one is correct?		
27	Bogura 230 kV GIS	Line item 1B3 (iv) and (v) - From SLD we have found 02 set of DS with ES and 02 set ES, But in Price schedule it is mentioned as 3 Nos ES only. Kindly confirm.		
28	Bogura 230 kV GIS	Line item 1B4 (iv) - As per price schedule ES is 01 but as per SLD it is 02. Please clarify.		
29	Bogura 230 kV GIS	Line item 1D2 - As per price schedule DS with ES is 04 set		

		but as per SLD it is 02 set. Which one is correct?		
30	Bogura 230 kV GIS	Line item 1M3 (b) As per price schedule SPR for 400kV and 230kV is 02 but as per SLD SPR for 230kV is 02 and SPR for 400kV is 01. Kindly clarify.		
31	Bogura 230 kV GIS	Line item 1O5 (ii) - As per price schedule line matching unit is 12 Nos but as per SLD it is 18 Nos. Please clarify.		
32	Bogura 230 kV GIS	In price schedule B1, for 230kv transformer bay, item 1B2 ii, the CB should be 1, not 2nos. Please confirm.		
33	Bogura 230 kV GIS	In price schedule B1, for 230kv transformer bay, item 1B2 iv, the earth switch should be 2 nos, not 1nos. Please confirm.		
34	Bogura 230 kV GIS	In price schedule B1, for 230kv transformer bay, item 1B2 v, the line dis-connector should be 1 nos, not 3nos. Please confirm.		
35	Bogura 230 kV GIS	In price schedule B1, for 230kv bus coupler bay, item 1B3 ii, the CB should be 1 nos, not 3nos. Please confirm.		
36	Bogura 230 kV GIS	In price schedule B1, for 230kv bus coupler bay, item 1B3 iv, the earth switch should be 2 nos, not 3 nos. Please confirm.		
37	Bogura 230 kV GIS	In price schedule B1, for 230kv bus coupler bay, item 1B3 iv, the earth switch should be 2 nos, not 3 nos. Please confirm.		
38	Bogura 230 kV GIS	In price schedule B1, for 230kv bus coupler bay, item 1B3 v, the CT core is 2 nos, But in volume 3 of 3 core, it is 3. Bidder will offer 3 core CT. Please confirm.		

39	Bogura 230 kV GIS	In price schedule B1, for 230kv bus coupler bay, item 1B3 vi, the CT core is 2 nos, But in volume 3 of 3, it is 3 core. Bidder will offer 3 core CT. Please confirm.		
40	Bogura 230 kV GIS	In price schedule B1, 230kv bus bar equipment, item 1B5 iii, the three phase earth switch is 6 nos, but in volume 3 of 3, it is 2nos. And in volume 3 of 3, item 1.1.1, it is high speed ES. Bidder will provide 2nos. three phase High speed earth switch or 6 nos. single phase high speed earth switch. Please confirm.		
41	Bogura 33 kV	In price schedule B1, there are 4 dis-connector But in SLD, there are 2nos. Bidder will offer 4nos. Please confirm.	Please refer to the item no. 07 of addendum 01 and item no. 11 of addendum 02	
42	Bogura 33 kV	In price schedule B1, the 33kv voltage transformer is inductive voltage transformer. But in SLD, it is CVT. Bidder will use inductive voltage transformer. Please confirm.	Confirmed	
43	Ref-1: Dwg SLD_BOGURA/1.1 Ref-2: Volume-2, Scope of works, Clause 1.2.1 ,Page-4	As per Ref-1: For 400 kV GIS - Four (04) Numbers Future Line Bay and Two (02) number future transformer bays are Shown. As per Ref-2: Space provision shall be kept for future Extension of Six (06) 420 kV bays and two (02) transformer bays.Kindly confirm the number of 400 kV future line bay space need to be considered.	Drawings are tentative or preliminary. Bidder is requested to follow scope of works or requirements. Please refer to item no. 07 & 08 of addendum 01.	
44	Ref-1: Dwg SLD_BOGURA/1.1	As per Ref-1: Type of feeder at opposite side of Bus reactor bay is no mentioned.Please confirm the type of bay need to be considered at the other side of Bus reactor bay at Bagura S/S.	Please see the item no. 07 of addendum 01.	
45	Ref-1: Volume-2, Scope of works, Clause 1.2.1 ,Page-5	As per Ref-1: GIS Design shall consider appropriate Buffer zone and section in Busbar & GIS compartment suit-able for best MRE practice so as to minimize interruption time & maintenance complexity.Requested to provide Gas Schamatic Diagram for 400 kV GIS	Detailed design shall be finalized during execution prior to Employers approval within the contract price.	
46	Ref-1: Dwg SLD_BOGURA/1.1 Ref-2: Volume-2, Scope of works, Clause 1.2.1 ,Page-5	As per Ref-1: For 230 kV GIS - Four (04) Numbers Future Line Bay and Two (02) number future transformer bays are Shown.	Drawings are tentative and for bidding purpose only. Bidder is requested to follow scope of works or requirements. Please refer to item no. 07 & 08 of addendum 01	

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		As per Ref-2: Space provision shall be kept for future extension of Eight (08) 230kV bays and two (02) transformer bays.Kindly confirm the number of 230 kV future line bay space need to be considered.		
47	Ref-1: Volume-2, Scope of works, Clause 1.2.1 ,Page-5	As per Ref-1: GIS Design shall consider appropriate Buffer zone and section in Busbar & GIS compartment suit-able for best MRE practice so as to minimize interruption time & maintenance complexity. Requested to provide Gas Schamatic Diagram for 230 kV GIS.	Detailed design shall be finalized during execution prior to Employers approval within the contract price.	
48	Ref-1: Price schedule, Sl No. 1A3,iii Ref-2: Dwg SLD_BOGURA/1.1	420kV, 4000A, 63kA/3s, three phase busbar disconnector complete with motor operating mecha-nism -As per ref-1 is 6 Nos and as per ref-2 is 8 Nos.Kindly confirm the number of 400 kV Disconnector in Bus reactor bay.	Please see the item no. 08 of addendum 01 and revised price schedule (item no. 11 of addendum 02).	
49	Ref-1: Price schedule, Sl No. 1A3,iv Ref-2: Dwg SLD_BOGURA/1.1	420kV, 4000A, 50kA/3s three phase high speed earth switch complete with motor operating mechanism-As per ref-1 is 6 Nos and as per ref-2 is 8 Nos.Kindly confirm the number of 400 kV Earth Switch in Bus reactor bay.	Please see the item no. 08 of addendum 01 and revised price schedule (item no. 11 of addendum 02).	
50	Ref-1: Price schedule, Sl No. 1B2,ii Ref-2: Dwg SLD_BOGURA/1.1	245kV, 3150A, 50kA/3s, three phase, single pole operation circuit breaker complete with spring-stored energy operating mechanism-As per ref-1 is 2 Nos and as per ref-2 is 1 No.Kindly confirm the number of 245 kV CB in transformer bay.	Please see the item no. 02 & 08 of addendum 01 and revised price schedule (item no. 11 of addendum 02).	
51	Ref-1: Price schedule, Sl No. 1B2,iv Ref-2: Dwg SLD_BOGURA/1.1	245kV, 50kA/3s, three phase, three position earth switch complete with motor operating mechanism at both sides of CB- As per ref-1 is 1 No and as per ref-2 is 2 No.Kindly confirm the number of 245 kV three position earth switch in transformer bay.	Please see the item no. 07 & 08 of addendum 01 and item no. 11 of addendum 02.	
52	Ref-1: Price schedule, Sl No. 1B2,v Ref-2: Dwg SLD_BOGURA/1.1	245kV, 3150A, 50kA/3s, three phase line disconnector, make proof, complete with motor operating mechanism-As per ref-1 is 3 Nos and as per ref-2 is 1 No.Kindly confirm the number of 245 kV three phase line disconnector in transformer bay.	Please see the item no. 07 & 08 of addendum 01 and revised price schedule (item no. 11 of addendum 02).	
53	Ref-1: Price schedule, Sl No. 1B3,ii	245kV, 4000A, 50kA/3s, three phase, gang pole operation	Please see the item no. 07 & 08 of addendum 01 and re-	

	Ref-2: Dwg SLD_BOGURA/1.1	circuit breaker complete with spring-stored energy operating mechanism-As per ref-1 is 2 Nos and as per ref-2 is 1 No. Kindly confirm the number of 245 kV CB in Bus coupler bay.	vise price schedule (item no. 11 of addendum 02).	
54	Ref-1: Price schedule, Sl No. 1B3,iv Ref-2: Dwg SLD_BOGURA/1.1	245kV, 50kA/3s, three phase, three position earth switch complete with motor operating mechanism, on either side of circuit breaker- As per ref-1 is 3 Nos and as per ref-2 is 2 No. Kindly confirm the number of 245 kV three position earth switch in Bus coupler bay.	Please see the item no. 07 & 08 of addendum 01 and revised price schedule (item no. 11 of addendum 02).	
55	Ref-1: Price schedule, Sl No. 1B4,iv Ref-2: Dwg SLD_BOGURA/1.1	420kV, 50kA/3s, three phase earth switch complete with motor operat-ing mechanism, one (1) on either side of circuit breaker- As per ref-1 is 1 Nos and as per ref-2 is 2 No. Kindly confirm the number of 245 kV three phase earth switch in Bus section bay.	Please see the item no. 07 & 08 of addendum 01 and revised price schedule (item no. 11 of addendum 02).	
56	Ref-1: Price schedule, Sl No. 1E1 Ref-2: Bagura Plan Drawing	As per Ref-1 Seven (7) Numbers Single phase 250MVA transformer is mentioned. But As per Ref-2 Four (4) numbers Three phase Transformer is shown. Please provide revise layout.	Please see the item no. 07 & 08 of addendum 01 and revised price schedule (item no. 11 of addendum 02).	
57	Ref-1: Price schedule, Sl No. 1.IIIA2 Ref-2: Bagura Plan Drawing	As per Ref-1 One (1) Number 420 kV, 125MVAR bus rector is mentioned . But as per Ref-2 Two (2) numbers Bus reactor is shown. Please confirm number of Bus reactor.	Please see the item no. 07 & 08 of addendum 01 and revised price schedule (item no. 11 of addendum 02).	
58	Ref-1: Price schedule	As per Ref-1 : 420kV, 4000A, 50kA/3s three phase line disconnector integral with high speed earth switch complete with motor operating mechanism. Please confirm short circuit rating of High Speed Earth Switch as for all other equipment short circuit rating is mentioned 63kA for 3 sec.	Please see the item no. 08 of addendum 01 and revised price schedule (item no. 11 of addendum 02).	
59	33kV Equipment	33kV Equipment 33 kV Outdoor equipments are not shown in layout. Please provide the same.	Please see the item no. 07 of addendum 01.	
60	400kV SLD_Bogura 400kV Layout_Bogura	Technical Data Sheet 01. GIS BM - Terminal of TR feeder is not able to figure out which type should be applied clearly. There is no mention on	The Terminal bushing for GIS is Gas-to-Air type.	

		data sheet and SLD, gas to oil bushing is mentioned on Layout Please clarify whether gas to oil bushing is correct composition at terminal of TR Feeder or other requirement		
61	400kV Layout_Bogura	Please provide overall layout of Bogura 400kV S/S with information of bus duct(GIB) length and route	As per tender.	
62	230kV Layout_Bogura	Please provide overall layout of Bogura 230kV S/S with location of gas to air bushing for comprise whole substation	As per tender.	
63	400kV SLD_Bogura	Bogura 400kV : Required busbar LA on SLD Please confirm that requirement of LA is as per SLD	Requirement of LA shall be as per Price schedule. Please refer to item no. 02, 04, 07 & 08 of Addendum no. 01 and revised price schedule (item no. 11 of addendum 02).	
64	400kV SLD_Bogura	400kV SLD_Bogura 400kV SLD_Rahanpur - Bogura 400kV : All required VT is CVT type as per SLD - Rahanpur 400kV : Interconnected VT with GIS is requried 'Inductive type', VT located independentely of GIS is required 'Capacitive type' as per SLD If gas to oil bushing will be applied at terminal of TR feeder on Bogura 400kV S/S, Busbar VT module & TR VT module should connect with GIS. However CVT type is not able to assemble with GIS, please clarify correct VT type.	The 400kV VT type is CVT. Please refer to item no. 02, 04,07 & 08 of Addendum no.01 and revised price schedule (item no. 11 of addendum 02).	

<table>
<tr>
<td>65</td>
<td>Transformer Bogura & Rahanpur</td>
<td>Transformer BM
It is mentioned that "Oil/Air Bushing or Oil/Gas Bushing is applied for HV Line and LV Line"
<table>
<tr><th>SL</th><th>Description</th><th>Unit</th><th>Rating</th></tr>
<tr><td></td><td>i) HV line</td><td></td><td>RIP type Oil/Air Bushing or Oil/Gas Bushing (to be connected with GIL)</td></tr>
<tr><td></td><td>ii) Neutral</td><td></td><td>RIP type Oil/Air Bushings</td></tr>
<tr><td></td><td>iii) LV line</td><td></td><td>RIP type Oil/Air Bushing or Oil/Gas Bushing (to be connected with GIL)</td></tr>
</table>
Please kindly give the detail and clarified bushing type for HV Line and LV Line of each transformer types.</td>
<td>Please refer to item no. 7a of Addendum no. 02.</td>
<td></td>
</tr>
<tr>
<td>66</td>
<td>Transformer Bogura & Ra-hanpur</td>
<td>Transformer BM
In specification, The phase is mentioned as single for 750MVA. But there are mentioned as three phase in price schedule.
<table>
<tr><th colspan="4">A2-1-1 (400/235/34.5 kV AUTO TRANSFORMER</th></tr>
<tr><th>SL</th><th>Description</th><th>Unit</th><th>Rating</th></tr>
<tr><td></td><td>RATING AND-PERFORMANCE</td><td></td><td></td></tr>
<tr><td>1</td><td>Maximum continuous rating (MCR)</td><td>MVA</td><td>750</td></tr>
<tr><td>2</td><td>Number of Phases</td><td></td><td>1</td></tr>
</table>
Please confirm that the BM specification is error to men-tion.</td>
<td>Confirmed. It shall be Three phase. Please refer to item no. 7a of Addendum no.02.</td>
<td></td>
</tr>
<tr>
<td>67</td>
<td>Transformer Bogura & Ra-hanpur</td>
<td>Transformer BM
Technical Data Sheet
Between BM specification and Technical Data sheet, There are differ-ences like below</td>
<td>Please refer to item no. 02, 04 & 08 of Addendum no.01.</td>
<td></td>
</tr>
</table>

		6.2.1 400/235/34.5 KV, 525/750 MVA, THREE PHASE AUTOTRANSFORMER: **6.2.2 (400/√3)/(235/√3)/34.5 KV, 175/250 MVA, SINGLE PHASE AUTO TRANSFORMER:** **6.2.3 400/135/34.5 KV, 350/520 MVA, 3-PHASE POWER TRANSFORMER:** 1E1 400/235/34.5 kV, 520/750 MVA (ONAN/ONAF), three phase outdoor type auto transformer equipped with delta connected 33 kV tertiary winding (brought out to terminal bushings) 3E1 Power Transformer of 400/230/34.5 kV three phase 520/750 MVA, YNa0d1, with On-load tap changer, with tertiary winding (brought out to terminal bushings) 2E1 Power Transformer of 400/132/33 kV three phase 400/520 MVA, YNa0d1, with On-load tap changer, with tertiary winding (brought out to terminal bushings) Please clarify the type, voltage rating, maximum continuous rating of transformer.		
68	Bogura 400 kV GIS	(a) Line item 1A1 (i) - Current rating 5000A but line item 1A1 (¡¡) current rating 4000A. Please clarify. (b) Line item 1A3 (iii) - 420kV, 4000A, 63kA/3s, three phase busbar disconnector complete with motor operating mechanism require 06 Nos. but as per SLD it is 08. Please clarify. (c) Line item 1A3 (v) - 420kV, 4000A, 50kA/3s three phase high-speed earth switch complete with motor operating mechanism require 02 set but as per SLD it is 01. Please clarify.	Please the item no. 02 of addendum 02.	

		(d) Line item 1A9 – As per price schedule single-phase wave trap are 12 Nos but required Nos are 18. Please clarify.		
69	Bogura 230 kV GIS	(a) The equipment current rating of SLD and price schedule differs from each other. Which should we use as reference? (b) Line item 1D2 - As per price schedule DS with ES is 04 set but as per SLD it is 02 set. Which one is correct? (c) Line item 1M3 (b) As per price schedule SPR for 400kV and 230kV is 02 but as per SLD SPR for 230kV is 02 and SPR for 400kV is 01. Kindly clarify.	The Drawings are tentative & for tender purpose only. Bidders are advised to follow the price schedule. Please see the item no. 02 of Addendum no.02 and revised price schedule (item no. 11 of addendum 02).	
70	Clarification-1, Sl no. 7	a) As per referred clarification, for Long/Compensated (series/ Shunt) Line, CSD alone cannot mitigate Overvoltage due to switching. In this regard, please furnish the line lengths of all 400kV transmission lines emanating from Bogura & Rahanpur station for assessing the PIR requirement. b) Either PIR or CSD shall be envisaged for 400kV line circuit breaker. Please confirm whether bidder's understanding is in order.	a) The bidder is requested to contract project director's office for this purpose. b) Bidder's understanding is not correct.	
71	Clarification-1, Sl no. 24 Price schedule - Rev.1, Schedule-B1, New 400/230 kV Substation at Bogura (W), Item No. 1A1 (ix), 1A2 (ix), 1A3(viii), 1B1(x), 1B2(ix), 1B3(ix)	As per referred price schedule, SF6 to air bushing shall be quoted in the referred line item of GIL which is unit rate. However, GIL is a variable quantity and shall be finalized during detail engineering. But Quantity of SF6 to Air bushing quantity is fixed irrespective of layout. Hence, we request to PGCB to add a separate line item in price schedule for SF6 to Air bushing.	Please see the item no. 02 of addendum 02 and revised price schedule (item no. 11 of addendum 02).	

72	Price schedule - Rev.1, Schedule-B1, New 400/230 kV Substation at Bogura (W), Item No. 1B2 (ii)	As per referred item, 245kV circuit breaker shall be single -pole operation for transformer bay. However, as per addednum-1, attachment-02, item no. 1B2 (ii), 245kV circuit breaker shall be gang operation for transformer bay. As above both the clauses are contradicting, please check and confirm the actual operation of circuit breaker of 245kV transformer bay.	CB for transformer bay shall be gang operated and revised price schedule (**item no. 11 of addendum 02**).	
73	Addendum-1, Attachment-01A, Clause no. 1.2.1- New 400/230 kV Substation at Bogura (W), 33kV AIS switchgear	As per referred clause, three (03) 33kV transformer bays shall be provided. However, as per revised price schedule, Item no. 1D, we understand that only 2 nos. of AIS type 33kV transformer bays shall be provided. Please check and confirm the no. of 33kV transformer AIS bays.	Two (02).	
74	Price schedule - Rev.1, Schedule-B1, New 400/230 kV Substation at Bogura (W), Item No. 1D5	As per referred price schedule item, 30kV surge arrester quantity is mentioned as 7 nos. As there are 3# 750MVA auto transformers, 30kV surge arrester quantity shall be 9nos. Please check and revise the price schedule accordingly.	Please see the item no 04 of addendum 01 and revised price schedule (**item no. 11 of addendum 02**).	
75	Clarification-1, Sl no. 16, Price schedule - Rev.1, Schedule-B1, New 400/230 kV Substation at Bogura (W), Item No. 1D5	As per referred clarification, 230kV busbar protection bay units shall be 17nos. However, as per referred revised price schedule, 230kV busbar protection bay units quantity is mentioned 23nos. Please check and revise the price schedule accordingly.	As per tender	
76	Clarification-1, Sl no. 16, Price schedule - Rev.1, Schedule-B1, New 400/230 kV Substation at Bogura (W), Item No. 1F4	Quantity of meters (Main & check) shall be 16nos (instead of 14 nos.) based on five (05) 400kV line bays & three (03) 400kV transformer bays. If main & check meter is required for 400kV Bus reactor bays also, then the quantity shall be 18nos. Please check and revise the price schedule accordingly.	Please see the item no. 02 of addendum 02 and revised price schedule (**item no. 11 of addendum 02**).	
77	Price schedule - Rev.1, Schedule-B1, New 400/230 kV Substation at Bogura	As per referred clause, DFDR shall be provided for 8 nos. of 400kV circuits. However, as per scope of works, 9 nos.	Please see the item no. 02 of addendum 02 and revised price schedule (**item no. 11 of addendum 02**).	

	(W), Item No. 1G1 (ii).a	of 400kV main bays shall be provided as follow: 400kV line bays- 5 nos. 400kV transformer bays - 3 nos. 400kV Bus reactor bay - 1 no. Please check and revise the 400kV DFDR circuits accordingly.		
78	Clarification-1, Sl no. 40	As per referred clarification, For 33kV AIS, Short circuit level shall be 31.5kA for 1 sec whereas for 33kV GIS, Short circuit level shall be 31.5kA for 3 sec.However, we are not envisaging any 33kV gas insulated switchgear (GIS) in this contract. Please confirm.	Confirmed.	
79	Clarification-1, Sl no. 55 & 56	As per referred clause, we understand that 25% spare feeder shall be considered for DCDB & LTACDB other than present scope. However, the same is not updated in addendum-1, attachment-02, item no. 1K & 1L. In this regard, we are considering 25% spare feeders in DCDB & LTACDB other than present scope for this contract irrespective of contradiction between clarification & addendum. Please confirm.	Confirmed.	
80	Clarification-1, Sl no. 57	As per referred clause, we understand that 2 nos. of SPR (one with battery & one without battery) shall be considered for each 230kV & 400kV system at Bogura station. In this regard, please confirm that SPR size shall be followed as per drawing furnished by PGCB or it can be modified based on actual requirement. If SPR size shall be decided by bidder, please confirm that future bays to be considered for sizing of SPR or only	As per tender.	

		present bays to be considered.		
81	Clarification-1, Sl no. 63 (Bogura)&Clarification-1, Sl no. 160 (Rahanpur)	As per clarification-1, Sl. No. 63, SPR room size can be decided by Bidder as per actual requirement. However, as per clarification-1, Sl. No. 160, SPR room size shall be followed as per Bid requirement. In this regard, please clarify whether the SPR room dimensions as given in the drawings furnished by PGCB shall be followed or it can be optimized to suit the project requirement.	As per tender.	
82	Vol 2, Scope of Work, Clause 1.2.1 Proposed Bogra 400/230 kV Substation shall be located in the --- thana of Bogra	Bidder requests PGCB to provide Site cordinates for Bogra site through offical communication as bidder need the same for collecting site details to estimate the Land Development /Soil resistivity/ Layout preparation etc	Please refer to item no.14 of Addendum no. 01.	
83	Vol 2, Scope of Work, Clause 1.2.1 Proposed Bogra 400/230 kV Substation shall be located in the --- thana of Bogra	Bidder is requesting PGCB to specify the Load Bearing capacity of soil as they have failed to perform soil testing at sites (Bogura & Rahanpur) because of local agitation by villagers.	Please refer to item no.84 of Clarification no. 01.	
84	Drawing: SLD_Bogura_OP1/1.1	Bidder understands that the land for proposed Bogra substation is already acquired and under PGCB possession. Kindly confirm	Please refer to item no. 04 of clarification no. 01.	
85	Volume 2, 1. Scope of Works, Page No.-4 & 5	Tender drawings consists of 2 layouts for Bogura Substation. Bidder requests PGCB to confirm which one to be followed. Kindly confirm.	Please follow the addendum-01.	
86	Volume 2, 1. Scope of Works, Page No.- 5 The configuration of the 420kV busbar shall be one & Half Breaker busbar scheme. Jointing plugs/Adapter shall be kept in GIS hall	Scope of work mentions requirement of space provision only for future bays of 400KV & 230kV. Bidder understands that only space provision to be considered for future bays & No Earthing, Lighting etc works to be done for future bays. Kindly confirm.	Confirmed.	

	for adding future bays and jointing plugs required for connecting GIS of different makes.			
87	Volume 2, 1. Scope of Works, Page No.- 5 AND Price Schedule:New 400/230 kV Sub-station at Bogura (W)	Bidder understands that 400kV & 220kV GIS is Outdoor type & hence GIS hall mentioned in mentioned clause & at other places is a typo graphical error. Kindly Confirm.	Voltage rating is 400/235/34.5 kV,	
88	Vol 2, Scope of Work, Clause 1.2.1 420kV GIS : Space provision for future bays	As mentioned in Scope of works, Auto Transformer requirement is 400/230/33kV transformers while in Price Schedule Transformer requirement is 400/230/34.5kV transformers. As per our understanding, the rating mentioned in Price schedule for 400/235/34.5 kV, 520/750 MVA (ONAN/ONAF), three phase outdoor type auto transformer needs to be considered. Kindly confirm.	As per tender.	
89	Vol 2, Scope of Work, Clause 1.2.1 420kV GIS : one & half breaker scheme	We presume that space provision for 3 dias (considering 2 line bays,1 reactor bay, 2 transformer bay, 1 spare bay and 3 tie bays) needs to be considered (future bays) as per one & a half breaker scheme. Kindly confirm.	The Layout shall be finalized during execution prior to employers' approval.	
90	Vol 2, Scope of Work, Clause 1.2.1 230kV GIS : 8 line bays in present scope	Bidder understands that based on Line bays & Transformer location bidder can customize the layout of the GIS. Kindly confirm.	Addressed Already	
91	Price Schedule - Item 1A1(vi) SLD_BOGURA/1.1	As per the proposed layout, only 4 nos. of line bays have been shown, whereas as per the mentioned clause, 8 nos. of line bays are in present scope. Please confirm.	Addressed Already	
92	Price Schedule - Item 1A2(vi & vii) SLD_BOGURA/1.1	As per the mentioned item no. of the price schedule, disconnector with high speed earthing switch is required.	Addressed Already	

		Whereas, as per SLD , HSES only is required. Please clarify.		
93	Price Schedule - Item 1A3(iii) SLD_BOGURA/1.1	As per the mentioned item no. of the price schedule, 6 nos. disconnectors are required. Whereas, as per SLD 8 nos. of disconnectors are shown. Please clarify.	Addressed Already	
94	Price Schedule - Item 1A3(v) SLD_BOGURA/1.1	As per the mentioned item no. of the price schedule,2 sets of high speed earthing switch is required. Whereas, as per SLD, 1 set is required. Please clarify.	Addressed Already	
95	Price Schedule - Item 1A7 SLD_BOGURA/1.1	As per the mentioned item no. of the price schedule,27 nos. of AIS type CVTs are required. However, in SLD, 30 nos. of CVTs are required. Please clarify.	Addressed Already	
96	Price Schedule - Item 1A12	Please provide standard gantry column, beam and equipment structure drawings.	Addressed Already	
97	Price Schedule - Item 1B1 (iii) SLD_BOGURA/1.1	As per the mentioned item no. of the price schedule, disconnector rating required is 3150A. However, in SLD following rating disconnectors have been mentioned - 2500A, 3000A, 4000A. Please clarify.	Addressed Already	
98	Price Schedule - Item 1B2 (ii) SLD_BOGURA/1.1	As per the mentioned item no. of the price schedule, 2 sets of circuit breaker per bay is required. However, as per SLD, only 1 no. of CB per bay is mentioned. Please clarify.	Addressed Already	
99	Price Schedule - Item 1B2 (vi & vii) SLD_BOGURA/1.1	As per the mentioned item no. of the price schedule, CT with 4000A current rating is required. However, as per SLD, 3000A CT is mentioned. Please clarify.	Addressed Already	
100	Price Schedule - Item 1B3 (ii) SLD_BOGURA/1.1	As per the mentioned item no. of the price schedule, 2 sets of circuit breaker per bay is required. However, as per SLD, only 1 no. of CB per bay is mentioned. Please clarify.	Addressed Already	
101	Price Schedule - Item 1B3 (iv) SLD_BOGURA/1.1	As per the mentioned item no. of the price schedule, 3 nos. of 3 position earth switch is required. However, as	Addressed Already	

		per tender SLD 6 nos. or 2 sets of 3 position earth switch is required. Please clarify.		
102	Price Schedule - Item 1B4 (iv) SLD_BOGURA/1.1	As per the mentioned item no. of the price schedule, 1 set of 3 position earth switch is required. However, as per tender SLD 2 sets of 3 position earth switch is required. Please clarify.	Addressed Already	
103	Price Schedule - Item 1B6	We presume that the line item as per the mentioned clause is for AIS type 230kV LA. Please confirm.	Addressed Already	
104	Price Schedule - Item 1B9	Please provide standard gantry column, beam and equipment structure drawings.	Addressed Already	
105		Please provide standard drawings for fire fighting pump house (FFPH) & water tank.	Addressed Already	
106	Price Schedule - Item 1M3 Layout	As per the mentioned clause of price schedule, 2 nos. of switchyard panel rooms for 400kV & 230kV GIS is required. However, as per the proposed layout 01 No. SPR for 400kV GIS and 02 Nos. SPR for 230kV have been shown. Please clarify.	Addressed Already	
107		Please provide standard drawings for control room building & switchyard panel room required for 400kV & 230kV GIS.	Addressed Already	
108	Price Schedule - Item 1D4 SLD_BOGURA/1.1	As per the mentioned item no. of the price schedule, 4 sets of disconnector is required. However, as per tender SLD only 2 nos. have been shown, Please clarify.	Addressed Already	
109	Vol 2, Scope of Work, Clause 1.6 ambient temperature	As per the mentioned clause of scope of works, maximum ambient shade temperature is mentioned as 45deg C. Kindly confirm the same for outdoor GIS also.	As per tender.	
110	Volume III, Clause 13.31.2	Air Cooled Split System Air Handling Units is mentioned in TS which require additional AHU room. Due to small room sizes, only Ductable Split AC with Ducting arrangements sufficient for the which will be hanged above false ceiling and supply and return air will be recirculated through diffusers. Pls confirm the same.	Detail/Alternative design shall be finalized during execution within the contract price prior to Employers approval.	

111	Volume III, Clause no. 1E4	As per referred clause, both Nitrogen Injection system and HVWS System is to be provided for Transformer Fire Protection. Pls confirm both systems are required or only Nitrogen Injection System (NIFPS) can be considered for Transformer Protection	There is no NIFPS/ HVWSS in the present scope of work. The requirement is as per tender.	
112	Price Schedule	For Reactors, type of fire protection system is not defined in price schedule and TS. Pls clarify should we have to consider same like transformer (both NIFPS and HVWS).	As per tender.	
113	Price Schedule, Clause no 1E4, 1M6.1	As per Clause no. 1E4, Supply of Fire Pumping System, Pump House, Reservoir, Piping is not mentioned, however as per Clause no. 1M6.1 Civil work of the same is mentioned. Please clarify the scope of supply for Pumping system along with reservoir & Piping Network.	Complete system shall be supplied under item no. 1E4.	
114	Volume II, Clause no. 4.12.1	Hydrant system requirement is not mentioned in TS, so we are considering only for control room building. Please confirm.	It is required for both SPRs & Control Room.	
115	Volume II, Clause no. 4.12.1	Type of fire detection system is not mentioned clearly. So, we are considering Conventional type Fire Detection & Alarm System. Please confirm. Also request you to provide details Specification of FDA System.	As per tender.	
116	Volume II, Clause no. 10B.3.1	As per referred clause, EOT Crane shall be provided in GIS Switchgear Rooms, However GIS is outdoor. and as per Price Schedule-B4, Clause no 1M3, Civil Work 10T EOT Crane mentioned is deleted. So we understand that, Crane is not envisaged for this project. Please confirm.	Confirmed. Please refer to item no.08 of Addendum no. 01.	
117	Clarification -1, S. No. 162	As per the bidding document and Addendum -1 received from PGCB, there is a line item regarding EMTP study for 400/230kV Bogura S/stn. (Price Schedule B3- Design Services). When we raised a query regarding the scope of EMTP study in our pre-bid, PGCB in their clarification -1 has clearly stated that there shall be a supervision consultant for the project and the EMTP study shall be in the Consultant's scope.	Please see the item no.03 of addendum 02.	

		From this we infer that the EMTP study is not in our scope and it will be carried out by PGCB through a hired third party consultant. The results of the EMTP study shall be provided to the successful bidder during project execution for finalizing the equipment ratings.		
118	Price Schedule – B3: Design Services	Relay Coordination study is to be carried out for the whole project with software demonstration. Please elaborate on the scope of the relay coordination study and the name of the software in which the study is to be carried out (if anything specific)	The bidder is free you use any software for relay co-ordination provided that demonstration is required and shall be approved by SPMC, PGCB	
119	Price Schedule, S. No. 1 N3	Complete specification for the 1KW solar panel with 12V VRLA maintenance battery for Substation emergency DC lighting is not yet provided by PGCB. Please provide the same. We also understand that this solar panel shall be installed and used for Main Control Room Building only. Please confirm.	Confirmed.	
120	Addendum – 1, Clause 7.5	In soil survey, PGCB has asked us to do earthmat sizing considering 2 layer modeling. Are we supposed to do the earthmat sizing in any specific software. Please confirm.	As per tender	
121	Clarification-1, S. No. 7 and 8	For 400kV line -tie -ICT diameters, Breaker for line bays shall be provided with PIR, Transformer bay breaker is with CSD and tie bay breaker shall have PIR + CSD. We understand that for line bay breaker CSD is also to be considered as per the output of the EMTP study. Please confirm for quoting purpose, what is to be considered for line bay breaker (i.e. only PIR, only CSD or PIR + CSD) and tie bay breaker (i.e. only PIR, only CSD or PIR + CSD) so that every bidder is at par.	As per tender	
122	Clarification -1, S. No. 311	For Type test, we understand that valid type test reports are to be submitted to PGCB along with the bid. Please confirm the validity requirement of the type test reports, i.e. how older type test reports are accepted. (number of years from the bid opening date)	As per tender	

Rahanpur (Chapainawabganj) Substation

123	400kV SLD_Rahanpur	Technical Data Sheet 01. GIS BM Quantity discrepancy of Rahanpur 400kV GIS in tender documents - SLD : Total 11bay / Line 5bay, TR 2bay, BC 1bay, BS 2bay, Reactor 1bay - BM : Total 11bay / Line 4bay, TR 2bay, BC 2bay, BS 2bay, Reactor 1bay - Data sheet : Total 10bay / Line 4bay, TR 2bay, BC 1bay, BS 0bay, Reactor 1bay.Please clarify quantity and feeder information of Rahanpur 400kV GIS	Please refer to item no. 04, 07 & 08 of Addendum no.01 and item no. 11 of addendum 02.	
124	Layout_Rahanpur	Please provide overall layout of Rahanpur 400/230kV S/S with location of gas to air bushing and bus reactor for comprise whole substation	As per tender.	
125	400kV SLD_Rahanpur	Rahanpur 400kV : Not required busbar LA on SLD Please confirm that requirement of LA is as per SLD	Requirement of LA shall be as per Price schedule. Please refer to item no. 02,04,07 & 08 of Addendum 01.	
126	400kV SLD_Rahanpur	400kV SLD_Bogura 400kV SLD_Rahanpur - Bogura 400kV : All required VT is CVT type as per SLD - Rahanpur 400kV : Interconnected VT with GIS is requr-ied 'Inductive type', VT located independentely of GIS is required 'Capacitive type' as per SLD .If gas to oil bushing will be applied at terminal of TR feeder on Bogura 400kV S/S, Busbar VT module & TR VT module should connect with GIS. However CVT type is not able to assemble with	The 400kV VT type is CVT. Please refer to item no. 02, 04,07 & 08 of Addendum no.01.	

<table>
<tr><td></td><td></td><td>GIS, please clarify correct VT type.</td><td></td><td></td></tr>
<tr><td>127</td><td>Transformer Bogura & Rahanpur</td><td>Transformer BM

It is mentioned that "Oil/Air Bushing or Oil/Gas Bushing is applied for HV Line and LV Line"

<table>
<tr><th>SL</th><th>Description</th><th>Unit</th><th>Rating</th></tr>
<tr><td></td><td>i) HV line</td><td></td><td>RIP type Oil/Air Bushing or Oil/Gas Bushing (to be connected with GIL)</td></tr>
<tr><td></td><td>ii) Neutral</td><td></td><td>RIP type Oil/Air Bushings</td></tr>
<tr><td></td><td>iii) LV line</td><td></td><td>RIP type Oil/Air Bushing or Oil/Gas Bushing (to be connected with GIL)</td></tr>
</table>

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<tr><th>SL</th><th>Description</th><th>Unit</th><th>Rating</th></tr>
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<tr><td></td><td>iii) LV line</td><td></td><td>RIP type Oil/Air Bushing or Oil/Gas Bushing (to be connected with GIL)</td></tr>
</table>

Please kindly give the detail and clarified bushing type for HV Line and LV Line of each transformer types.</td><td>Please refer to item no. 7a of Addendum no.02.</td><td></td></tr>
<tr><td>128</td><td>Transformer Bogura & Rahanpur</td><td>Transformer BM
In specification, The phase is mentioned as single for 750MVA. But there are mentioned as three phase in price schedule.

A2-1-1 (400/235/34.5 kV AUTO TRANSFORMER

<table>
<tr><th>SL</th><th>Description</th><th>Unit</th><th>Rating</th></tr>
<tr><td></td><td>RATING AND PERFORMANCE</td><td></td><td></td></tr>
<tr><td>1</td><td>Maximum continuous rating (MCR)</td><td>MVA</td><td>750</td></tr>
<tr><td>2</td><td>Number of Phases</td><td></td><td>1</td></tr>
</table>

Please confirm that the BM specification is error to mention.</td><td>Confirmed. It shall be Three phase. Please refer to item no. 7a of Addendum no.02.</td><td></td></tr>
</table>

129 130	Transformer Bogura & Rahanpur	Transformer BM Technical Data Sheet Between BM specification and Technical Data sheet, There are differ-ences like below **6.2.1 400/235/34.5 KV, 525/750 MVA, THREE PHASE AUTOTRANSFORMER:** **6.2.2 (400/√3)/(235/√3)/34.5 KV, 175/250 MVA, SINGLE PHASE AUTO TRANSFORMER:** **6.2.3 400/135/34.5 KV, 350/520 MVA, 3-PHASE POWER TRANSFORMER:** 2E1 Power Transformer of 400/132/33 kV three phase 400/520 MVA, YNa0d1, with On-load tap changer, with tertiary winding (brought out to terminal bushings) 3E1 Power Transformer of 400/230/34.5 kV three phase 520/750 MVA, YNa0d1, with On-load tap changer, with tertiary winding (brought out to terminal bushings) **6.2.1 400/235/34.5 KV, 525/750 MVA, THREE PHASE AUTOTRANSFORMER:** 1E1 400/235/34.5 kV, 520/750 MVA (ONAN/ONAF), three phase outdoor type auto transformer equipped with delta connected 33 kV tertiary winding (brought out to terminal bushings) Please clarify the type, voltage rating, maximum continu-ous rating of transformer.	Please refer to item no. 02, 04 & 08 of Addendum no.01.	

131	Rahanpur 400 kV GIS	a) Line item 2A1 (ii) - As per price schedule Busbar Disconnector is 02 sets but as per SLD it is 03 sets. Please clarify. b) Line item 2A2 (ii) - Voltage rating 4420kV. Please clarify. c) Line item 2A2 (ix)- As per price schedule VT requires 1 set, which is not found in SLD. Please clarify. d) Line item 2A3 (i)-(viii) - As per SLD all current rating are 2000A but as per price schedule all current rating is 4000A. Which one is correct please clarify. e) Line item 2A4 – As per price schedule current rating 1600A but as per SLD it is 2000A. Which one is correct please clarify. f) Line item 2A5 – As per price schedule current rating 4000A but as per SLD it is 5000A which one is correct please clarify. g) Line item 2A3 – As per price schedule bus coupler bays are 2 set but as per SLD it is 01 set. Please clarify. h) Line item 2A3 (ii) – As per price schedule CB is 02 set but as per SLD it is 01 set. Please clarify. i) Line item 2A7 – As per price schedule LA is 06 Nos, which is not found in SLD. Please clarify. j) Line item 2A8 – As per price schedule VT is 21 Nos, but as per SLD it is 15 Nos. Please clarify. k) Line item 2A10 – As per price schedule wave trap is 08 Nos, but as per SLD it is 05 Nos. Please clarify. l) Line item 2F1 – As per scope of work we need to construct 5 bays, but for CRP overhead circuit it is shown 4 bays. Kindly confirm furnishing bay is included or not. m) Line item 2F3 – As per price schedule bus coupler	Tender drawings are tentative & for tender purpose only. BPS shall be followed in case of discrepancy. Please refer to item no. 3 & 8 of Addendum no. 01 and item no. 11 of addendum 02.	

		is 02 set but as per SLD it is one. Kindly confirm.		
132	Rahanpur 132 kV GIS	a) Line item 2C1 (v) & (vi) – Voltage rating is 245kV or 145kV. Please clarify. b) Line item 2C1 (x) – Voltage rating is 245kV or 145kV. Please clarify. c) Line item 2C2 (v) & (vi) – Voltage rating is 245kV or 145kV. Please clarify. d) Line item 2C2 (viii) & 2C3 (vi). Voltage rating is 245kV or 145kV please clarify. e) Line item 2C1 (vii) & (viii) – As per price schedule current rating of CT is 4000A but as per SLD current rating of CT is 4000A and 3000A. Please clarify. f) Line item 2C1 (iv) – As per price schedule ES is 02 set each bay but as per SLD in Chapainawabganj-2,Niyamatpur-1 & Niyamatpur-2 bays ES is 03 set each bay. Please clarify. g) Line item 2C2 (ii) – As per price schedule CB is 02 set but as per SLD it is 01 set. Please clarify. h) Line item 2C2 (iv) – As per price schedule ES is 02 set but as per SLD it is 01 set. Please clarify. i) Line item 2C2 (vii) & (viii) – As per price schedule current rating is 2500-4000A but as per SLD it is 3000A. Please clarify.	Tender drawings are tentative & for tender purpose only. BPS shall be followed in case of discrepancy. Please refer to item no. 3 & 8 of Addendum no. 01 and revised price schedule (**item no. 11 of addendum 02).**	
133	Rahanpur 33 kV Portion (Transformer End)	Line item 2D2 – As per price schedule 02 set of DS and 02 set of DS with ES but as per SLD it is only 02 set of DS. Please clarify.	Please follow price schedule.	

Approved by _____

134	Rahanpur	(a) Line item 2O5 – As per price schedule line matching unit 08 nos but as per SLD it should be 15 nos. Kindly clarify. (b) Line item 2.IIIA4 – As per price schedule LA is 03 nos but as per SLD there is no LA. Please clarify. (c) Line item 2M2 (ii-c) – As per price schedule Wave Trap is 08 nos but as per SLD it is 15 nos. Please clarify.	Please follow price schedule.	
135	Volume-II, Clause 13.31.2	Air Cooled Split System Air Handling Units is mentioned in TS which require additional AHU room. Due to small room sizes, only Ductable Split AC with Ducting arrangements sufficient for the which will be hanged above false ceiling and supply and return air will be recirculated through diffusers. Pls confirm the same.	Detail/Alternative design shall be finalized during execution within the contract price prior to Employers approval.	
136	Volume III, Clause no. 2E4	As per referred clause, both Nitrogen Injection system and HVWS System is to be provided for Transformer Fire Protection. Pls confirm both systems are required or only Nitrogen Injection System (NIFPS) can be considered for Transformer Protection	Please follow the tender documents.	
137	Price schedule	For Reactors, type of fire protection system is not defined in price schedule and TS. Pls clarify should we have to consider same like transformer (both NIFPS and HVWS).	As per tender.	
138	Price Schedule, Clause no 2E4, 2M6.1	As per Clause no. 2E4, Supply of Fire Pumping System, Pump House, Reservoir, Piping is not mentioned, however as per Clause no. 2M6.1 Civil work of the same is mentioned. Please clarify the scope of supply for Pumping system along with reservoir & Piping Network.	Complete system shall be supplied under item no. 2E4.	
139	Volume II, Clause no. 4.12.1	Hydrant system requirement is not mentioned in TS, so we are considering only for control room building. Please confirm.	It is required for both SPRs & Control Room.	

140	Volume II, Clause no. 4.12.1	Type of fire detection system is not mentioned clearly. So, we are considering Conventional type Fire Detection & Alarm System. Please confirm. Also request you to provide details Specification of FDA System	As per tender.	
141	Volume II, Clause no. 10B.3.1	As per Price Schedule-B4, Clause no 2M3, Civil Work 10T/5T EOT Crane is mentioned as 1 Set. Also, as per referred clause, EOT Crane shall be provided in GIS Switchgear Rooms, However GIS is outdoor. So, EOT crane is not required for outdoor GIS. Pls confirm.	Confirmed. Please refer to item no.02 of Addendum no. 02.	
142	Clarification-1, Sl no. 63 (Bogura)&Clarification-1, Sl no. 160 (Rahanpur)	As per clarification-1, Sl. No. 63, SPR room size can be decided by Bidder as per actual requirement. However, as per clarification-1, Sl. No. 160, SPR room size shall be followed as per Bid requirement. In this regard, please clarify whether the SPR room dimensions as given in the drawings furnished by PGCB shall be followed or it can be optimized to suit the project requirement.	The SPR size shall be as per tender drawings. However, if required larger size, the employer shall have the right to change the size on square-meter basis.	
143	Price schedule - Rev.1, Schedule-B1, New 400/132 kV Substation at Rahanpur (Chapainawabganj), Item No. 2A2 (vii)	As per referred item, 400kV CT current rating shall be 3150A for Rahanpur station. However, as per addednum-1, Attachment-04-2, item no. 2A2 (vii), CT current rating is mentioned as 4000A. Please check and confirm the actual current rating of 400kV current transformer.	It shall be as per attachment-04-2, item no. 2A2 (vii) of Addednum-1. Please refer to item no. 02 of Addendum no. 02.	
144	Price schedule - Rev.1, Schedule-B1, New 400/132 kV Substation at Rahanpur (Chapainawabganj), Item No. 2A2 (viii)	As per referred price schedule item, 3-core CT shall be provided for 400kV transformer bay. However, as per addednum-1, attachment-04-2, item no. 2A2 (viii), - 4 core CT shall be provided. Please check and confirm the number of cores for 400kV transformer bay of Rahanpur station.	It shall be as per attachment-04-2, item no. 2A2 (viii) of Addednum-1. Please refer to item no. 02 of Addendum no. 02.	
145	Clarification-1, Sl no.129,	As per referred clarification, 145kV switchgear short time current rating shall be 40kA for 3sec. However, as per revised price schedule-B1, item no. 2C1 (v), 145kV disconnector rating is mentioned as 50kA for 3sec. Please check and revise the price schedule accordingly.	It shall be 40kA for 3sec. Please refer to item no. 02 of Addendum no. 02.	

146	Price schedule - Rev.1, Schedule-B1, New 400/132 kV Substation at Rahanpur (Chapainawabganj), Item No. 2A3	As per referred price schedule, we understand that only one no. of Bus coupler bay is required for 400kV system at Rahanpur station. No Bus-section bay shall be envisaged. However, the same is not updated in addednum-1, attachement-04-2. Please check and confirm the requirement.	Please refer to item no. item no.04 of Addendum no. 02.	
147	Clarification-1, Sl no. 137 & 138,Price schedule - Rev.1, Schedule-B1, New 400/132 kV Substation at Rahanpur (Chapainawabganj), Item No. 2A6	As per addendum, Bus section is not required for 400kV rahanpur station. Hence only one bus-coupler bay is required.However, as per referred price schedule item, total no. of Bus VT is indicated 12 nos. (6 nos of 2 set) and high speed earth switch for bus is 4 nos. (2 nos of 2set)Since there is only one bus-coupler bay, Only 6 nos. of Bus VT (3 nos for each bus) and 2 nos of high speed earth switch is required.Please check and revise the bid price schedule accordingly.	Please refer to item no. item no.04 of Addendum no. 02.	
148	Clarification -1, Sl no. 144,	As per referred clarification, 4 core CT shall be provided for 132kV transformer & line bay. However, as per addednum-1, attachment-04-2, Item no. 2C1 (vii, viii) & 2C2 (vii, viii), only 3 cores description is given. Hence we understand that only 3 core CT is required for 132kV line & transformer bay based on protection & metering requirement. So please confirm the number of CT cores for 132kV line & transformer bays.	4 no. s CT core to be considered, one as spare Protection class.	
149	Price schedule - Rev.1, Schedule-B1, New 400/132 kV Substation at Rahanpur (Chapainawabganj), Item No. 2C4 (vi)	As per referred clause, 3-core CT shall be provided for 132kV Bus-section bay. However, as per addednum-1, attachment-04-2, item no. 2C4 (vi), 2-core CT is mentioned. Please check and confirm the actual number of CT cores.	It shall be as per addednum-1, attachment-04-2, item no. 2C4 (vi), 2-core CT. Please refer to item no. 02 of Addendum no. 02.	
150	Clarification-1, Sl no. 146	As per referred clarification, 3 core CT shall be provided for 33kV.	It shall be as per Clarification-1, Sl no. 146. Please refer to item no. 2 & 4 of Addendum no. 02.	

		However as per addedum-1, attachment-04-2, item no. 2D3, 4-Core CT is mentioned. Hence please check & revise the price schedule B1 as well as Schedule-A as applicable, for both Bogura & Rahanpur station.		
151	Clarification-1, Sl no. 194,Price schedule - Rev.1, Schedule-B1, New 400/132 kV Substation at Rahanpur (Chapainawabganj), Item No. 2E1	As per vol.2, Appendix - A2-2, Sl no. 12, Vector group of 400/135/34.5kV transformer is indicated as YNynd1. However, as per revised price schedule, item no. 2E1, Vector group of 400/135/34.5kV transformer shall be YNa0d1.As the transformer has an auto connected winding, we understand that the vector group shall be YNa0d1 only. Please confirm whether Bidder's understanding is in order.	Confirmed. Please refer to item no. 06 of Addendum no. 02.	
152	Price schedule - Rev.1, Schedule-B1, Upgradation of 400/132kV Gopalganj Substation by erecting 230kV Switchyard, Item No. 3F2 & 3F6	Main transformer protection relays are indicated in both HV side (Item No. 3F2) & LV side (3F6). We presume that Main relays shall be provided only on HV side & for LV side back up protection (overcurrent & Earth fault) alone is sufficient. Please confirm and provide suitable amendments.	Confirmed.	
153	Price schedule - Rev.1, Schedule-B1, New 400/132 kV Substation at Rahanpur (Chapainawabganj), Item No. 2F3	Quantity of Control, protection, monitoring & SAS for Bus coupler circuit shall be 1 no instead of 2 nos. Please check and revise the price schedule accordingly.	Please refer to item no. 02 of Addendum no. 02.	
154	Price schedule - Rev.1, Schedule-B1, New 400/132 kV Substation at Rahanpur (Chapainawabganj), Item No. 2F4	As per clarification, Bus -section is not required for 400kV system at Rahanpur station. Accordingly, please delete the control & protection line item for the 400kV Bus-section bays at rahanpur station.	Please refer to item no. 02 & 04 of Addendum no. 02.	
155	Clarification-1, Sl no. 132, Price schedule - Rev.1, Schedule-B1, New 400/132 kV Substation at Rahanpur (Chapainawabganj), Item No. 2F8	a) As per referred clarification, Quantity of Control Mimic panel with all accessories including monitoring shall be 1set. However, the same is not updated in price schedule. b) Though there is a separate line item, the quantity of CRP for Power transformer circuits is not mentioned in the revised price schedule also.	a) Please refer to item no. 02 of Addendum no. 02. b) Please refer to item no. 02 of Addendum no. 02.	

		Please check and revise the BPS accordingly.		
156	Price schedule - Rev.1, Schedule-B1, New 400/132 kV Substation at Rahanpur (Chapainawabganj), Item No. 2F11 (b) . i	As per referred item, Bay units for 132kV Bus bar protection is indicated as 10set. But, Bay units shall be 12set based on number of 132kV bays as follows:Line bay - 6 nos.Transformer bay - 2 nosBus-coupler bay - 2 nos.Bus-section bay - 2 nos.Please check and revise the price schedule accordingly.	Confirmed. Please refer to item no. 02 of Addendum no. 02.	
157	Price schedule - Rev.1, Schedule-B1, New 400/132 kV Substation at Rahanpur (Chapainawabganj), Item No. 2G1 (ii)-a	Digital & Analog data acquisition system for 400kV circuit shall be 8set instead of 10set, as only 8 nos. of 400kV bays are in present scope. Please check and revise the price schedule accordingly.	Confirmed. Please refer to item no. 02 of Addendum no. 02.	
158	Price schedule - Rev.1, Schedule-B1, New 400/132 kV Substation at Rahanpur (Chapainawabganj), Item No. 2G1 (ii)-b	Digital & Analog data acquisition system for 132kV circuit shall be 12set instead of 16set, as only 12 nos. of 132kV bays are in present scope. Please check and revise the price schedule accordingly.	Confirmed. Please refer to item no. 02 of Addendum no. 02.	
159	Vol 2, Scope of Work, Clause 1.2.2 Proposed Rahanpur 400/132 kV Substation shall be located in the ---- thana of Rajshahi.	Bidder requests PGCB to provide Site cordinates for Rahanpur site through offical communication as bidder need the same for collecting site details to estimate the Land Development /Soil resistivity/ Layout preparation etc	Please refer to item no. 14 of Addendum no.01.	
160	Vol 2, Scope of Work, Clause 1.2.2 Proposed Rahanpur 400/132 kV Substation shall be located in the ---- thana of Rajshahi.	Bidder understands that the land for proposed Rahanpur substation is already acquired and under PGCB possession. Kindly confirm	Not confirmed. Please refer to item no. 126 of Clarifcation no.01.	
161	Volume 2, 1. Scope of Works, Page No.-6	In Scope of work, Space provision only for future bays of 400KV & 132kV need to be considered. Bidder understands that only space provision to be considered for future bays & No Earthing works, Lighting works, etc to be done for future bays. Kindly confirm.	Confirmed as per tender.	

162	Volume 2, 1. Scope of Works, Page No.- 6 The configuration of the 420kV bus-bar shall be Double busbar with by-pass isolator scheme. Jointing plugs shall be kept in GIS hall for adding future bays and jointing plugs required for connecting GIS of different makes.	Bidder understands that 400kV & 132kV GIS is Outdoor type & hence GIS hall mentioned in mentioned clause & at other places is a typo graphical error. Kindly Confirm.	Confirmed.	
163	Volume 2, 1. Scope of Works, Page No.- 6 AND Price Schedule: New 400/132 kV Sub-station at Rahanpur	In Scope of works, Rating of Auto Transformer consid-ered to be 400/230/34.5 kV transformers while Price Schedule rating of Transformer considered to be 400/230/33 kV transformers. Bidder understands that Transformer rating to be fol-lowed as per Price Schedule ie 400/132/33 kV three phase 400/520 MVA. Kindly Confirm.	Voltage Rating of Auto Transformer shall be considered as 400/135/34.5 kV.	
164	Price Schedule: New 400/132 kV Sub-station at Rahanpur 2E1: Power Transformer of 400/132/33 kV three phase 400/520 MVA, YNa0d1, with On-load tap changer, with tertiary winding (brought out to terminal bushings)	Bidder understands Power Transformer mentioned in Price schedule is a typo graphycal error & the same is Au-to Transformer. Kindly confirm.	Confirmed.	
165	Volume 2, 1. Scope of Works, Page No.- 7 33 kV GIS Switchgear AND Price Schedule: New 400/132 kV Substation at Rahanpur	Bidder understands 33kV Switchgear is of AIS type as per the Price Schedule. While in Scope of works, 33kV GIS Switchgear is men-tioned. Bidder understand that 33 kV GIS Switchgear mentioned in scope of works is due to typographical error. Kindly Confirm.	Confirmed. Please refer to item no. 03 of Addendum no. 01.	

166	Volume 2, 1. Scope of Works, Page No.- 7: Complete civil works and facilities for one new Control building with cable basement(2m)	Bidder understands that as this is an outdoor GIS substation, there is no requirement for Cable basement. Kindly confirm.	Please refer to item no. 03 of Addendum no.01.	
167	Vol 2, Scope of Work, Clause 1.2.2 420kV GIS : Space provision for future bays	As per the scope of works, space provision for 6 nos. of 420kV bays and 2 nos. of 420kV trafo bays needs to be provided. However, in SLD, only 4 nos. future 420kV bays and 2 nos. of 420kV trafo bays have been mentioned and in layout only 2 nos. of 420kV bays and 2 nos. of 420kV trafo bays have been shown. Please clarify.	Drawings are tentative & for Bidding pourpose only.It shall be as per scope of work.	
168	Vol 2, Scope of Work, Clause 1.2.2 420kV GIS : Bypass isolator scheme	As per scope of works, 420kV GIS with bypass isolator scheme have been mentioned. However, the same has not been considered in price schedule and SLD. Kindly confirm.	420kV GIS shall be Double Main Busbar scheme.Please refer to item no. 03 of Addendum no.01.	
169	Vol 2, Scope of Work, Clause 1.2.2 132kV GIS : bays	132kV GIS Bay requirement for present scope as per tender documents is as follows - 1. As per scope of works, 6 line bays, 2 trafo bays, 1 bus coupler bay, 2. As per tender SLD, 5 line bays, 2 trafo bays, 1 bus coupler bay, 2 bus sectionaliser bays, 3. As per layout, 8 line bays, 2 trafo bays, 1 bus coupler bay, 2 bus sectionaliser bays, 4. As per price schedule, 4 line bays, 2 trafo bays, 2 bus coupler bays, 2 bus sectionaliser bays. Please clarify the ambiguity in the number of bays for 132kV GIS.	As per tender. Please fere to item no. 3, 4 & 8 of Addendum no.01.	
170	Vol 2, Scope of Work, Clause 1.2.2 132kV GIS : future bays	132kV GIS Bay requirement for future (space provision only) as per tender documents is as follows - 1. As per scope of works, 8 bays, 2 trafo bays, 2. As per tender SLD, 4 bays, 2 trafo bays, 3. As per layout, no future requirement has been mentioned.	Space are provided by Employers, bidders are to design GIS & others with low space requirement. However, the tender drawings are tentative and for biding purpose only. It shall be as per scope of work.	

		Please clarify the ambiguity in the number of bays for future (space provision only) for 132kV GIS.		
171	Vol 2, Scope of Work, Clause 1.2.2 Buildings	Please provide the standard drawings for control room building and switchyard panel rooms to be used for 400kV & 132kV GIS.	Please refer to item no.7e of Addendum no. 01.	
172	Vol 2, Scope of Work, Clause 1.2.2 Buildings	As per the mentioned clause of scope of works, Control room building with 2mtrs.deep cable basement, 420kV GIS panel room with 1.5mtrs.deep cable basement and 132kV GIS panel room with 1.5mtrs.deep cable basement is required. We propose cable entry through trenches for all the three buildings in place of cable basements. Please confirm.	As per tender. Design other than mentioned in the tender document shall be finalized during execution with Employers approval.	
173	SLD_RAHANPUR/2.1	One 420kV GIS bay named as furnished bay has been shown in the SLD, however, the same has not been included in price schedule. Please confirm.	It is a typo error. Please refer to item no. 07 & 08 of Addendum no. 01.	
174	Price Schedule - Item 2A2(vii) SLD_RAHANPUR/2.1	As per the mentioned item no. of the price schedule, CT with current rating of 3150A is required. However,4000A current rating CT is mentioned in SLD. Please clarify.	The drawings are tentative & for bidding purpose only. Bidders are advised to follow price schedule.	
175	Price Schedule - Item 2A3 SLD_RAHANPUR/2.1	As per the mentioned item no. of the price schedule, 2 nos. of bus coupler bays are required. However, only 1 no. of bus coupler bay is shown in SLD. Please clarify.	Plaese refer to item no. 08 of addendum no. 01	
176	Price Schedule - Item 2A3(ii) SLD_RAHANPUR/2.1	As per the mentioned item no. of the price schedule, 2 sets of circuit breaker per bay is required. However, as per SLD, only 1 no. of CB per bay is mentioned. Please clarify.	Plaese refer to item no. 08 of addendum no. 01	
177	Price Schedule - Item 2A5(ii) SLD_RAHANPUR/2.1	As per the mentioned item no. of the price schedule,circuit breaker of current rating 4000A is required. However, as per SLD 5000A CB is required. Please clarify.	The drawings are tentative & for bidding purpose only. Bidders are advised to follow price schedule.	
178	Price Schedule - Item 2A5(iii) SLD_RAHANPUR/2.1	As per the mentioned item no. of the price schedule,disconnector of current rating 4000A is required.	The drawings are tentative & for bidding purpose only. Bidders are advised to follow price schedule.	

		However, as per SLD 5000A disconnector is required. Please clarify.		
179	Price Schedule - Item 2A5(v & vi) SLD_RAHANPUR/2.1	As per the mentioned item no. of the price schedule,CT of current rating 4000A is required. However, as per SLD 5000A CT is required. Please clarify.	The drawings are tentative & for bidding purpose only. Bidders are advised to follow price schedule.	
180	Price Schedule - Item 2A7 SLD_RAHANPUR/2.1	Surge arrestor for busbar has not been mentioned in SLD.However, the same is required as per price schedule. Please clarify.	The drawings are tentative & for bidding purpose only. Please refer to item no. 07 & 08 of Addendum no. 01.	
181	Price Schedule - Item 2A13	Please provide standard gantry column, beam and equipment structure drawings.	Please refer to item no. 01 of Addendum no. 02.	
182	Price Schedule - Item 2C1(iii) SLD_RAHANPUR/2.1	As per the mentioned item no. of the price sched-ule,disconnector of current rating 3150A is required. However, as per SLD 4000A disconnector is required. Please clarify.	The drawings are tentative & for bidding purpose only. Please refer to item no. 07 & 08 of Addendum no. 01.	
183	Price Schedule - Item 2C1(vii & viii) SLD_RAHANPUR/2.1	As per the mentioned item no. of the price schedule,CT of current rating 4000A is required. However, as per SLD 3200A CT is required. Please clarify.	The drawings are tentative & for bidding purpose only. Please refer to item no. 07 & 08 of Addendum no. 01.	
184	Price Schedule - Item 2C2(ii) SLD_RAHANPUR/2.1	As per the mentioned item no. of the price schedule, 2 sets of circuit breaker per bay is required. However, as per SLD, only 1 no. of CB per bay is mentioned. Please clarify.	The drawings are tentative & for bidding purpose only. Please refer to item no. 07 & 08 of Addendum no. 01.	
185	Price Schedule - Item 2C2(iv) SLD_RAHANPUR/2.1	In SLD,for trafo bay, earth switch is not shown on both sides of circuit breaker as per the requirement of price schedule. Please clarify.	The drawings are tentative & for bidding purpose only. Please refer to item no. 08 of Addendum no. 01.	
186	Price Schedule - Item 2C2(vi) SLD_RAHANPUR/2.1	In SLD,for trafo bay, make proof earth switch is not shown as per the requirement of price schedule. Please clarify.	The drawings are tentative & for bidding purpose only. Please refer to item no. 08 of Addendum no. 01.	
187	Price Schedule - Item 2C3 SLD_RAHANPUR/2.1	As per the mentioned item no. of the price schedule, 2 nos. of bus coupler bays are required. However, only 1 no. of bus coupler bay is shown in SLD. Please clarify.	The drawings are tentative & for bidding purpose only. Please refer to item no. 08 of Addendum no. 01.	

187	Price Schedule - Item 2C9	Please provide standard gantry column, beam and equipment structure drawings.	Please refer to item no. 01 of Addendum no. 02.	
188	Price Schedule - Item 2D2 SLD_RAHANPUR/2.1	As per the mentioned item no. of the price schedule, 4 sets of disconnector is required. However, as per tender SLD only 2 nos. have been shown, Please clarify.	The drawings are tentative & forbidding purpose only. Please refer to item no. 08 of Addendum no. 01.	
189	Price Schedule - Item 2.IIIA4 SLD_RAHANPUR/2.1	As per the mentioned item no. of the price schedule, 3 nos. of 390kV LAs are required. Whereas, the same has not been mentioned in the SLD. Please clarify.	The drawings are tentative & forbidding purpose only. Please refer to item no. 08 of Addendum no. 01.	
190	Vol 2, Scope of Work, Clause 1.6 ambient temperature	As per the mentioned clause of scope of works, maximum ambient shade temperature is mentioned as 45deg C. Kindly confirm the same for outdoor GIS installation.	Please refer to item no. 13 of Addendum no. 01.	
191	Vol.3 Schedule B1: Rahanpur Substation	Generally, 145kV GIS is required as 145 kV, 3150A bus-bars, 40 kA and the same is required in most previous tenders of PGCB project. We consider the above require-ment is suitable to PGCB 132kV system. Therefore, please confirm if it is necessary to require 145 kV, 4000A busbars, 50kA GIS in this project and we suggest 145kV GIS can be required as 145 kV, 3150A busbars, 40 kA Please clarify.	As per tender.	
192	Price schedule - Rev.1, Schedule-B1, New 400/132 kV Substation at Ra-hanpur (Chapainawabganj), Item No. 2C1 (xi) & 2C2 (xi)	As per BPS, the quantity of 132kV SF6-to-air bushing is indicated as 3Nos. As 132kV GIS is 3-phase design, we presume the SF6-to-air bushing shall be 1no. of 3-phase type per bay. Please check and confirm.	As per tender.	
193	Clarification -1, S. No. 162	As per the bidding document and Addendum -1 received from PGCB, there is a line item regarding EMTP study for 400/230kV Bogura S/stn. (Price Schedule B3- Design Ser-vices). When we raised a query regarding the scope of EMTP study in our pre-bid, PGCB in their clarification -1 has clearly stated that there shall be a supervision con-sultant for the project and the EMTP study shall be in the Consultant's scope. From this we infer that the EMTP study is not in our scope	As per tender	

		and it will be carried out by PGCB through a hired third party consultant. The results of the EMTP study shall be provided to the successful bidder during project execution for finalizing the equipment ratings.		
194	Price Schedule – B3: Design Services	Relay Coordination study is to be carried out for the whole project with software demonstration. Please elaborate on the scope of the relay coordination study and the name of the software in which the study is to be carried out (if anything specific)	The bidder is free you use any software for relay coordination provided that demonstration is required and shall be approved by SPMC, PGCB.	
195	Price Schedule, S. No. 2 N3	Complete specification for the 1KW solar panel with 12V VRLA maintenance battery for Substation emergency DC lighting is not yet provided by PGCB. Please provide the same. We also understand that this solar panel shall be installed and used for Main Control Room Building only. Please confirm.		
196	Addendum – 1, Clause 7.5	In soil survey, PGCB has asked us to do earthmat sizing considering 2 layer modeling. Are we supposed to do the earthmat sizing in any specific software. Please confirm.	As per tender	
197	Clarification-1, S. No. 7 and 8	For 400kV line -tie -ICT diameters, Breaker for line bays shall be provided with PIR, Transformer bay breaker is with CSD and tie bay breaker shall have PIR + CSD. We understand that for line bay breaker CSD is also to be considered as per the output of the EMTP study. Please confirm for quoting purpose, what is to be considered for line bay breaker (i.e. only PIR, only CSD or PIR + CSD) and tie bay breaker (i.e. only PIR, only CSD or PIR + CSD) so that every bidder is at par.	As per tender	
198	Clarification -1, S. No. 311	For Type test, we understand that valid type test reports are to be submitted to PGCB along with the bid. Please confirm the validity requirement of the type test reports, i.e. how older type test reports are accepted. (number of years from the bid opening date)	As per tender	

199	Earthing	Requested to provide area Dimension need to be considered for area development and Earth mat design. Please confirm.	Please refer to item no. 01 of Addendum no. 02.	
200	Ref-1: Price schedule, Sl No. 3E2. i Ref-2: Volume-2, Scope of works, Clause 1.2.3 ,Page-8	As per Ref-1 : Two (2) sets of On-line Dissolved Gas monitoring system for 400/132/33kV three phase Autotransformer is required. As per Ref-2: Supply of no such 400/132/33kV three phase Autotransformer is found. Hence On-line Dissolved Gas monitoring system for 400/132/33kV three phase Autotransformer is not required. Kindly confirm the requirement with quantity of On-line Dissolved Gas monitoring system for 400/132/33kV three phase Autotransformer at Gopalganj S/S.	On-line Dissolved Gas monitoring system for Autotransformer is required as per Price schedule, Sl No. 3E2. i	
201	Ref-1: Price schedule, Sl No. 3E2. i Ref-2: Volume-2	As per Ref-1 : Two (2) sets of Water Sprinkler type transformer fire fighting system for three phase outdoor type auto transformer is required. As per Ref-2: Supply of any three Phase Auto Transformer is not found. 750 MVA transformer consist of three number 250 MVA single phase transformer. For 7 sets of 400/√3)/(235/√3)/34.5 kV, 175/250 MVA (ONAN/ONAF), three single phase outdoor type auto transformer Six (6) sets of Water Sprinkler type transformer fire fighting system may be required. Kindly confirm the requirement of water sprinkler type transformer fire fighting system for 400/132/33kV three phase Autotransformer at Gopalganj S/S. Also please confirm the requirement of sprinkler type transformer fire fighting system for 7 sets of 400/√3)/(235/√3)/34.5 kV, 175/250 MVA	Water Mist type Fire Suppression system is required. Please refer to item. No. 06 & 08 of Addendum no. 01.	

		(ONAN/ONAF), three single phase outdoor type auto transformer with quantity.		
202	Ref-1: Price schedule, Sl No. 3E2. ii Ref-2: Volume-2	As per Ref-1 : Two (2) sets of Fast Depressurization System for three phase outdoor type auto transformer is required. As per Ref-2: Supply of any three Phase Auto Transformer is not found. 750 MVA transformer consist of three number 250 MVA single phase transformer. For 7 sets of 400/√3)/(235/√3)/34.5 kV, 175/250 MVA (ONAN/ONAF), three single phase outdoor type auto transformer Six (6) sets of Fast Depressurization System may be required. Kindly confirm the requirement of Fast Depressurization System for 400/132/33kV three phase Autotransformer at Gopalganj S/S. Also please confirm the requirement of Fast Depressurization System for 7 sets of 400/√3)/(235/√3)/34.5 kV, 175/250 MVA (ONAN/ONAF), three single phase outdoor type auto transformer with quantity.	Fast Depressurization System is required. Please refer to item. No. 06 & 08 of Addendum no. 01.	
203	Ref-1: Price schedule, Sl No. 3E2. iii Ref-2: Volume-2	As per Ref-1 : Two (2) sets of Compresed Air Foam (CAF) type transformer fire fighting system for three phase outdoor type auto transformer is required. As per Ref-2: Supply of any three Phase Auto Transformer is not found. 750 MVA transformer consist of three number 250 MVA single phase transformer. For 7 sets of 400/√3)/(235/√3)/34.5 kV, 175/250 MVA (ONAN/ONAF), three single phase outdoor type auto transformer Six (6) sets of Compresed Air Foam (CAF) type transformer fire fighting system may be required. Kindly confirm the requirement of Compresed Air Foam (CAF) type transformer fire fighting system for 400/132/33kV three phase Autotransformer at Go-	It is not required as per tender. Please refer to item. No. 06 & 08 of Addendum no. 01.	

		palganj S/S. Also please confirm the requirement of Compresed Air Foam (CAF) type transformer fire fighting system for 7 sets of 400/√3)/(235/√3)/34.5 kV, 175/250 MVA (ONAN/ONAF), three single phase outdoor type auto transformer with quantity.		
204	Busbar Protection Scheme	Please provide the type of existing Busbar Protection Scheme. Whether Existing Bus bar protection scheme is Centralised or Distributed? Please confirm	Decentralized type.	
205	Protection Panel	Please confirm the location of 400 kV protection panel. Is there any field kiosk available near to 400 kV Bay ? Please confirm	In 400kV SPR.	
206	Bus Conductor	Please confirm the type of bus conductor for Existing 400 kV AIS. Please confirm.	Aluminium pipe bus.	
207	CRP	We are considering that all new 400 kV,230 kV and 33 kV control and relay panel will be installed at existing control room. Please confirm. Please Confirm	Panel will be in respective voltage level Panel Room (400kV & 230kV). However, Automation shall be in main Control Room.	
208	Ref-1: Volume-2, Scope of works, Clause 1.2.3 ,Page-9	As per Ref-1 : Complete civil works and facilities for one new 230 kV GIS building with cable basement, including foundation works, super structure works, finishing works like rendering, painting, water supply, sanitary, floor finishing, rain water drainage system, lightning protection, etc. Kindly confirm the requirement of one new 230 kV GIS building at Gopalganj S/S as there is no 220 kV GIS bay.	No 230kV GIS Building is required, as it is AIS substation.	

209	Ref-1: Volume-2, Scope of works, Clause 1.2.3 ,Page-9	As per Ref-1 : Complete civil works and facilities for one new 132 kV GIS and control building with cable basement, including foundation works, super structure works, finishing works like rendering, painting, water supply, sanitary, floor finishing, rain water drainage system, lightning protection, etc. Kindly confirm the requirement of one new 132 kV GIS and control building with cable basement at Gopalganj S/S as 132 kV S/S is not included with this scope.	Confirmed.	
210	Earthing	Please provide approx. area need to be considered for earth-mat design at 400 kV and 230 kV AIS. Please confirm	Please refer to item no. 07 of Addendum no. 01.	
211	Gopalganj 230 kV AIS SS	Line item 3B4 – As per price schedule DS is 20 set but we think that it should be 22. Please clarify.	Please refer to item no. 6 & 8 of Addendum no. 01.	
212		Volume 02 section 19 (Drawing forming part of the specification) – In 19.2 (List of bid drawings) part VI 28 – 38 drawings are not found in "All related drawing" file. These drawing are necessary to meet the PGCB standard, which is used as a reference for different enclose. Please attach the related drawing.	Please refer to Drawings of Addendum 01 & 02.	
213		We have found two GTPs { (i) 6.2.1 (1) & (ii) 5.2.2 (400/√3)/(235/√3)/34.5 KV, 175/250 MVA, SINGLE PHASE AUTO TRANSFORMER } in Volume 3 of 3. We could not find the exact requirement under the price schedule for those particular GTPs. Please clarify.	No SINGLE PHASE AUTO TRANSFORMER is in the scope of work.	
214	Gopalganj 230 kV AIS SS	In price schedule 3M2 (iv) – Out door gantry foundation 230kV switchyard is 04 Nos. Whether this number is increased or it would be adjusted with in-	Detailed design shall be finalized during execution.	

		creasing amount of PI. Please clarify.		
215	Volume II, Clause no. 4.12.1	As per referred clause, both Nitrogen Injection system and HVWS System is to be provided for Transformer Fire Protection. Pls confirm both systems are required or only Nitrogen Injection System (NIFPS) can be considered for Transformer Protection	There is no NIFPS in the present scope of work. The requirement is as per tender.	
216	Volume II, Clause no. 4.12.1	As this is extension project, No Fire Detection & Alarm System, Fire Extinguishers, Hydrant System shall be considered for this project. Please Confirm	Not confirmed. It is in the scope of work.	
217	Price Schedule, Clause no 3E4, 3M6.1	As per Clause no. 3E4, Supply of Fire Pumping System, Pump House, Reservoir, Piping is not mentioned, however as per Clause no. 3M6.1 Civil work of the same is mentioned. Please clarify the scope of supply for Pumping system along with reservoir & Piping Network. Also confirm of any Existing Pumping system with Ring main Network is available for tapping system. We are considering 50 mtr tapping distance.	Complete system shall be supplied under item no. 3E4. Please refer to the item no. 01 of Addendum no. 02 for Existing system Layout.	
218	Volume-II, Clause no. 10B.3.1	We understand that existing EOT Crane will be utilized for erection purpose so, there is no requirement of rail and DSL extn work. Plz confirm.	Not confirmed. It is an AIS substation	
219	General	Please provide the Existing Fire Hydrant layout drg showing Existing Fire Pipe header and tapping point which can be extended for HVWS & Hydrant system.	Yet not Finalized, hence, cannot be provided.	
220	General	We assume that Existing Pumping Capacity, Pump head and water tank capacity is sufficient to take care the HVWS & Hydrant Fire fighting system. Hence Fire Pumping system is totally excluded from Bidder scope of work. Please confirm.	Not confirmed.	
221	General	We assume that sufficient Fire water pressure & Fire water qty is available at the TOP (take over point)/ Tapping point of Existing Fire Pipe	Not confirmed.	

		Header which to be extended for Fire fighting system. Hence Booster Pump is not envisaged at Tapping point. Please confirm .		
222	General	We assume that there is the provision in the existing Annunciation Panel located in the existing Fire Pump house & existing Main Control Room building to take the input / output Signal from deluge valve panel of upcoming for HVWS spray system. So New annunciation panels are not required separately. Please confirm.	Not confirmed.	
223	General	We assume that there is the provision in the existing DCDB Panel located in the existing Fire Pump house & Main Control Room building to provide DC power in the deluge valve panels for HVWS spray system. So DCDB panels are not required separately. Please confirm.	Not confirmed. Extension of DCDB is in the scope, including any panel when required.	
224	Revised Gopalganj overall layout & 400kV SLD	As per referred layout we understand that only one 400kV bus (Main Bus-2 as mentioned in referred layout & SLD) shall be extended for 4 diameters of 400kV. Hence we understand that the extension of other 400kV Bus (Main bus-1 as mentioned in referred layout & SLD) is not required. Please confirm whether bidder's understanding is in order. If Bidder understanding is correct, please clarify the requirement of Tie bay & where the Disconnector of tie bay shall get connected.	Not confirmed. Both 400kV buses shall be extended for 4 diameters of 400kV. Please refer to item no. 01 of Addendum no. 02.	
225	Revised Gopalganj overall layout & 400kV SLD	As per referred layout we understand that for future bay of the 400kV diameter with Future- tie- Transformer configuration, no towers, bay equipment are required.Please confirm whether bidder understanding is in order.	Only Bus extension is required. For Future Bay, no equipment/tower is required except bay bus conductor.	

226	Revised Gopalganj overall layout & 230kV SLD	As per referred layout we understand that for future bay of the 230kV diameter with Line-Tie-Future configuration, no towers, bay equipment are required. Please confirm whether bidder understanding is in order.	Only Bus extension is required. For Future Bay, no equipment/tower is required except bay bus conductor.	
227	Price schedule - Rev.1, Schedule-B1, Upgradation of 400/132kV Gopalganj Substation by erecting 230kV Switchyard, Item No. 3B3 & 3B5	Referred line items are one and the same as both are referring to 245kV, 3150A, Double side break motor operated disconnector with earthing switch. Also, as per addendum-1, Attachment-06-2, Item no. 3B5 is deleted under Schedule-A. In line with the above, please revise the schedule B1 also.	Please refer to item no. 02 & 05 of Addendum no.02.	
228	Price schedule - Rev.1, Schedule-B1, Upgradation of 400/132kV Gopalganj Substation by erecting 230kV Switchyard, Item No. 3A3, 3A4, 3B3, 3B4	Please specify the type of gang mechanism (Electrically ganged or Mechanically ganged) for 400kV, 245kV, 145kV & 36kV Disconnector.	Only for 400kV, gang operation shall be Electrical & for other, gang operation shall be Mechanical.	
229	Price schedule - Rev.1, Schedule-B1, Upgradation of 400/132kV Gopalganj Substation by erecting 230kV Switchyard, Item No. 3F11 (i) b	As per referred item, BCU for 245kV circuits is indicated as 6 no. However, based on 245kV number of bays, BCU shall be 10set. 230kV bays are as follow: Line bay - 4nos. Transformer bay - 2 nos Tie bay - 4 nos. Please check and revise the price schedule accordingly.	Confirmed. Please refer to item no. 02 of Addendum no. 02.	
230	Clarification-1, Slno. 252	Please confirm the requirement of lighting, lightning & gravel for Aminbazar 3-4 line bays at gopalgnaj station	Only Earthing is included in the current scope of work.	

231	Volume 2, 1. Scope of Works, Page No.- 8 AND Price Schedule: Upgradation of 400/132kV Gopalganj Substation by erecting 230kV Switchyard	As per Scope of works, Auto Transformer to be 400/230/33 kV transformers while Price Schedule metions Transformer to be 400/230/34.5 kV transformers. Bidder understands that Transformer rating to be followed as per Price Schedule ie 400/132/34.5 kV three phase 520/750 MVA.	Voltage Rating of Auto Transformer shall be considered as 400/235/34.5 kV.	
232	Price Schedule: Upgradation of 400/132kV Gopalganj Substation by erecting 230kV Switchyard 3E1: Power Transformer of 400/230/34.5 kV three phase 520/750 MVA, YNa0d1, with On-load tap changer, with tertiary winding (brought out to terminal bushings)	Bidder understands Power Transformer mentioned in Price schedule is a typo graphycal error & the same is Auto Transformer. Kindly confirm.	Confirmed.	
233	General	Bidder understands that necessary shut down will be arranged & provided by PGCB for Gopalganj site.	Please refer to item no. 247 of Clarification no.01.	
234	Volume 2, 1. Scope of Works, Page No.- 8 Two (2) station auxiliary transformers with the capacity of 3-phase, 33/0.415kV, 300 kVA AND Price Schedule: Upgradation of 400/132kV Gopalganj Substation by erecting 230kV Switchyard 3E3: 33/0.415 kV, 500kVA, three phase outdoor type earthing/auxiliary Zig-Zag transformer	Scope of work mentioned 300kVA Auxillary Transformer while Price schedule mentioned 500kVA earthing/auxiliary Zig-Zag transformer. Bidder understands that 33/0.415 kV, 500kVA earthing/auxiliary Zig-Zag transformer is required as mentioned in Price Schedule. Kindly confirm.	There is no Auxiliary Transformer for Gopalganj Site. Please refer to item no. of Addendum no. 01.	

235	Vol:2 Scope of Work : Cl.No. 1.2 Finishing Ground Level (FGL)	Please provide the HFL & NFL data.	As per tender.	
236	Vol:2 Scope of Work : Cl.No. 1.2 Land development	It is envisaged that boundary wall of switchyard is already existing. If any extension is required, PGCB has to furnish the plan layout of the existing boundary wall. However,roads within switchyard are considered to be in present scope only.	Confirmed	
237	Vol:2 Scope of Work : Cl.No. 1.2 Re-location of Bus LA, ES & CVT	1. PGCB has to confirm the location of ES. 2. We presume that all existing control cables for ES & CVT shall be reused. We have considered one no. JB near to the location of existing equipments (ES,CVT) , the existing cable shall be terminated on that JB. The bidder shall supply new cables from JB to equipment, (CVT, ES) in its new equipment (ES, CVT) location. 3.Dismantling works for existing foundation of above said LA, ES & CVT in not in our scope.	As per tender.	
238	Vol:2 Scope of Work : Cl.No. 1.2 Extension of 400kV Bus	Only main busbar has been considered in the space for those vacant line bays (Aminbazar-3,4). Any type of equipment, earthing, ligthtning protection, Illumination etc. have not been considered for those two number vacant bays under present scope.	As per tender.	
239	Vol:2 Scope of Work : Cl.No. 1.2 33kV switchyard	As per our understanding, there is no 132kV system or 132kV transformer in present scope. We presume that - 1. The 33kV system is outdoor type only. 2. Two no Earthing & Aux. transformer (33/0.415kV) are connected with two no. 400/230/33 kV auto transformers.	1. Confirmed. 2. Confirmed	
240	Vol:2 Scope of Work : Cl.No. 1.2 33kV switchyard	Location of 132/33kV transformers has not been shown in the tender layout. Please provide the details for the same for construction of 33kV switchyard.	It is out of present scope.	

241	Vol:2 Scope of Work : Cl.No. 1.2 AC & DC auxiliary power supply	We presume that for aux. power for 400kV switchyard extension, existing LT panels will be used with modification /extension of O/G feeders and sufficient feeders are available in the DBs. Item as per clause no.3L of the price schedule shall be used for 230kV switchyard. Please confirm.	Extension of DC & AC DB are in present scope of work.	
242	Vol:2 Scope of Work : Cl.No. 1.2 230 kV GIS building with cable basement	As it is an AIS substation, hence any 230KV GIS building is not envisaged. Please confirm.	Confirmed.	
243	Vol:2 Scope of Work : Cl.No. 1.2 132 kV GIS building with cable basement	As it is an AIS substation, hence any 132KV GIS building is not envisaged. Please confirm.	Confirmed.	
244	Control Room Building	It is envisaged that existing control room & SPR unit will be used for the new 400/230KV bays. Hence, please provide the layout details for existing control room building.	As per tender.	
245	Earthmat Design	As per our understanding, the earthmat is existing. So we will extend the existing earthmat for our present scope. Hence, no earthing design has been envisaged.	As per tender.	
246		Please provide the existing earthmat layout, DSLP layout, cable trench layout, illumination layout, EKD drawing.	As per tender.	
247	Construction Power	It is envisaged that PGCB will provide contruction power upto a certain point for present scope of works & the details for the same shall be provided.	As per tender.	
248	245kV SLD	Please provide the SLD for 230kV portion of the switchyard.	As per tender.	
249	33kV equipments	There is no line item for 33kV equipments in the price schedule. Please clarify.	As per tender.	

250		As per our understanding, 33kV connection from 132/33kv transformer and tertiary of 400/230/33kV transformer is in present scope of works. Please confirm.	As per tender.	
251	Price Schedule - Item 3A13,3B13	Please provide standard gantry column, beam and equipment structure drawings.	As per tender.	
252	Price Schedule – B3: Design Services	Relay Coordination study is to be carried out for the whole project with software demonstration. Please elaborate on the scope of the relay coordination study and the name of the software in which the study is to be carried out (if anything specific)	The bidder is free you use any software for relay co-ordination provided that demonstration is required and shall have to be approved by SPMC, PGCB.	
253	Price Schedule, S. No. 3 N3	Complete specification for the 1KW solar panel with 12V VRLA maintenance battery for Substation emergency DC lighting is not yet provided by PGCB. Please provide the same. We also understand that this solar panel shall be installed and used for Main Control Room Building only. Please confirm.	Confirmed.	
254	Addendum – 1, Clause 7.5	In soil survey, PGCB has asked us to do earthmat sizing considering 2 layer modeling. Are we supposed to do the earthmat sizing in any specific software. Please confirm.	As per tender.	
255	Clarification -1, S. No. 311	For Type test, we understand that valid type test reports are to be submitted to PGCB along with the bid. Please confirm the validity requirement of the type test reports, i.e. how older type test reports are accepted. (number of years from the bid opening date)	As per tender.	
Chapainawabganj Substation				**24**
256	Drawing: SLD & Layout	Kindly arrange to provide SLD & Layout for Chapainawabganj site.	Available Drawings has been provided in item no. 07 of Addendum no. 01.	
257	Vol:2 Scope of Work : Cl.No. 1.2 Extension of control room building	Please provide the details/drawing of the existing control room , as the extension for the same is in present scope of works.	Plase refer to item no. 01 of Addendum no. 02.	

258	Vol:2 Scope of Work : Cl.No. 1.2 Extension of LT AC & DC DB	As per the price schedule, only extension of LT AC & DC boards is in present scope of works. Hence, it is envisaged that necessary space is avaialble in the existing boards and in control room near to the existing boards.	DB shall be condiered for extension.	
259	Price Schedule - Item 4C8	Please provide standard gantry column, beam and equipment structure drawings.	As per tender.	
260	Drawing	Please provide the existing earthmat layout, DSLP layout, cable trench layout, illumination layout, EKD drawing.	Available Drawings has been provided in item no. 07 of Addendum no. 01.	
261	Chapainawabganj 132 kV AIS SS	We understand that water pump house dismantling is included in our scope but reconstruction of water pump house is included in our scope or not. Please clarify.	As per tender	
262	Price Schedule, Clause no 4M4, 4M5	We understand No Fire protection & detection system is in our scope of supply. Please confirm	Confirmed.	
263	Volume-II, Clause no. 10B.3.1	We understand that existing EOT Crane will be utilized for erection purpose so, there is no requirement of rail and DSL extn work. Plz confirm.	There shall be no EOT crane since, it is AIS substation	
264	Chapai nawabganj 132/33kV grid substation SLD	As per referred SLD, only 1 bay of 132kV system is shown in present scope. However, as per vol.2, Section-1, 2 bays pf 132kV shall be present scope. Please check and confirm the actual scope of work.	It shall be 02 bays.	
265	Price schedule - Rev.1, Schedule-B1, Extension of 132kV AIS bays at 132/33 kV Chapainawabganj Substation , Item No. 4C1	Please confirm whether 145kV Air insulated circuit breaker is mechanically gang operated or single-pole operated.	single-pole operated.	
266	SLD	Please provide SLD and Plot plan layout of Chapainawabganj S/S. Please provide the type of existing Busbar Protection Scheme. Whether Existing Bus bar protection scheme is Centralised or Distributed? Please provide approx. area need to be considered	SLD/ Earthmat/Conductor: Please refer to item no. 07 of Addendum no. 01. Busbar: There is no busbar protection extension scope of work as per tender.	

		for earthmat design at 132 kV AIS. Please confirm the type of bus conductor for Existing 132 kV AIS. Please Confirm		
267	Price Schedule – B3: Design Services	Relay Coordination study is to be carried out for the whole project with software demonstration. Please elaborate on the scope of the relay coordination study and the name of the software in which the study is to be carried out (if anything specific). Also, Chaipainawabganj is a very old station, please provide all the available relay setting data of the existing station to prepare the bid.	The bidder is free you use any software for relay co-ordination provided that demonstration is required and shall be approved by SPMC, PGCB. Data shall be provided at the time of project execution.	
268	Clarification -1, S. No. 311	For Type test, we understand that valid type test reports are to be submitted to PGCB along with the bid. Please confirm the validity requirement of the type test reports, i.e. how older type test reports are accepted. (number of years from the bid opening date)	As per tender.	
Common queries				
269	Vol 2 Technical Specifications section-5 Protection, Metering & Control and Substation Automation System	Bidder understands that the protection relays and control systems, together with complete panels including metering and metering panels to be supplied under this project shall be manufactured by ABB(Switzerland/Sweden), Alstom/GE(France/UK/USA), Siemens(Germany), or SEL(USA).Please confirm.	Confirmed.	
270	Vol 2 Technical Specifications section-8 Batteries, Chargers	Bidder understand that the complete DC system including the Battery and Battery Charger with Panel shall be of Europe/USA/Japan Origin. Please confirm.	Confirmed.	
271	Volume 2 Section 3, A1-1-1 400KV GIS	The IEC standard does not have a mandatory requirement for the maximum closing time of the CB operating mechanism. For GIS products, compared	Please refer to item no. 08 of Addendum no. 02.	

		with the rapid urgency of opening time, the closing time is generally performed after the troubleshooting, and does not require special pursuit of high speed. Therefore, we consider max closing time is less than 100ms is also can be accepted. Please confirm.		
272	Volume 2 Section 3, A1-1-1 400KV GIS	The IEC standard does not have a mandatory requirement for the maximum opening and closing time of highspeed earthing switch. Therefore, we consider max opening time of high speed earthing switch less than 200ms is also can be accepted and max closing time of high speed earthing switch less than 100ms is also can be accepted. Please confirm.	Please refer to item no. 08 of Addendum no. 02.	
273	Volume 2 Section 3 A1-1-2 230kV GIS	The IEC standard does not have a mandatory requirement for the maximum closing time of the CB operating mechanism. For GIS products, compared with the rapid urgency of opening time, the closing time is generally performed after the troubleshooting, and does not require special pursuit of high speed. Therefore, we consider max closing time is less than 100ms is also can be accepted. Please confirm.	Please refer to item no. 08 of Addendum no. 02.	
274	Volume 2 Section 3 A1-1-2 230kV GIS	Generally, 245kV GIS is required as max break time less than 60ms in most previous tenders of PGCB project. Therefore, we consider max break time less than 60ms is also can be accepted.Please confirm.	Please refer to item no. 08 of Addendum no. 02.	
275	Volume 2 Section 3 A1-1-2 230kV GIS	The IEC standard does not have a mandatory requirement for the maximum opening and closing time of high speed earthing switch. Therefore, we consider max opening time of high speed earthing switch less than 200ms is also can be accepted and max closing time of high speed earthing switch less than 100ms is also can be accepted.Please confirm.	Please refer to item no. 08 of Addendum no. 02.	
276	Volume 2 Section 3 A1-1-3 132kV GIS	The IEC standard does not have a mandatory requirement for the maximum closing time of the CB.	Please refer to item no. 08 of Addendum no. 02.	

		For GIS products, compared with the rapid urgency of opening time, the closing time is generally performed after the troubleshooting, and does not require special pursuit of high speed. Therefore, we consider max closing time of 145kV GIS less than 100ms is also can be accepted. Please confirm.		
277	Volume 2 Section 3 A1-1-3 132kV GIS	Generally, 145kV GIS is required as max break time less than 60ms in most previous tenders of PGCB project. Therefore, we consider max break time less than 60ms is also can be accepted.Please confirm.	Please refer to item no. 08 of Addendum no. 02.	
278	Volume 2 Section 3 A1-1-2 132kV GIS	The IEC standard does not have a mandatory requirement for the maximum opening and closing time of high speed earthing switch. Therefore, we consider max opening time of high speed earthing switch less than 200ms is also can be accepted and max closing time of high speed earthing switch less than 100ms is also can be accepted. Please confirm.	Please refer to item no. 08 of Addendum no. 02.	
279		If the quantity of Steel structure (Gantry Column & Beam) differs from price schedule in execution stage, addition bill will be paid by PGCB. Kindly clarify	Additional Payment shall be based on contractual unit rate as per final design prior to Employers approval.	
280		From various places in price schedule, we have found that GIL length should be considered as 50 meter for price submission purpose. If we design to use 3-phase encapsulated GIL, then 50 meter is assumed as total length of GIL per bay. But if we use single phase encapsulated GIL, then assuming that we need to consider 50 meter GIL per phase. Kindly confirm.	Meters mentioned in the price shall mean three phase length not single phase length. For 400kV, Single phase GIL length shall be considered as three phase, for example 50m shall mean 150m.	
281		In Type Test Requirement, Shunt Reactor Type Test is required for 125 MVAR. To find complied manufacturer, we request to amend the rating of Shunt Reactor which type test report should be provided.	Please refer to clarification no. 01. However, If a manufacturer qualifies for Power Transformer, qualification shall be relaxed in case Shunt reactor is supplied from same manufacturer.	
282		As you know that for GIS, very few manufacturers in the world having the qualification following PGCB requirements. Among those few manufacturers,	As per tender.	

		most of them have either spring or hydraulic operating mechanism for CB closing & opening. We request you to accept both.		
283	18.3.1 (page 560)	Short-circuit withstand capability for Shunt Reactor As Per Tender Document The shunt reactors and all associated facilities shall have the ability to withstand the effects of short-circuit currents, defined as symmetrical short circuit current in the Technical Schedules, according to requirements of IEC 60076-5. Clarification Please refer Cl. 8.9.4 - Special tests in IEC 60076-6, Short-circuit test is applicable for current-limiting reactors, neutral-earthing reactors to be connected to a neutral of a power system and for test reactors. Kindly let us know whether Short-circuit withstand capability for Shunt Reactor is required or not?	As per tender	
284	18.3.3 (page 562)	Compensation device for Shunt Reactor As Per Tender Document Compensation devices shall be provided for possible further shrinkage of the coils in service. We understand that Manufacturer‘s reactors do not require any re-tightening during its lifetime. Manufacturer follows strict requirements for mechanical design. The long term stability of the noise level in operation serves as the best indicator of our mechanically stable, robust design, and manufacturing precision. This has been well proven by a field verification report	As per tender	

		Kindly Clarify		
285	18.7 (page 572)	EMTP study for Shunt Reactor Clarification EMTP studies and calculations, to select the appropriate rating of the shunt reactors, should be included in the contractor's scope. As a manufacturer of shunt reactor, ABB has not considered any such studies or calculations in their scope. Kindly clarify	As per tender.	
286	10.1 (page 230) Schedule I	Witnessing and certification of tests by STL member laboratory representative As Per Tender Document Test carried out at manufacturer's own testing laboratory must have been witnessed and certified by a representative from STL member laboratories. Clarification Units will be tested in accordance with the applicable standard in our fully equipped test laboratory. manufacturer accepts inspection and witnessing of tests by customer or customer representative. Witnessing members are selected by the customer. It is not a standard practice to witness the tests by a representative from STL member laboratory. Kindly clarify	As per tender.	

287	10.1 (page 231) Schedule I	Shunt reactor - Short circuit withstand test Clarification Please refer Cl. 8.9.4 - Special tests in IEC 60076-6, Short-circuit test is applicable for current-limiting reactors, neutral-earthing reactors to be connected to a neutral of a power system and for test reactors. Kndly Clarify	Short circuit withstand test is not required for Shunt reactor. Please refer to item no. 09 of Addendum no. 02.	
288	18.3.5 (page 563)	Tank surface treatment for Shunt Reactor Clarification External surface treatment, according to Class C4 in ISO 12944-6 standard, has been considered. Kindly Clarify	As per tender. Alternative design shall be finalized during execution prior to Employers approval.	
289	1E2 (page 29), 2E2 (page 46), 3E2 (page 58 Schedule A	Monitoring system As Per Tender Document Two (02) sets of On-line Dissolved Gas & moisture monitoring system Clarification Please specify the PGCB approved monitoring system. Kindly Clarify	Qualitrol (UK) / Vaisala (Finland) / ABB(Europe) / GE(Europe) / Siemens (Europe)	
290	4.3.7.9 Power transformer	Insulation level, Neutral Clarification	As per tender.	

		Neutral insulation of 650 kV BIL has been considered. Kindly Clarify		
291	4.3.7.9 Power transformer	Internal surge arrester As Per Tender Document BIL requirements shall be met without the use of internal arresters. Clarification Internal Surge arresters are needed due the regulating winding is directly on Line side, Manufacturer suggest this solution to reduce the dielectric stresses on RV. Kindly Clarify	Use of Internal Surge arresters are generally not acceptable. Detailed design shall be finalized during detail Engineering	
292	4.5.1.1 Power transformer	Painting and corrosion protection Clarification External surface treatment, according to Class C4 in ISO 12944-6 standard, has been considered. Kindly Clarify	As per tender.	
293	4.12.1 Power transformer	Fire Protection/ Prevention System	It is under scope of this contract. Bidders may choose to include in manufacturer's scope, but, not mandatory.	

		Clarification Excluded from manufacturer's scope Kindly Clarify		
294	4.12.2 Power transformer	Fire wall Clarification Excluded from manufacturer's scope Kindly Clarify	It is under scope of this contract, but, not in manufacturer's scope.	
295		If the quantity of Steel structure (Gantry Column & Beam) differs from price schedule in execution stage, addition bill will be paid by PGCB. Kindly clarify	As per tender.	
296	Clarification-1, Slno. 252	Please confirm the requirement of lighting, lightning & gravel for Aminbazar 3-4 line bays at gopalgnaj station	Only Earthing is included in the current scope of work.	
297	Technical specification, Vol.2, clause no.3.4.7	Specification calls for Center break type isolator. As per Datasheet revised BPS Double break type isolator is mentioned. We presume, Double break type isolators shall be supplied in line with BPS. Please confirm.	Confirmed.	
298	Clarification-1, Sl no. 290, & 311	As per referred clarifications, we understand that, if valid type test & special test report is submitted as per specification, then repetition of type test & spe-	Not required for Evaluation, however, all tests for as per tender are required to be conducted during FAT.	

		cial test is not required for any equipment including Auto transformers & Shunt reactors. Please confirm whether bidder's understanding is in order.		
299	Clarification-1, Sl no. 315	As per referred clarification we understand that 230kV & 400kV GIL price shall be quoted for 50m single phase GIL and 132kV GIL price shall be quoted for 50m three phase GIL. Please confirm whether bidder's is in order.	As per tender.	
300	Price schedule - Rev.1, Schedule-B4, item no. 1M2 & 2M2 - Approach road	Please confirm whether lighting is required for approach road or not? If required, please add a separate line item in the BPS.	As per tender.	
301	Technical specification Vol.2, section-10, clause no. 10A.3.5 Roads	As per referred clause, "All roads within the site boundary shall be generally 6 meters wide between the outer edges of kerbs for main road and 4.5 meter & 3 meters wide for sub road". However, as per overall layout drawings of Bogura station, 8 meters wide road is shown. Please check and confirm the actual road width inside the substation plot.	Minimum 8 meter wide Main Road (upto transformer) is required.	
302	Technical specification Vol.3 - Schedule- I, Clause no. 10.1	As per referred clause, " Typical single line, layout & sectional drawings of substation showing details of construction and dimensions" shall be submitted with the bid. We shall submit the same during detail engineering after award of contract. Please accept the same.	As per tender.	
303	Addendum-1, Attachment-02, item no. 1K1 (v)	As per referred clause, Insulation monitoring system for complete DC system shall be provided. However, there is no line item for Insulation Monitoring system in the BPS. Please check and include the same if required.	Please refer to item no. 02 & 03 of Addendum no. 02.	
304	Technical specification Vol.2, , clause no. 2.2.3, 8.2.2 - Codes & Standards	We confirm to relevant IEC/IEEE standards for our products instead of BS standards for battery & charger.	Confirmed.	

305	Technical specification Vol.2, , clause no. 2.7.1, 2.7.2, 2.3.3 - Paint Shade	Please note that, we have offered RAL 7035 paint shade of 60-70 microns for the offered systems and also note that painting procedure will be as per manufacturer standards. Please confirm acceptance.	As per tender.	
306	Technical specification Vol.2, , clause no. 14.9.4.1 - 48V Battery Charge rate_10hrs	Please note that the we confirm to 0.2C5 charge rate for the offered system batteries instead of 10hrs charge rate. Please confirm acceptance.	Confirmed.	
307	Technical specification Vol.2, , clause no. 14.9.6 - Modular construction_48VDC battery charger	Please note that we have industrial based DC UPS for the offered 48VDC system instead of the specified modular construction. Please confirm acceptance.	The same shall be finalised during detail Engineering within the contract price.	
308	Technical specification Vol.2, section-8, clause no. 8.4.1- Battery high Performance	Kindly note that we have offered low discharge type (SBLE) battery instead of high discharge type battery. Please confirm acceptance.	As per tender.	
309	Technical specification Vol.2, section-8, clause no. 8.4.1- Battery Life-25Years	Please note that, as per manufacturer standard we confirm the life time of the offered Vented NiCad Battery is 20 Years @ 25°C. Please confirm acceptance.	Not acceptable. It shall be as per tender. Such design life shall be investigated during detailed design.	
310	Technical specification Vol.2, section-8, clause no. 8.4.1- IEC Standard for Electrolyte (KOH)	We confirm to IEC-60993 standard for electrolyte instead of BS 5634. Please confirm acceptance.	Confirmed.	
311	Technical specification Vol.2, section-8, clause no. 8.4.5 - Battery Racks	We have offered Stainless steel with Acid resisting enamel paint shade battery racks instead of timber stands. Please confirm acceptance.	Confirmed.	
312	Technical specification Vol.2, section-8, clause no. 8.4.5 - Battery accessories	Kindly note that we have provided standard battery accessories as per the battery manufacturer recommendations. Please confirm acceptance.	As per tender.	
313	Technical specification Vol.2, section-8, clause no. 8.5, Float & Boost Voltages	We confirm float voltage to 1.42V/Cell and boost voltage to 1.55V/cell as per battery manufacturer standard. Please confirm acceptance.	As per tender.	
314	Technical specification Vol.2, section-8, clause no. 8.5, Float/Boost Selector Switch& Override Selector Switch	Offered DC UPS are HMI control panel with password protection and menu driven boost/float/equalizing selecting facility which is advanced technology. Hence, selector switch/override switch is not provided.	Confirmed.	

315	Technical specification Vol.2, section-8, clause no. 8.5, Recharge Period	We offered batteries will get recharged to 90-95% in 10-12hrs as per manufacturer standards. Please confirm acceptance.	Detailed Design shall be finalized during execution prior to Employers approval within the contract price.	
316	Technical specification Vol.2, section-8, clause no. 8.5, Diode assembly failure	We confirm to diode failure instead of "Diode assembly failure". Please confirm acceptance.	Confirmed only if each diode failure shall be incorporated.	
317	Technical specification Vol.2, section-8, clause no. 8.5, Charger input protection fuse switch	Please note that we confirm to charger input MCCB which more advance in operation as compared to fuse switch. Please confirm acceptance.	Confirmed.	
318	Technical specification Vol.2, section-8, clause no. 8.7, Ingress Protection	Please note that as per Scope and GTR" we have considered IP31 protection for the offered systems instead of IP52. Please confirm acceptance.	Not confirmed. It shall be as per tender.	
319	Technical specification Vol.2, section-8, DVR Position	In order to maintain the voltage to +10% at load through Diode voltage regulator (DVR) and to reduce the rating /cost of the DVR, we recommend to connect the inverter before DVR (at battery output). Please note that our inverter works well in the range of 90VDC to 160VDC and regulated DC Voltage is not required. Please confirm acceptance.	As per tender.	
320	Technical specification Vol.2, section-16, clause no. 18.3.1 - Short-circuit withstand capability & Technical specification Vol.3 - Schedule- I, Clause no. 10.1 - Shunt reactor - Short circuit withstand test	As per referred clause, "The shunt reactors and all associated facilities shall have the ability to withstand the effects of short-circuit currents, defined as symmetrical short circuit current in the Technical Schedules, according to requirements of IEC 60076-5." However, this is not applicable for shunt reactor. As per clause no. 8.9.4 - Special tests in IEC 60076-6, Short-circuit test is applicable for current-limiting reactors & neutral-earthing reactors to be connected to a neutral of a power system and not applicable for shunt reactor. Please confirm acceptance.	Confirmed.	
321	Technical specification Vol.2, section-16, clause no. 18.3.3- Compensation device	As per referred clause " Compensation devices shall be provided for possible further shrinkage of the coils in service." Our reactors do not require any re-tightening during	The same shall be finalized during detail Engineering prior to Employers approval within the contract price.	

		its lifetime. We follows strict requirements for mechanical design. The long term stability of the noise level in operation serves as the best indicator of our mechanically stable, robust design, and manufacturing precision. The same shall be well proven by a field verification report which shall be submitted during detail Engineering. Please confirm acceptance.		
322	Revised price schedule -B, item no. 1E2 - On-line Dissolved Gas & moisture monitoring system	Please specify the PGCB approved make and model number for On-line Dissolved Gas & moisture monitoring system.	Qualitrol (UK)/Vaisala (Europe)/ GE (Europe)/ABB(Europe)/Siemens	
323	Vol-2, Technical specification Sec-10A (Buildings and Civil Engineering Works) &Price schedule, Schedule B4: Installation and Other Services Cl.no: 10A.3.5 (Road)&Sl. No: 1M2.xvii & 2M2.xvii	It is mentioned in Civil works that "the width of access road from outside the site boundary to connect to any adjacent public road shall be 6m.However in price schedule, width of access road is mentioned as 8m. We trust that, access road width shall be 8m as per price schedule. Please confirm.	Confirmed.	
324	Vol-2, Technical specification Sec-10A (Buildings and Civil Engineering Works) & Layout for Bogura SS & Gopalganj SS Cl.no: 10A.3.5 (Road) & --	It is mentioned in Civil works that, all roads within the site boundary shall be generally 6m wide for main road and 4.5m & 3m wide for sub roads. However in layout, 8m & 4m wide road is shown for Bogura (w) S/S & 2m wide road is shown for Gopalganj S/S. Please confirm, which is to be followed.	As per tender drawing.	
325	Pre-bid Clarification replay Sl No: 63 & 160	It is replied in the clarification Sl no: 63 that "the size of SPR room shall be changed asper requirement." However in Sl no: 160, it is mentioned that, the SPR room size shall be as per bid requirement. Please clarify, whether the SPR room size shall be changed as per requirement or not.	The size shall be as per tender drawing. However, if Larger size is required, it will be finalized with square-meter basis during execution.	

326	Pre-bid Clarification replay Sl No: 273	It is replied in the referred clarification that "the existing control room building drawings are attached with addendum no 1." However, the same is not enclosed. Please furnish the same.	Please refer to item no.01 of Addednum no. 02.	
327	Pre-bid Clarification replay Sl No: 328	It is replied in the referred clarification that "the proposed buildings shall be designed with future floor load."Please furnish the future floor load requirements, in order to design the building.	As per tender.	
328	Vol -2, Scope of Works & Price schedule, Schedule B4: Installation and Other Services Cl no: 1.2.1 & 1.2.2 & Sl. No: 1M1.b & 2M1.b	As per scope of work, site levelling with earth filling is in bidder scope for proposed Bogura (w) and Rahanpur Substations. In price schedule, item for slope protection is included and there is no item for retaining wall. Please include the item for retaining wall, if required.	As per tender.	
329	Addendum No. 01, Attachment - 01A Cl no: 1.2.1	As per referred clause, one new control room building with cable basement (2m) is in bidder's scope at proposed Bogura (W) substation. We propose cable entry through trenches for proposed control room building in place of cable basements. Please confirm.	Confirmed.	
330		If the quantity of Steel structure (Gantry Column & Beam) differs from price schedule in execution stage, addition bill will be paid by PGCB. Kindly clarify	As per tender.	
331		From various places in price schedule, we have found that GIL length should be considered as 50 meter for price submission purpose. If we design to use 3-phase encapsulated GIL, then 50 meter is assumed as total length of GIL per bay. But if we use single phase encapsulated GIL, then we need to consider 50 meter GIL per phase. Kindly confirm.	Confirmed.	

332		We understand that, to find the complied manufacturer for specific rating shunt reactor, Shunt reactor type test will be provided.	As per tender.	
333		As you know that very few manufacturers in the world having the qualification following PGCB requirements. Among those few manufacturers, most of them have either spring or hydraulic operating mechanism for CB closing & opening. We request you to accept both.	As per tender.	
334	Volume 2 of 3 / 3.4.5.13 Arrangement/ P98 LAYOUT DRAWINGs	In volume 2 of 3 item 3.4.5.13, it shows "The switchgear shall be installed in a building with a cable basement". But in layout drawings, the GIS is outdoor installation. Bidder will use outdoor type GIS and there will be no GIS building. Please confirm.	Confirmed that, there is no GIS building	
335	Volume 2 of 3 / 1.5.3 Minimum substation clearances	In volume 2 of 3 item 1.5.3 it shows "Minimum safety clearance between ground and the nearest point not at earth potential of an insulator:2700mm", according to BS 7354, the clearance is 2400mm for 33kV and 132kV;2700mm for 230kV and 400kV. Please confirm.	Not Confirmed. It shall be as per tender.	
336	Volume 2 of 3 / 1.5.3 Minimum substation clearances	Bidder assumed that the minimum clearances is apply only to equipment not subject to impulse voltage type tests. For equipment which subject to impulse voltage type test the clearance is not applicable (such as the clearance between the primary terminal of CVT and the bottom of CVT).	The mentioned clearance is intended for External Air clearance. For, internal clearance appropriate standard shall be followed. However, Detail shall be finalized during execution.	
337	Volume 2 of 3 / 4.3.6 Service conditions; 1.6 Climatic conditions	In volume 2 of 3 item 4.3.6, the ambient is -20 to+40 Deg C for transformer. But in 1.6 Climatic Conditions the ambient temperature is between 2~45 Deg C. We will follow 2~45 Deg C. Please confirm.	Please refer to item no. 13 of Addendum no. 01.	
338	Volume 2 of 3 / 9.3.1 General	In volume 2 of 3 item 9.3.1, it shows "LV is 400/230V, three phase, four wire." Bidder will use TNC system for LV system. Please confirm.	TT (separate Protective Earth Conductor & Neutral conductor) system shall be used.	

339	Volume 2 of 3 / 13.6 Schedule of Design Requirements	In volume 2 of 3 item 13.6, it shows" the switchyard floodlighting shall use 500W Halogen lamps." But in other areas, LED type lighting is required. Please clarify.	It shall be LED Light. Please refer to item no. 08 of Addendum no. 02.	
340	Volume 2 of 3 / 13.30 Design for lighting level	In volume 2 of 3 item 13.6, it shows "The lighting distribution board shall be designed for operation in a 400 V, 3 phase, 4 wire, 50Hz. neutral grounded system with a fault level of 15 kA at 400 V". According to our practice, the short circuit current of lighting board is very small, and 10kA is enough for MCB in lighting board. Please confirm.	Confirmed.	
341	Volume 2 of 3 / 13.5 Lighting requirements 13.30 Design for lighting level	In volume 2 of 3 item 13.5, it shows "Control rooms, relay rooms, telecommunications equipment rooms, offices and stores shall have the service illumination measured at 850 mm above finished floor level. All other areas shall have the service illumination measured at floor level." But in volume 2 of 3 item 13.30, it shows "The surface for lux measurement shall be at 0.5 m high from ground for Indoor and 1 m for outdoor Areas except transformer Yard. In case of Transformer compounds, surface at 1.5 m height from ground shall be considered for lux measurement." Please clarify which one we will follow.	13.30 shall be followed. Please refer to item no. 08 of Addendum no. 02.	
342	Volume 2 of 3 / 13.29 Schedule of Lighting Fittings and socket out lets 13.30 Design for lighting level	In volume 2 of 3 item 13.29, it shows "Tpye E4 shall indicate a 110V DCor….". But in volume 2 of 3 item 13.30, it shows "The emergency lighting system operating from 220V +/-10% DC system…". Please clarify.	It shall be 110V DC. Please refer to item no. 08 of Addendum no. 02.	
343	Volume 2 of 3 / 15.1.4 Capacitor Voltage Transformers	In volume 2 of 3 item 13.5, it shows "New capacitor voltage transformers (CVT) and lattice steel structures shall be provided suitable for mounting line traps on them." According to our practice, 132kV line trap can be mounted on CVT. But for 230kV and 400kV line trap, it is too heavy and can not be mounted on CVT. Please confirm.	There is only 400kV LT is present scope of work.	

344	Price schedule	item 1N3 & 2N3 & 3N3 “Complete solar system (1kW solar panel) including 12V VRLA maintenace free battery and other accessories for Substation emergency DC Lighting “. Please clarify what is this and what is used for? The emergency DC lighting will be fed from DC system.	As per tender.	
345		VOLUME_2_of_3 – chapter 1.6 – Please provide wind speed (10m,3s) and return period for ASCE 7-10 code.	As per tender. Detailed design shall be finalized after award of contract within the contract price.	
346		VOLUME_2_of_3 – chapter 1.6 – Please provide seismic PGA and return period for UBC 97 code.	As per tender.	
347		VOLUME_2_of_3 – chapter 2.5 – Please confirm the American standards can be used for civil design.	Confirmed.	
348		VOLUME_2_of_3 – chapter 11.3.2 – Please confirm the American standard ASCE load combinations can be used for civil design(LRFD and ASD).	Confirmed.	
349		VOLUME_2_of_3 – chapter 11.3.8 - Steel A frame or moment structures – Please confirm the American standards can be used	Confirmed.	
350		Please provide soil investigation report.(Including water table)	As per tender.	
351		Please provide steel structure anti-corrosion and underground concrete anti-corrosion requirements	As per tender.	
352		Please provide the whole topographic map (scale is 1:200,AutoCAD format) for the proposed site, including whole proposed site, construction site, laydown area, disposal site, access road, disposal area, river/coastline, etc. The land line, boundary fence, coordinate system and elevation system will be included in the topographic map at the same time. The location of the disposal area and the distance between the site and the disposal area.	As per tender.	

353		Please provide the direction of the electric outgoing line.	As per tender.	
354		Please provide the maximum flood elevation of once-in-a-century return period and the information of the flood protection for the proposed site.	Same to be collected by Bidders own responsibility.	
355		Please provide the information of existing road net near the proposed site.	As per site condition.	
356		Please provide the substation General layout, Elevation planning, Pipeline planning, Road & Hardening, Boundary fence and other drawings.	Please refer to item no. 07 of Addendum no. 01.	
357		Please provide available boundary line of the extension substation.	Please refer to item no. 07 of Addendum no. 01.	
358		Please provide flood control requirements, once-in-a-century flood levels and existing flood control facilities.	As per tender. Detailed design shall be finalized after award of contract within the contract price.	
359	Ref1: TS_6. Auxiliary Power and Control Cables , Clause 6.17,Cable Identification and Schedules,Page-343	The Contractor shall prepare and submit computerised cable schedules, the content and style of which shall be to the general approval of the Engineer. The Contractor shall provide copies of the cable schedule in an approved format. The Contractor shall provide a standard software package together with a suitable personal computer to permit the Engineer to access, display, print and edit the schedules. The schedules shall be accessed by simple interactive dialogue using 'menu-selection' or other approved procedure. Kindly elaborate meaning of computerised cable schedule. Pl. clarify whether it is the cable schedule prepared in any spreadsheet (MS Excel) or any other software (please specify) to be used? Accordingly BOQ need to be modified.	Standard software with PC as per the reference clause shall be furnished during execution. The price of the same shall be deemed to be included in the bid price.	
360	Ref1: Volume 2, Pg 350 , Clause: 7.8.2 Connection of System Neutrals and	As per Ref-1: The Transformer Neutrals shall be directly Buried to earth up to 15meter minimum. The	15m is a general value, actual requirement shall be based on soil investigation and survey of site by the contractor.	

	Earth Ref2: Volume 2, Pg 352 , Clause: 7.9.2 Earthing Rods	connection shall be in delta format. In addition to transformer neutrals, the contractor shall consider direct earthing of all LA neutrals, Lightning mast neutrals to ground through earthing rod (15 meter minimum). As per Ref-2: Earth rods shall be driven to a depth below the ground water table level, to be determined by the Contractor during soil investigation and survey of site. We are considering 15meter Earthing Rod in line with Ref-1 for equipment direct earthing. Please confirm.		
361	DG Set	There is no separate line item for DG set in the price schedule. Hence we are not envisaging of the same in our scope. Please confirm.	Confirmed.	
362	CCTV	There is no separate line item for CCTV in the price schedule. Hence we are not envisaging of the same in our scope. Please confirm.	Confirmed.	
363	Battery Charger	We are presuming that the Battery and Battery Charger mentioned in the Price schedule is for reference & bidding purpose. Actual payment shall be as per final design during detail engineering. Please Confirm.	Not confirmed. Actual rating (not payment) shall be as per final design during execution within the contract price.	
364		For Battery (Ni-Cad type) sizing: At the end of five (5) hours the battery shall have sufficient capacity to complete the operations which inter alia include the following: 1. Two closing operations on all circuit breakers (including future) supplied by the battery.	As per tender.	

		2. Two tripping operations on all circuit breakers (including future) supplied by the battery. Where bus-bar protection is provided, it shall be assumed that all circuit breakers in any one busbar protection zone trip simultaneously. As per standard practice, only one time Tripping operation (at the beginning of the duty cycle) of all CBs associated with one bus-bar protection and one time Closing operation (at the end of the duty cycle) of only 2 nos. CBs are considered for battery design. Request to kindly inform the duty Cycle of battery discharge followed by PGCB for sizing purpose.		
365	VOLUME_2_of_3 13.31.4 Basis for Design	External Design Conditions The external conditions for the calculation of duties for the mechanical services shall be with mean monthly, maximum and minimum values as below: Maximum ambient shade temperature: 40 °C Minimum ambient shade temperature: 4 °C Maximum daily average temperature: 35 °C Maximum annual temperature: 25 °C Relative humidity: maximum 100%, minimum 80% Solar radiation: 100 mW / m² The External Design Conditions is not suitable for HVAC system. At the tender stage, the outdoor design conditions for HVAC system quoted from ASHRAE HANDBOOK 2017 Meteorological data of DHAKA HAZRAT SHAHJALAL INTL which latitude is 23.843N, and longitude is 90.398E The 0.4% Summer design dry-bulb temperature and mean coincident wet-bulb temperature of this site. (36.2℃/25.9℃) The 1% Summer design dry-bulb temperature and mean coincident wet-bulb temperature of this site.	As per tender	

		(35.2℃/26.1℃) The 99.6% /99.6%Winter design dry-bulb temperature.(12.6℃/13.9℃) Please confirmed		
366	VOLUME_2_of_3 13.31.4 Basis for Design	Internal Design Conditions Air conditioning systems shall be capable of maintaining internal conditions in all air conditioned areas within the following bands or, if necessary for the satisfactory operation of the equipment housed, more stringent requirements: For substations 22+4 °C DB, 40 to 70% R.H. The following air change rates/hour shall be provided in mechanically ventilated area: Battery rooms 10 Toilets 12 (extract only) Cable basement 6 Other general areas 4 (1)According to electrical code IEC, indoor condition of switchgear rooms shall be maintained at no more than +35℃. (2)According to ASHRAE, indoor condition of battery room shall be maintained at 25℃.Mechanical Ventilation can't satisfy indoor condition requirement based on Maximum ambient shade temperature 40℃ . So we suggest that air conditioning system shall be provided for switchgear rooms and battery room and shall be designed compliance with ASHRAE standard, please confirm.	As per tender	
367	Volume II, Clause 3.4.5.30.1	As per referred clause we understand that the manufacturer of GIS & GIL for all the rating class shall be from Europe / North America /Japan / Korea Origin. Kindly confirm.	As per tender	

368	Volume III, Clause 1.3.3 & Clarification-1 Sr. No. 340	Functional Guarantees of the facilities is NOT APPLICABLE, In-case bidder proposes more than one qualified manufacturer for transformer & reactor and submitted the filled GTP for all the qualified manufacturer, kindly clarify that PGCB what loss figure shall be considered for loss capitalization while bid evaluation.	As per tender	
369	Volume III, Clause 1.3.3 & Clarification-1 Sr. No. 341	Kindly clarify that whether the Auxiliary transformer / earthing transformer losses will be capitalized while bid evaluation or not?	As per tender	
370	Volume-I, Section-III, Clause 2.5, Item No. 4, 5, 6, 7, 8, 9	For AIS equipment Circuit Breaker, Disconnector, Current Transformer, CVT, Surge Arrester, Post & Disc Insulators, we understand that the qualification requirement mentioned in Clause 2.5 is applicable for 400, 230 &132 kV Voltage class equipment which shall be supplied from same respective equipment factory, however the manufacturer qualification criteria is not applicable for 33kV voltage class equipment and 33kV voltage class equipment can be supplied from different manufacturer of 400, 230 & 132kV. Kindly Confirm.	As per tender	
371	Volume-I, Section-3, Clause 2.5, Sr. No. 1) GIS	Satisfactory Type Test Report as per Schedule-I of Volume-3 with same specification (kV, rated current and short circuit current) or higher rating We understand form above qualification requirement that the Type test with same specification mean to the kV, rated current and short circuit current ratings only.	As per tender	
372	Technical specification Vol.2, section-6, clause no. 4.5.1.1, Painting and corro-sion protection	For Power transformer & Shunt reactor, External surface treatment conforming to C4 category according to ISO 12944-2 standard shall be considered. Please	As per tender. However, detail shall be finalized at the time of project execution.	

	& Technical specification Vol.2, section-18, clause no. 18.3.5, Tank surface treatment	confirm acceptance.		
373	Technical specification Vol.2, section-4, Power Transformer, Clause-4.3.7.9 & Volume-2, Schedule of technical requirements A2-1-1, Sl. No. 25 (iv), Neutral insulation level	As per, Cl. 6 in A2-1-1, Page 244 Power frequency withstand of neutral is mentioned as 275 kVrms. This implies BIL level should be 650 kV, as per IEC 60076-3. Refer, Cl. 25 in A2-1-1, Page 246 Insulation level for neutral bushing is mentioned as 1050 kV BIL/ 650 kVrms. As the above clauses are contradicting, Please clarify the insulation level of Neutral.	BIL of Bushing shall be 650kV.	
374	Volume-2, Section-18, Shunt reactor, Clause-18.3.2, Core Material	We request PGCB to specify the Core loss / kg (Watt/kg) of the core material for Shunt reactor.	0.85-1.0 Watt/kg	N
375	Addendum-1, Attachmen-01A, Item No. 1K1 (v),	For Bogura station, as per the referred clause insulation monitoring system for complete DC system is required. However, there is no line item available in Schedule-B1. Please check and revise the BPS suitably.	As per tender	N
376	Clarification-1, Sl. No. 162, EMTP study	As per referred clarification, EMTP study is in consultant scope of work. However, as per BPS (Bid price schedule), Schedule B3, EMTP study price to be quoted for Bogura & Rahanpur station. We presume that this is a typographical error & hence understand that EMTP study is not in the scope of Bidder for both the stations. Please confirm & revise the BPS suitably.	Please see the item no. 3(b) of Addendum 02	
377	Volume-3, Schedule-I, Clause-10.1Clarification-1, Sl. No. 344, Type & Special test reports	As per the referred clause, "Type test certificates of Power Transformer and Shunt Reactor shall be issued by any independent STL member testing laboratories or from manufacturer's own testing laboratory. Test carried out at manufacturer's own testing la-	Please see the item no. 10 of Addendum 02.	

		boratory must have been witnessed and certified by a representative from STL member laboratories. "We would like to clarify that type testing of Transformers and Reactors witnessing of STL member is not a general practice. Hence, we request PGCB to accept type test reports of tests conducted in Manufacturer's own laboratory & witnessed by end customers / customer's representatives. Please confirm acceptance.		
378	Transmission line side Hardware (applicable for Bogura, Rahanpur, Gopalganj & Chapainawabganj old)	We presume that Transmission line side hardware & insulator for 400kV, 230kV & 132kV line bays are not in the scope of this contract. Please confirm.	As per tender	