

POWER GRID COMPANY OF BANGLADESH LIMITED
Design, Supply, Installation, Testing & Commissioning of Jamuna River Crossing Portion of Bogura-Kaliakair 400kV Double
Circuit Transmission Line on Turnkey Basis (Packge-01, Lot-03)
IFB No. 27.21.0000.101.07.317.22.1924 & ICB No. PGC/EXIM BANK/LOC-2/400kV/TL/JRC(Re-Tender)

CLARIFICATION NO.1

Pre-bid meeting was held on April 11, 2022 as per clause 7.4 of Instruction to Bidders of Volume 1 of 3 of the Bidding document. Some queries were received from the prospective Bidders regarding the Bidding Documents prior the Pre-bid meeting as well as some of the bidders have submitted queries after pre-bid meeting. Clarifications on the above queries are given below, which will form part of the bidding documents.

Sl. No.	Reference and Queries of Prospective Bidders	Reply(PGCB)
Volume 1 of 3		
01	Kindly refer ITB-5.2, Section-2, Volume-1: "Goods and services for minimum 75% value of the contracts covered under the Line of Credit must be sourced from India." & as per Section-5 (Eligible Countries), Volume-1: "The value of at least 75% of the goods (on Schedule-1 and 2 only) shall be supplied by the Seller from India, and the remaining 25% of the goods (on Schedule-1 and 2 only) may be procured by the Seller for the purpose of the Eligible Contract from outside India." From the above two clauses, we understand that the Criteria for 75% will be applicable only on goods under Schedule 1 & 2. Kindly Confirm.	Confirmed.
02	As per ITB 20.1, Section-2, Volume-1: "The currency in which prices are to be quoted in Price Schedule No.3 & 4 is Bangladeshi Taka only." However, As per Appendix-1 (B), Section-9, Volume-1: "The Local Currency is not applicable".	Please follow the Addendum-1.



	In reference with the above clauses, we request you to kindly change/correct the Currency for price quotation in Schedule 3 & 4 to US Dollars from Bangladeshi Taka.	Your request cannot be accepted. Please follow the bidding documents.
03	We understand that Bidder can secure all types of required Insurances from any reputed Institution in India for this Project to meet 75% Indian Origin Criteria. Please Confirm.	The Contractor shall follow the existing insurance act and related acts of the Government of Bangladesh.
04	<u>Volume 1: Section 9 – Contract Forms; Clause Appendix 2 – Price Adjustment</u> In the Price Adjustment Formula, it is defined that Material and Labor Indices applicable to the appropriate industry in the country of origin. However, in case there are no such indices in the country, then bidder shall be free to propose internationally acceptable material and labour indices e.g. LME etc. Please confirm if the understanding is correct.	Confirmed.
05	Please provide the MS Excel copy of Price Schedule.	MS Excel copy of Price Schedule has been provided to all the bidders who have purchased the bidding documents. If require, bidders are requested to collect this from the Contract Department of PGCB.
06	We request you to kindly amend the percentage of Advance Payment from “15%” to “20%”, because to start the work for steel tube pile foundation, we require various special/heavy tools and equipment’s at project site location, so we need to transport the same to project site and it is very costly.	Your request cannot be accepted. Please follow the bidding documents.
07	As per Clause No. 1.3.2, Section 3, Page 3-2, Volume 1 of 3 of bid documents, completion period is 24 months. Due to huge steel tube pile foundation work in river bed and complexity involved in the same is very time consuming, so provided completion period is short for this kind of work. So, we kindly request you to increase the completion period to 48 months from 24 months.	Your request cannot be accepted. Please follow the bidding documents.
08	Please explain whether PGCB will support the bidder in terms of additional cost, time and claims under GCC clause “unforeseen	“unforeseen conditions” will be taken care off as per the conditions of the Contract.



	conditions” for example change of route & locations in future or any situation which as a bidder we cannot determine at bid stages as such changes in future is a situation beyond the control of PGCB and Bidder. The bid states that the bidder will get support so we understand that PGCB will provide all necessary support.	
09	<u>Vol 1 of 3, Section 2-Bid Data Sheet, ITB 5.1</u> Bidder understand that in consortium agreement between two parties, each member can raise the invoice for its scope of work directly to Client and direct payment will be made to an account of individual members. Please confirm.	Your understanding is not correct. Please follow the bidding documents and Addendum-1.
10	<u>Vol 1 of 3 Section 7-General conditions of contract 13.2.1- Advance Payment Security</u> Bidder request to kindly allow contractor to consider insurance bond in lieu of payment guarantee- Pl confirm.	Your request cannot be accepted. Please follow the bidding documents.
11	<u>Vol 1 of 3, Section 7- General conditions of contract Clause: 13.2.2- Recovery of advance payment</u> Bidder request to kindly consider recovery of mobilisation advances will start after 25% of the work is executed and the recovery of total advance should be completed by the time 90% of the original contract work is executed.	Your request cannot be accepted. Please follow the bidding documents.
12	<u>Vol 1 of 3, Section 7-General conditions of contract Clause: 13.3.2- Performance Security</u> Bidder request to Kindly allow contractor to consider insurance bond in lieu of payment guarantee- Pl confirm.	Your request cannot be accepted. Please follow the bidding documents.
13	<u>Vol 1 of 3 Section 8-Special Conditions of Contract Clause: 10. Employer's Responsibilities</u> The Contractor shall be responsible for acquiring and providing legal and physical possession of the transmission line sites and access thereto,	Your request cannot be accepted. Please follow the bidding documents.

	and for acquiring possession of and access to all other areas reasonably required for the proper execution of the contract, including all requisite rights of way as specified in the appendix (scope of works and supply by the employer) to the contract agreement. Bidder request to kindly consider the Land acquiring, physical possession of the site area and other access in Employers scope.	
14	<u>Vol 1 of 3, Section 8-Special Conditions of Contract, Clause-13.3.3</u> The performance security shall not be reduced on the date of the operational acceptance. Bidder request to kindly reduce performance security by 50% after operational acceptance and balance 50% after DLP period of 365 days(12 months)	Your request cannot be accepted. Please follow the bidding documents.
15	<u>Vol 1 of 3, Section 8-Special Conditions of Contract</u> <u>Clause: 22.2.5 Normal working hours are from 9:00 am to 5:00 pm</u> Bidder request to kindly allow contractor to work on 24 X7 basis. <u>Vol 1 of 3 - Section 9: Contract Form, Terms of Payment.</u> “(A) Terms of Payment Schedule No. 1,2,3 and 4.....within forty-five (45) days after receipt of invoice” Bidder request to kindly release the payment within 28 days after receipt of invoice.	Normal working hours are from 9:00 am to 5:00 pm Your request cannot be accepted. Please follow the bidding documents.
16	<u>(A) Terms of Payment, Schedule No. 1 and 2</u> “Ten percent (10%) of the total or pro rata EXW amount upon issue of the Completion Certificate, within 45 days after receipt”	Your request cannot be accepted. Please follow the bidding documents.



	Bidder request to kindly consider the payment towards supply of materials/spare parts as under 1. 15% of the total CIP amount as an advance payment 2. 70% of the total or pro rata CIP or amount upon Incoterm ""CIP,"" upon delivery to Site, 3. 10% of the total or pro rata CIP or amount upon installation 4. 5% of the total CIP upon completion of project. Bidder request to consider bank guarantee/insurance bond against the withheld amount of 5% of the total CIP upon completion of project.	
17	<u>(A) Terms of Payment</u> <u>Schedule No. 4-Installation and Other Services</u> "Ten percent (10%) of the total or pro rata EXW amount upon issue of the Completion Certificate, within 45 days after receipt" Bidder request to kindly consider the payment towards supply of materials/spare parts as under 1. 15% of the total installation and other services amount as an advance payment 2. 80% of the measured value of work performed by the Contractor as identified in the said Program of Performance, during the preceding month 3. 5% of the total installation services upon completion of project. Bidder request to consider bank guarantee/insurance bond against the withheld amount of 5% of the total installation services upon completion of project.	Your request cannot be accepted. Please follow the bidding documents.
18	<u>Vol 1 of 3 - Section 9: Contract Form, Appendix 2 - Price Adjustment-Steel"</u> <u>Appendix 2 - Price Adjustment-Steel (For Foundation)</u>	Your request cannot be accepted. Please follow the bidding documents.

	Bidder request to kindly consider percentage of fixed elements in the contract price = 10% instead of 20%	
19	<u>General Temporary Loadout Point</u> 1. Please clarify is there any loadout facility available on site to unload/load and shift the construction equipments, materials etc. 2. If the loadout facility is not available, kindly provide the designated area for the construction of such facility.	The bidders are requested to visit the sites to assess the loadout facility.
20	<u>General, Contractors Site facility</u> 1. Bidder request to kindly provide the area for contractors office, godowns, stockyards, precast yard, labour camp, batching plant etc. 2. Bidder assume that the area for contractors establishment will be provided at free of cost till completion of project. Please clarify.	The bidders are requested to visit the sites to assess the requested facilities. The Bidder (Contractor) shall arrange such facilities with their own cost during the Contract execution.
21	<u>General: Electricity, Water and other Services</u> 1. Bidder request to kindly provide drawing showing the location/ point from where Contractor can arrange Power supply. 2. Bidder request to kindly provide drawing showing the location of nearest tapping point and lead distance from where Contractor can arrange water supply.	The bidders are requested to visit the sites to assess Power and Water Supply.
22	<u>General: Dredging/ trench cutting</u> Bidder understand dredging work is allowed if it is required to be carried out in the River for construction purpose and the dredged material will be disposed in river itself. Please confirm.	Corresponding Govt. rule & guideline shall be followed.
23	<u>General: Disposal of Pile Muck</u> Kindly provide the designated area for muck disposal and Please mention the lead distance of such place from the site	Bidders are requested to visit the sites to assess the muck disposal area.
24	<u>General</u> Please confirm is there any working restrictions or barge movement restrictions to the contractor while working in the river bed.	The work will be conducted as per the conditions of the Contract.

25	<u>General</u> Please confirm the tentative commencement date of Project.	Please follow the bidding documents.
26	<u>SCC 14- Taxes and duties</u> <u>Notwithstanding to Clause 14.2 (a), for Contract Value (Part 1)-</u> <u>LOC Component: As per the Dollar Credit Line Agreement dated</u> <u>March 09, 2016 between Exim Bank and the Government of the</u> <u>People's Republic of Bangladesh, all eligible goods and services</u> <u>including works, shall be exempt from all kinds of taxes and duties,</u> <u>of any nature whatsoever levied in Bangladesh including all value</u> <u>added taxes import/custom duties,</u> <u>.....</u> 1) Based on the clause no. SCC-14 , we request you to confirm that following taxes are exempt for the project : - Corporate Income tax - Branch Remittance tax - VAT on our sales to employer - VAT on local purchase of goods and services - VAT on import of services - Custom duty and other charges/taxes on import of goods. 2) We request you to confirm that the exemption certificates for all the above taxes will be provided before the commencement of the project. 3) If you wish to provide the exemptions by way of reimbursement, request you to confirm the timelines for the reimbursement of the taxes. 4) Bidder understand that as it is EXIM bank /LOC project. AIT and VAT will be paid by Employer directly to Government without any deduction from contractors payment. Please confirm.	Please follow the bidding documents.
27	<u>Appendix 2 - Price Adjustment</u> Steel (For Foundation) The formula for calculating the price adjustment to be applied to the contract price component of fabricated towers (including bolts & nuts)	Please follow Addendum-1.



	is as follows:"	
	It is mention here that "the formula for calculating price adjustment to be applied to the contract price component of fabricated towers (including bolts & nuts) is as follows: ". In the header it is written the given price adjustment is for Steel (For Foundation) only. Please clarify the applicability is on Tower or Steel Tube Material for Tower foundation and Permanent Steel Casing Material for Tower foundation.	
28	<u>Appendix 2 - Price Adjustment Steel (For Foundation)</u> We understand Price Adjustment is applicable on Steel Material in Foundation works which include the following : a) Steel Tube b) Steel Tube related crown c) Steel Beam/ Grider d) Reinforcement Steel. Please confirm	Price Adjustment shall be applicable on the Steel Tube Material and Permanent Steel Casing Material for Foundation as mentioned on the line item of Price Schedule-1 & 2.
29	<u>Annex 23-1</u> <u>Table: Tower Positions of Jamuna River Crossing Portion of Bogura-Kaliakair 400kV Double Circuit Transmission Line</u> It is mentioned the tower type for all the 14 nos. of tower locations, however there is no mention on the type of foundation i.e. Mid River Foundation on Steel Tube, River Bank Foundation on Steel Tube and River Bank under any soil category. Please provide us the type of foundation against each tower location for our proposal.	Please follow the bidding document.
30	<u>Volume 1 of 3 400kV JRC TL(P-1, L-3) Re-Tender ITB 20.1: currency in which prices are to be quoted in Price Schedule No.3 & 4 is Bangladeshi Taka only.</u> Under the scope of Sch 3 and 4, significant amount of expenses are being incurred outside Bangladesh in freely convertible foreign currency, please allow quoting of the prices under Sch 3 and 4, in local and freely convertible foreign currency.	Your request cannot be accepted. Please follow the bidding documents.

31	<u>Volume 1 of 3 400kV JRC TL(P-1, L-3) Re-Tender Section 3: Evaluation and Qualification Criteria: 1.3.2 Time Schedule</u> Project of this complex nature with requirement of specialised equipment, huge mobilisation, expertise teams and others need minimum timeline of 48 months. The given timeline are not sufficient to carry out the works, please allow requisite timeline for the completion.	Your request cannot be accepted. Please follow the bidding documents.
32	Requirement of Supply of goods and services from India i. As per Clause no. ITB 5.2, Section 2 : Bid Data Sheet, Volume – 1 <i>“As per the GOI guidelines, goods and services for minimum 75% value of the contracts covered under the Line of Credit, must be sourced from India. Applicants are advised to refer to the GOI guidelines mentioned above for details available at: http://www.eximbankindia.in/assets/pdf/loc/GOI-Guidelines-on-LOC.pdf.”</i> ii. As per Section 5 – Eligible Countries. <i>“The value of at least 75% of the goods (on Schedule-1 and 2 only) shall be supplied by the Seller from India, and the remaining 25% of the goods (on Schedule-1 and 2 only) may be procured by the Seller for the purpose of the Eligible Contract from outside India. The bidders are invited to refer to the Government of India’s guidelines in this regard.”</i> <u>Queries</u> i) From the above clauses, we understand that Govt of India guidelines i.e. “75% value of the contracts must be sources from India”, shall be applicable to Price Schedule-1 & 2 only (Supply of Plant & Mandatory Spare Parts). While, bidders not required	Confirmed.

	to comply above 75% criteria for Price Schedule-3 & 4 (Design & Installation). Please clarify / confirm. ii) As you are aware, major scope of work in this Project includes construction of large-scale steel tube pile foundation in Jamuna riverbed. Steel Tube Material (Steel Pile) for Tower foundation is the only major item in supply Schedule-1 & 2, having huge volume & sizeable weightage (about 70-80%) of total Supply Value. Hardly, one supplier available in India, having capacity (as on date) to manufacture steel tube pile as per requirements (i.e. more than 50 mm thick & 2000 mm diameter steel pipe) for this package. Considering above, Bidder shall also be allowed to explore & supply Steel Tube materials from other competent outside India Steel Tube suppliers, which further ensures preparation of best realistic & economical Bid proposal and timely deliverables of the Project. In this regard, we hereby request PGCB to look into this matter on priority and suitably take it up with Govt of India / EXIM Bank-India to remove Indian origin criteria (i.e. 75% of the goods (on Schedule-1 and 2 only) shall be supplied from India" for this particular package. Please clarify / confirm.	Please follow the bidding documents.
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33	Sub-Contractor Eligibility : As per Volume-1, Section-1 (Instruction to Bidder), Clause 18.2: <i>“Bidders shall not be allowed to subcontract works to any contractor from a country which shares a land border with India unless such contractor is registered with the competent Authority. In this regard, Bidders are advised to refer to the Public Procurement Order nos. 1 & 2 dated July 23, 2020 and Public Procurement Order no. 3 dated July 24, 2020 issued by the Public Procurement Division of the Department of Expenditure (DOE), Ministry of Finance, Government of India.”</i> However, as per Volume-1, Section-5 (Eligible Countries): The value restriction i.e. 75% of Services procurement India, is not applicable for Installation & Other Services (on Schedule-3 and 4). Queries: i) From the above clauses, we understand that above subcontractor restrictions (i.e. Clause 18.2 of Section-1 (ITB)), shall not be applicable for works covered under Schedule-3 & 4 (Design, Installation & Other Services), which is funded by Govt of Bangladesh. Please clarify / confirm. ii) From the above clauses, we also understand that above subcontractor restrictions (i.e. Clause 18.2 of Section-1 (ITB)), shall not be applicable to any Sub-contractor from borrowers country (Bangladesh). Please clarify / confirm.	Your understanding is correct.
34	Price Adjustment: Kindly refer Appendix-2 (Price Adjustment), Section-9, Volume-1, Page 9-11: "Steel (For foundation)"	Please follow the Addendum-1.



	i) It is mention here that <i>“the formula for calculating price adjustment to be applied to the contract price component of fabricated towers (including bolts & nuts) is as follows: “</i> From above, we understand that, the given price adjustment is for Steel (For Foundation) only, and reference of fabricated towers is merely an error. Hence, we request you to kindly arrange to provide the correction. ii) From the above clause we understand that, price adjustment shall be applicable to Steel tube material for tower foundation and Permanent Steel casing material for tower foundation. Kindly Confirm. Sub-contracting: Please refer Sub-Clause no 19.6, Section -8 (Special Condition of Contract), Page 8-8, Volume-1 : “The Contractor shall not subcontract more than 50% of the facilities” Queries: In this project, 11 out of 14 nos of River Crossing Tower Foundation requires Steel Tube Pile foundation (Mid River) for which bidders allowed to depute specialist Steel Piling Subcontractor, who meets the required experience criteria. Further, majority of the Total Contract value (about 80-90%) belong to River Crossing foundation civil works only, which may require to be subcontracted to specialist Civil Infrastructure subcontractor. While, standard 400KV Transmission Line items (like Tower, Conductor, Insulator, Hardwares...etc.) not having much weightage in total contract value. So, its difficult to comply above requirements for bidders as an EPC Transmission Line Contractor.	Please follow the bidding documents.
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	Considering above, may we request PGCB to remove above sub-clause 19.6, i.e. "The Contractor shall not subcontract more than 50% of the facilities" for this particular package. Please issue necessary clarification / amendment in this regard.	
35	Taxes & Duties: As per Sub-Clause 14.2, Section -8 (Special Condition of Contract), Volume-1 : a. <i>"Notwithstanding GCC Sub-Clauses 14.1 above or wherever, any material import from abroad under price schedule No.1 shall be considered as the direct import of the Employer and the Employer shall bear and promptly pay all relevant customs and import duties as well as other local taxes, e.g., a value added tax (VAT), advance income tax (AIT) and other charges, which are imposed by the law of the country, that are to be incorporated into the facilities"</i>. b. <i>"Notwithstanding to Clause 14.2 (a), for Contract Value (Part 1)-LOC Component: As per the Dollar Credit Line Agreement dated March 09, 2016 between Exim Bank and the Government of the People's Republic of Bangladesh, all eligible goods and services including works, shall be exempt from all kinds of taxes and duties, of any nature whatsoever levied in Bangladesh, except in-come tax as referred to in the relevant provisions contained in the double Taxation Avoidance Agreement (DTAA) between India and Bangladesh"</i>. Queries As per above clauses, we understand that PGCB shall bear and promptly pay Advance Income Tax (AIT) as applicable on any material imported from abroad under Price Schedule No 1. Please confirm, whether our above understanding are in line with Bid requirements or not.	Please follow the bidding documents.



36	As per Scope of Work (Especially Steel Tube Foundation Work), we required Expert staffs and same will come from foreign countries (Mainly Indians, Turkish or Other Eligible Nation/Countries) phase by phase and will work in Bangladesh till Project Completion. We will also hire local manpower from Bangladesh. In this regards we understand that there are restrictions from BIDA regarding employment of foreign nationalities in Bangladesh to maintain 1:5 expatriate: local ratio and due to Special Steel Tube Foundation work, we cannot maintain 1:5 ratios. So we seek below mentioned clarity / addendum in relevant clauses. • The manpower requirement for this project is such that skilled workmen, operators and engineers having specific expertise for 2000 mm steel driven pile is not available in Bangladesh. We expect major support staff will come from various foreign nations based on their specific skill and expertise in Steel Tube Foundation work required from time to time. We understand that there are restrictions from BIDA for employment of foreign nationalities to maintain 1:5 expatriate: local ratio and in this project, the prevailing ration of 1:5 cannot be maintained. The bid does mention about few key roles in Section 6, Point 8 of Vol 1 of Bid Document but does not specify any further requirements. We request you to kindly issue an addendum in Section 6, Point 8 of Vol 1 of Bid Document for ○ Include provision to hire manpower required from foreign countries ○ PGCB will facilitate VISA and work permit of the expatriates employed in the project including expatriates of the subcontractor. Such facilitation will include but not limited to issuance of relevant (A3 / E) VISA recommendation letter, arrange for NOC	
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	from the Project Director relating to security clearance of the expatriates etc.; and, ○ Inform BIDA, NBR and NSI through concerned ministries declaring that this project is of national importance and there will be a requirement of skilled personnel from foreign countries. This will enable us to take up the cases with these agencies during execution and VISA processing will be faster and convenient. • The bidders will have to bring in expert manpower (including skilled workmen, technicians, operators, welders, engineers and executives) from foreign nations as per projects requirements. However, we understand that though there are certain restrictions related to employment of foreign nationalities in Bangladesh in this project the same will not be applicable as the related expertise is not available locally in Bangladesh. Please confirm our understanding is correct. We further understand that during execution, PGCB will provide all necessary supports required for obtaining visa and work permits for all foreign personnel through concerned ministry. Please confirm. In addition, if there is a situation where a specific meeting needs to be arranged with Ministries or BIDA or NBR or NSI the same support in terms of documents and time will be taken care by the client. Please confirm.	
37	Vol 1 of 3 -Section 7- General condition of contract, Page 7-12 CI 12.3-In the event that the Employer fails to make any payment by its respective due date or within the period set forth in the Contract, the	Interest on delayed payment is not applicable for this tender.



	Employer shall pay to the Contractor interest on the amount of such delayed payment at the rate(s) shown in the Appendix (Terms and Section 7 - General Conditions of Contract 7-13 It is stated that Employer shall pay to the Contractor interest on the amount of such delayed payment at the rate(s) shown in the Appendix (Terms and Procedure of payment). Bidder request to kindly provide the rate of interest towards delay in payment.	
38	Section-1, ITB, Clause 5: Eligible Bidders point (m) As per the given clause it is mentioned that “All Joint Venture partners should comply with GOI-Guidelines regarding entity/ies registered in India and/or incorporated/established under any law in force in India”. We have the following clarification in this regard It is clearly given in the tender document (BDS) that the project is jointly funded by Indian Line of Credit & Govt of Bangladesh where payment of Schedule-1 are to be made through Indian LOC fund while for other Schedules its is made from GOB Fund. Since in this project >50% of the project value is of Construction, which is funded by GOB, hence Participation of Bangladeshi Contractors/Any other Nationality Contractor as JV member with Mandatory requirement of Indian Partner as Lead Partner should also be allowed in case non Indian partner's scope in JV is limited to the contract Portion which is under GOB Fund. Please clarify.	Please follow the bidding documents.
39	Section-1, ITB, Clause 18.2 Technical Proposal Subcontractor In this clause it is mentioned that “Bidders shall not be allowed to subcontract works to any contractor from a country which shares a land border with India unless such contractor is registered with the competent Authority. In this regard, Bidders are advised to refer to the Public Procurement Order nos. 1 & 2 dated July 23, 2020, and Public Procurement Order no. 3 dated July 24, 2020 issued by the Public Procurement Division of the Department of Expenditure (DOE),	



	Ministry of Finance, Government of India". We have the following clarification in this regard - Whether the Same clause is applicable to Subcontracting of works or even the items to be supplied under Schedule No. 1, please clarify. - If the Indian Line of Credit Itself is given to the country which shares the land border with India, then as per our understanding the above clause should not be applicable to the contractors/subcontractors of the beneficiary country of LOC which in current case is Bangladesh. Hence, we understand that for Bangladeshi subcontractors this clause shall not be applicable. Please clarify. Also, since the fund for this project are from Indian LOC and GOB both, and hence for GOB Funded Portion of the Contract i.e Schedule No., 2,3 4, the above clause should be not applicable. Please clarify	- No. For Schedule no. 1, it is mandatory to maintain 75%-25% ratio. - Your understanding is correct.
40	Section-2, BDS, Clause- ITB 20.1 In this clause it is mentioned that "The currency in which prices are to be quoted in Price Schedule No. 3 & 4 is Bangladeshi Taka only". We have the following clarification in this regard It is to submit that due to the very specific nature of the contract of River Bed & River Bank Foundation a huge amount of cost applicable to the Scope covered under Schedule No 3 & 4 is to be incurred In foreign convertible Currencies and hence not allowing to quote any other currency in the said schedule shall be adversely impacting the project cost and hence it is requested that both Foreign Currency & Local Currency must be allowed to be quoted in Schedule 3 & 4. Pls clarify your position in this regard.	Please follow the bidding documents.
41	Section-5, Eligible Countries	The supply portion is under the financing of LOC, hence the ratio is applicable for both the Schedule-1 and Schedule-2.

	The value of at least 75% of the goods (on Schedule-1 and 2 only) shall be supplied by the Seller from India, and the remaining 25% of the goods (on Schedule-1 and 2 only) may be procured by the Seller for the purpose of the Eligible Contract from outside India. The bidders are invited to refer to the Government of India's guidelines in this regard. This restriction is not applicable for Installation & Other Services (on Schedule-3 and 4). We have the following clarification in this regards As per above clause 75:25 Rule is applicable to Schedule 1 & 2 while in BDS only the payment of Schedule-1 is from Indian Line of Credit. Hence as per our understanding the above clause should not be applicable to Schedule No. 2 as schedule 2/3/4 payment is from GOB Fund. Pls Clarify.	
42	Section-8, SCC, 10.2 (Employer's Responsibilities) The Employer shall give administrative support to accord all rights of access for transmission line thereto on or before the date(s) specified in that appendix at the cost of the Contractor. The Contractor shall be responsible for acquiring and providing legal and physical possession of the transmission line sites and access thereto, and for acquiring possession of and access to all other areas reasonably required for the proper execution of the contract, including all requisite rights of way as specified in the appendix (scope of works and supply by the employer) to the contract agreement. All Such cost is deemed to be included in the contract price We have the following Clarification in this regards The above clause categorically puts complete onus of acquiring/managing ROW and access to site to the Contractors Scope which shall be a huge issue during execution. As you are very much aware that for constructing this project Huge Land Area is required for Setting up the necessary Fabrication Yards, Equipment Storage and Steel Pile Storage Area on both side of the river banks. It is requested	Your request cannot be accepted. Please follow the bidding documents.



	that PGCB must discuss with the relevant authorities and get the subject required land for the contractors project facility set up free of cost or if any compensation is to be paid, it shall be made directly by PGCB. Please clarify your position in this regards.	
43	Section-9, Contract Forms, Appendix-2 Price Adjustment Steel (For Foundation) The formula for calculating the price adjustment to be applied to the contract price component of fabricated towers (including bolts & nuts) is as follows:- It is requested that words “Fabricated Towers (Including Bolt & Nut)” must be deleted and replaced with “Steel for Foundation”. For your consideration please.	Please follow the Addendum-1.
44	Section-9, Contract Forms, Appendix-4 Time Schedule In this particular Appendix, the Completion time Schedule is, mentioned as 720 Days from Contract Effective Date i.e Contract Signing Date. We have the following clarification in this regards a. As you are very much aware the complexity and challenges involved in such projects is huge and with the available example of 7 Nos of Mid River Foundation in Padma River (Still Under Execution for almost 4 Years) it is clear that the given timelines are almost impractical and project shall demand at least 42-48 Months in all practical sense. Hence Given 24 Months time lines are not at all workable and the same must be revised to 42-48 Months. Please clarify your position in this regards. In case the above timelines are not amended to the above referred request, the bidders shall not have any other option but to quote considering all the risk associated with delayed completion of the project which in turn shall increase the cost of the project to the significant extent. Please clarify your position in this regard.	Your request cannot be accepted. Please follow the bidding documents.



Volume 2 of 3		
45	<u>Volume 2 of 3, Section-7: Foundation, Clause- 7.1.4.5:</u> Rigid Frame Foundation "Rigid framed foundation, which is adopted at high water level area, shall be consisted of rigid frame and pile." Since River Bed Foundation are subject to HFL and naturally in High Water Level Area hence as per above clause Rigid Frame Foundation shall be applicable for the foundations on River Bed. Please confirm if the understanding is correct.	No, your understanding is not correct. Volume 2/3, Section-7, Clause 7.1.4.6 shall be followed for river crossing foundation.
46	<u>Volume 2 of 3, Section-7: Foundation, Clause- 7.1.4.6.1:</u> Considerations for design on river bed b) All river crossing foundations shall be supported by driven steel tube piles having minimum 2000mm Diameter & minimum 80-meter length for 400kV transmission line. Thickness of steel in such steel tube piles shall be minimum 50mm. No of pile in each pile cap, actual diameter & length of individual pile etc. shall be finalized during the detail design at execution stage. Please confirm, in case while driving the pile if refusal strata is achieved, whether pile length can be reduced below minimum length as specified above as applicable for 400 kV Lines.	The length of driven steel piles CAN NOT BE REDUCED below minimum length. The piles driving technology is to be determined in the process of design based on geotechnical investigations. If a refusal strata is achieved, bidder shall investigate and find suitable location/ technology for pile driving. No extra cost will be provided by employer in any case.
47	<u>Volume 2 of 3, Section-7: Foundations, Appendix-7.A9, Clause 2.4 Sand</u> "The sand that fills the piles shall be assumed to have a submerged unit weight of 9 kN/m³, based on experience from the Padma Multipurpose Bridge." Whether the bidder need to consider the same or not as the document has been referred to as for conceptual purpose. If so the material grades to be used in the design and Construction must be categorically covered	Please follow the bidding documents.



	under the technical Specification or through additional appendix to make it clear to the bidders/Contractor. Please Clarify.	
48	<u>Volume 2 of 3, Section-7: Foundations, Appendix-7.A9, Clause 2.4 Sand</u> "The sand that fills the piles shall be assumed to have a submerged unit weight of 9 kN/m³, based on experience from the Padma Multipurpose Bridge." Above clause is mentioned in conceptual design, Please confirm whether the sand filling is required in driven steel tube piles or bidder can design without sand filling inside steel tube piles.	Please follow the bidding documents.
49	<u>Volume 2 of 3, Section-7: Foundation, Clause-7.1.4.6.3</u> Considerations for design on river bank, in Clause (b) & (c) it is mentioned that b) Pile supported foundation shall be designed considering approved foundation reaction and foundation strength factor of corresponding tower, water current on structures below HFL, ship impact and other necessary loads in association with relative codes and standards. Ship impact should be calculated as per Bangladesh/International code and practices Maximum deflection of pile and pile cap should be within allowable limit. c) All piles of a leg shall be connected by a RCC pile cap. Top of pile cap shall be 450mm below existing ground level. Top of chimney shall generally be minimum 450mm higher than Highest Flood Level (HFL), but maximum height of the chimney shall be limited to 6450mm from ground level. These reinforced concrete chimneys shall be designed to withstand the maximum resultant horizontal residual shear (from tower reaction) and other required external lateral forces. Whole foundation shall be capable to withstand ship impact. For structural design of chimney, no allowance shall be made of the nominal strength of	Please follow the bidding documents.



	concrete in tension and the stub shall not be considered as providing any part of the tensile area of reinforcing steelwork. We have the following clarification in this regard: Since the towers on the River Bank are to be located outside the River Bed and there is no ship movement on the Bank of the River, hence the ship impact should not be applicable to Foundation Design of Tower Foundation of the River Bank. Please Clarify.	
50	<u>Volume 2 of 3, Section-7: Foundations, Appendix-7.A9, Clause 4.6.2</u> ∴ Please confirm, if LUSAS dynamic analysis would be in the time domain or in the frequency domain.	Please follow the bidding documents.
51	<u>Volume 2 of 3, Section-7: Foundations, Appendix-7.A9, Clause 4.6.2, for LUSAS program :</u> In LUSAS, 3-phase soil behaviour is difficult to model, kindly provide any alternative.	Please follow the bidding documents.
52	It is presumed that the ship impact force on the river foundations will act against the sacrificial concrete fins provided at top of concrete platform level irrespective of the water level in the river. Ship impact force acting directly against the isolated steel piles below the bottom of the concrete platform level will not be considered in design, for water level flowing below the HFL (say at the LWL). Please confirm whether our understating is correct	Please follow the bidding documents.
53	Please provide the following ship / vessel parameters for analysis of ship impact force on river foundations for Jamuna River. (i) DWT (dead weight tonnage) of ship	Please follow the bidding documents.



	(ii) Self-weight (unladen weight) of the ship (iii) Length of the ship (iv) Width / breadth of the ship (v) Total depth / height of the ship (vi) Height / depth of the ship below water level for loaded (laden) condition (vii) Velocity of the ship	
54	<u>Volume 2 of 3, Section-7: Foundations, Appendix-7.A9, Clause 4.8.2</u> ⋮ It is assumed that for design of river foundations, the ship impact force will act on the foundation system along the centre line of the foundation system only. Therefore, no eccentric ship impact force shall be considered on the foundation system in the design. Please confirm.	Please follow the bidding documents.
55	<u>Volume 2 of 3, Section-8: Towers, Annex 8.13 (5) : 400kV Double Circuit Towers</u> Foundation forces provided in the global direction including total vertical force, total longitudinal force and total transverse force are provided for four load cases. Please provide individual vertical force, longitudinal force & transverse force at each tower leg of four legs for each of four load cases.	Provided foundation reactions are for one leg only and Foundation reactions are same for all four legs.
56	<u>Volume 2 of 3, Section-7: Foundations, Appendix-7.A9, Clause 2.3</u> <u>Structural Steelwork :</u> 2.3. Structural Steelwork Material strengths and properties shall be in accordance with BS 5400 Part 3. Grades of steel are as follows. ➤ Steel tubular piles - S355 to BS EN 10025 (refer to the Drawings and Specification for final subgrades adopted in the design).	Please follow the bidding documents.

	➤ Any steel used elsewhere in the foundations or platforms - S355; the subgrades to be used shall be as follows: J2+N to EN 10025-2:2004 for thicknesses less than 35 mm; K2 or N or M to EN 10025-2 or 10025-3 for steel thicknesses between 35 & 45mm; NL or ML to EN 10025-3 or EN 10025-4 for steel thicknesses between 45 & 120mm. Please confirm whether steel grade of S460 can be used for steel tubular piles.												
57	As per Clarification-01, Point no. 60, Page 24 of 44 received during last bid as per Contract No. PGCB/400KV&230kV/RCTL/Lot-1/2 for Lot 1/2 as below. <table><tr><td>60</td><td> Volume 2 of 3 "Steel Tubular Piles" for river foundations will be provided with anticorrosive paint on the outer surfaces, which will have guaranteed corrosion protection life for 5 years. Subsequently anticorrosive paint will be periodically applied on the pile surfaces by PGCB to prevent corrosion for rest of the design life of the structure. It is presumed that this consideration for corrosion prevention is acceptable. </td><td> No, it is not acceptable. Design & construction of steel tube piles should ensure its strength throughout the design life. </td></tr></table> It is mentioned that to ensure the strength of steel tubular pile throughout the design life, respective care should be taken in design. As per our understanding, additional sacrificial thickness needs to be considered to ensure its strength. Please confirm our understanding is correct.	60	Volume 2 of 3 "Steel Tubular Piles" for river foundations will be provided with anticorrosive paint on the outer surfaces, which will have guaranteed corrosion protection life for 5 years. Subsequently anticorrosive paint will be periodically applied on the pile surfaces by PGCB to prevent corrosion for rest of the design life of the structure. It is presumed that this consideration for corrosion prevention is acceptable.	No, it is not acceptable. Design & construction of steel tube piles should ensure its strength throughout the design life.	Design & construction of steel tube piles should ensure its strength throughout the design life. Thickness of steel tube piles shall be finalized during detail design in execution stage.								
60	Volume 2 of 3 "Steel Tubular Piles" for river foundations will be provided with anticorrosive paint on the outer surfaces, which will have guaranteed corrosion protection life for 5 years. Subsequently anticorrosive paint will be periodically applied on the pile surfaces by PGCB to prevent corrosion for rest of the design life of the structure. It is presumed that this consideration for corrosion prevention is acceptable.	No, it is not acceptable. Design & construction of steel tube piles should ensure its strength throughout the design life.											
58	Please indicate the present (existing) riverbed level and riverbank level at all the river crossing locations for Jamuna River.	Please follow the bidding documents.											
59	As per the structural drawing received with bid documents, Bolt/nut quantity (BOM) not mentioned on any drawings of 4DR & 4DAX. Please provide the latest structural drawing with Bolt/nut BOM in the drawings itself.	Available structural Drawings with the Bill of Materials (BoM) have already been provided to all the bidders. For missing BoM portions [Structural Drawing of 4DR Tower, Sheet no. 6 of 12 & 7 of 12], please refer to clarification against query no. 62.											
60	Volume 2 of 3, Section-7: Foundations, Appendix 7.A1 : <table><tr><th rowspan="2">Soil Category</th><th colspan="3">Allowable Foundation Type</th></tr><tr><th>For river bed locations</th><th>For river bank locations</th><th>For overland locations (Non-river crossing foundation)</th></tr><tr><td>Any</td><td>Driven steel tube pile</td><td>Cast in situ Pile</td><td>Cast in situ</td></tr></table> Please confirm permanent liner/casing required for riverbank location or not. If required, Please confirm whether MS liner plate in the concrete piles of the riverbank foundations shall be provided up to the scour level of the river or for the entire length of the pile up to the founding level.	Soil Category	Allowable Foundation Type			For river bed locations	For river bank locations	For overland locations (Non-river crossing foundation)	Any	Driven steel tube pile	Cast in situ Pile	Cast in situ	Please follow the bidding documents.
Soil Category	Allowable Foundation Type												
	For river bed locations	For river bank locations	For overland locations (Non-river crossing foundation)										
Any	Driven steel tube pile	Cast in situ Pile	Cast in situ										

61	Soil Investigation is an integral part of the contract and PGCB has not provided any soil test report as generally provided by agencies for such critical projects. We understand that bidders have to do soil test during execution. Please confirm. We further understand that since it is not possible to do soil test at all locations during tender stage and if an abnormal or different report (as clay encountered after 70 m like in case of Padma Bridge project) than PGCB will issue variance order, as this is an unforeseen situation as per GCC clause. Please confirm our understanding is correct.	1. Confirmed. Soil Investigation is the responsibility of the bidders 2. For any abnormality or different situation, specifications of the bidding document will be followed.
62	As per the structural drawing received with bid documents for 4DR Tower, Sheet no. 6 of 12 & 7 of 12, Structural Steel weight (BOM) & Bolt/nut quantity (BOM) not mentioned. Please provide the latest structural drawing with Steel & Bolt/nut BOM in the drawings itself.	Bidders are requested to collect the scanned copy of available structural drawings with Bill of Material (BoM) for 4DR Tower, Sheet no. 6 of 12 & 7 of 12 from PGCB. However, the bidders are also requested to follow the structural drawings to check, if there is any mismatch/missing parts in the bill of material and calculate the correct bill off material (BoM) by themselves
63	As per the structural drawings of 2DR & 2DAX received during last bid as per Contract No. PGCB/400KV&230kV/RCTL/Lot-1/2 for Lot 1/2, Old revision drawings received with the bid and there are some weight variation with latest revision drawings. Please confirm provided drawings with the bid are latest one, if not so than PGCB will pay for the differential weight if latest drawings provided at the execution stage.	PGCB will not pay anything beyond the price schedule items during execution of the project, since price of these items are for 'each' tower only. It may be mentioned here that, available structural drawings have already been provided to the bidders. However, the bidders are requested to follow the structural drawings to check, if there is any mismatch/missing parts in the provided bill of material and calculate the correct bill of material (BoM) by themselves.
64	As per Clause 7.1.4.6.3, Section-7, Volume 2 of 3: Foundation,; Considerations for design on river bank.	Please follow the bidding documents.

	For River bank location, It is not clearly mentioned that bidder should design RCC bored pile for the riverbank location. However, looking to the price schedule it seems that bidder have to design RCC bored pile only. Considering the heavy loading of ship impact & scour, we request you to allow bidder to decide type of pile foundation out of RCC bored & steel driven pile for riverbank location. Please amend the price schedule accordingly.												
65	As per Volume 2 of 3, Section-7: Foundations, Appendix 7.A1 <table><tr><th rowspan="2">Soil Category</th><th colspan="3">Allowable Foundation Type</th></tr><tr><th>For river bed locations</th><th>For river bank locations</th><th>For overland locations (Non-river crossing foundation)</th></tr><tr><td>Any</td><td>Driven steel tube pile</td><td>Cast in situ Pile</td><td>Cast in situ</td></tr></table> Please confirm, permanent liner/casing required for riverbank location or not. If required, please confirm, that MS liner plate in the concrete piles of the riverbank foundations shall be provided as per the site/construction requirement only, and not up to the scour level or founding level. If liner requirement up to the scour level or founding level, then at least more than 35 mm thick liner will be required which is very impractical for riverbank location. Please provide clarity for liner requirement for riverbank locations.	Soil Category	Allowable Foundation Type			For river bed locations	For river bank locations	For overland locations (Non-river crossing foundation)	Any	Driven steel tube pile	Cast in situ Pile	Cast in situ	Please follow the bidding documents.
Soil Category	Allowable Foundation Type												
	For river bed locations	For river bank locations	For overland locations (Non-river crossing foundation)										
Any	Driven steel tube pile	Cast in situ Pile	Cast in situ										
66	Please, refer the clause no. 7.4.3, 7.5.5 (e), 7.6.3 of Volume 2 of 3 (Technical Specification). From above clauses, we could not define / understand the exact requirements of Epoxy Coated Reinforcement bars. We understand that Epoxy Coated Reinforcement Steel Bars not required in this Project. Please, Confirm.	Use of epoxy coated steel bars shall be finalized in execution stage. Corresponding specifications of bidding document shall be followed.											

	If Epoxy Coated Steel Bars required, then kindly arrange to provide the detail Epoxy coating specifications to be followed with clearly mentioning the types of coating materials / methodology / Dry Film Thickness / standards.....etc. to enable us to assess the exact tender requirements.	
66	As per Clause No. 9.6.2 (ii), Volume-2 of the bid documents, "Type tests of insulator sets shall be comprising of cap & pin insulator units being completed with all appropriate same fittings including insulator protective fittings manufactured by the same manufacturer". It is also stated in the clause that:- "If the type tests for insulator sets are not available as offered combination of insulator & fitting manufacturer (except low duty sets) with proposed design, the tests shall be performed in laboratories mentioned in Clause 9.6.2 (i) during execution stage in presence of Employer's Engineers. Cost of such test and witness shall deem to be included in the Contract Price". From the above clauses we understand that, if the bidder fails to submit type tests of offered insulator string sets (except low duty sets), then the bidder needs to conduct fresh type tests on all the insulator string sets (except low duty sets) such as 'suspension sets, jumper suspension sets and tension string sets',. Kindly clarify & confirm.	If the type tests for insulator sets are not available as offered combination of insulator and fittings manufacturer (except low duty sets) with proposed design, the tests shall be performed in laboratories mentioned in clause 9.6.2 (i) during execution stage in presence of employer's engineers. Costs of such test and witness shall deem to be included in the contract price.
67	The type test requirement for Insulator Unit are given in the Table 9-1 and also in Clause No. 9.6.2 (i), Chapter 9, Volume-2. Please confirm whether type test reports shall include all items mentioned in Table 9-1 or only include lists in 9.6.2 (i).	(i) Please follow Clause No. 9.6.2 (i), Chapter 9, Volume 2 of 2. (ii) Bidder's understanding is not correct. Type test report for Insulator units is to be submitted with the bid proposal as per the bid requirement.

Table 9-1: Test Requirements

Test	Insulator Units Cap & Pin (Type B)	Insulator Sets
Type Tests:		
Verification of dimensions	X	-
Dry lightning impulse withstand voltage	X	X
Wet power frequency withstand voltage	X	X
Thermal mechanical performance	X	-
Mechanical or EMF load	X	-
Radio Interference Voltage (RIV)	X	X
Pollution performance		X a)
Power arc	X	X
Impulse voltage puncture	X	-
Zinc sleeve	X	-
Residual strength	X	-
Sample Tests:		

Test	Insulator Units Cap & Pin (Type B)	Insulator Sets
Verification of dimensions	X	-
Verification of locking system and displacement	X	-
Temperature cycle test	X	-
Mechanical or EMF load	X	-
Porosity	X	-
Galvanizing	X	-
RIV	X	-
Impulse Voltage puncture	X	-
Zinc sleeve test	X	-
Head design test	X	-
Routine Tests:		
Visual inspection	X	-
Mechanical	X	-
Electrical	X	-

a) $U_m \leq 245 \text{ kV}$;

	9.6.2 Type Tests (i) Insulator Units Type test reports issued from independent reputed testing laboratory as listed below, outside the Manufacturer's country for insulator units which shall include the following tests performed on all the offered types of insulators as per IEC except power arc test which shall conform to test procedures outlined in this Clause: • Verification of dimensions • Dry lightning impulse voltage withstand test; • Wet power frequency voltage withstand test; • Electro-mechanical failing load test; • Thermal mechanical performance test; • Radio Interference Voltage (RIV) • Impulse voltage puncture test • Power arc test • Zinc Sleeve Test • Residual Strength Test A list of independent reputed testing laboratories acceptable to the Employer is mentioned below: - KEMA Laboratories in the Netherlands - Powertech High Power Laboratories in Canada - Kinectrics, Canada - IREQ Montreal in Canada - CESI in Italy - Vattenfall in Sweden - Veiki VNL in Hungary As per Clause No. 9.6.2, Chapter-9, Volume-2 of the bid documents, we understand that in case bidder fails to submit type test reports of the offered insulator unit alongwith the bid, then is it possible to perform type tests of insulator unit during execution stage like insulator sets? Please clarify & confirm.	
68	We understand that the route as given by PGCB is to be considered as final and all permissions from BWDB & BIWTA has been obtained. Please confirm.	PGCB has already obtained a no objection letter from BIWTA for the river crossing portions. However, The necessary permission/ clearance are in the responsibility of the Contractor as per the bidding document. The Employer may assist the Contractor in getting such required permissions and permits
69	<u>Vol 2 of 3 - 5. Access - 5.1 Wayleaves 5.1.1.4 -</u>	Please follow the bid document.

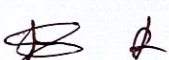


	The necessary permission for the removal of obstructions such as trees, houses, etc. and for the permanent removal or guarding of pipes, telegraph, telephone and power lines will be in the responsibility of the Contractor. The Employer may assist the Contractor in getting required permissions and permits. Bidder request to kindly provide the necessary permissions to remove the permanent obstructions- houses, trees, telephone, power lines falling in project area. Further, kindly provide the layout drawing showing the underground existing utilities such as water and power lines, drains etc.	
70	<u>Vol 2 of 3 - 5. Access -5.2 Access to Site, Notice of Entry</u> 5.2.1 "The Contractor shall make all necessary arrangements for the general route for access to each or any position with the occupier as agreed by the Employer." Bidder request you to define the battery limit of the site.	Please follow the bid document.
71	<u>Vol 2 of 3 - 5. Access -5.5 Crossing Obstacles</u> "The Contractor shall, at his own expense, make any necessary arrangements and take the necessary precautions where the route crosses buildings, telecommunication, power or pipe lines, orchards, gardens, railways, antiquities or other obstructions or ground over or across which erection cannot be carried out in the normal manner or has to be avoided. These arrangements must be submitted to the Engineer. This is a Hold Point. Bidder request you to define this clause. ""This is a Hold Point"	Bidder's understanding is not correct. Arrangement of such necessary permits/approvals will be in responsibility of the contractor during execution. However, the Employer may assist the Contractor in getting required permissions and permits.

	Bidder understand that all necessary permits and approvals will be provided by client to cross such any obstacles in access of site along with additional time and cost. Please confirm.	
72	<u>Volume 2 of 3 400kV JRC TL(P-1, L-3) Re-Tender7.1.4.6 River Crossing Foundations</u> Allowable foundation type shall be as per APPENDIX 7.A1. River crossing foundation shall be of two categories- i) on river bed and ii) on river bank. Detail specifications of these two categories are stated below. On Referring Appendix there is additional foundation "For overland locations(Non-river crossing foundation)". Please confirm that the design conditions shall be as per clause 7.1.3 for these type of foundation.	Confirmed.
73	<u>Volume 2 of 3 400kV JRC TL(P-1, L-3) Re-Tender</u> (e) Epoxy Coated Bars It is mandatory to use to Epoxy quoted bars at all the locations under this project. Please confirm.	Use of epoxy coated steel bars shall be finalized in execution stage. Corresponding specifications of bidding document shall be followed.
74	<u>Volume 2 of 3, Section-6, Clause 6.7: Morphological Study of Rivers</u> The ship impact has been stated as 3000 DWT and they have mentioned that Ship "FEEDERMAX" and "LARGE RHINE VESSEL" has been considered both having capacity of 3000 MT approximately. Moreover as per Volume 2 of 3, Section-7 - Foundations, Appendix 7.A9, Clause 4.8.2 PGCB has drawn references from Padma Bridge project has considered ship impact 4000 DWT as per study by COWI and Bridge authority As per our understanding, PGCB is referring to 3000 DWT as per morphology report but PGCB wants the bidder to be responsible to get accurate data from relevant authorities during execution and for reference during bidding they have mentioned 3000 DWT. Please confirm our understanding is correct.	Ship impact load provided in the morphological study is for guideline purpose only. Actual Ship impact load for the particular location shall be collected by the bidders from concern authority/organization. BIWTA may be considered as the concerned authority from whom necessary data for computation of ship impact load can be collected. But the Bidders will be responsible for collection of all necessary data.




	We further want to understand that, "If BIWTA during execution states that the class/type of vessel is lower and DWT is also less than 3000 DWT then the same shall be accepted by PGCB."	
75	<u>Volume 2 of 3, Section-7: Foundations, Appendix-7.A9, Clause 2.3 Structural Steelwork, it is mentioned that</u> 2.3. Structural Steelwork Material strengths and properties shall be in accordance with BS 5400 Part 3. Grades of steel are as follows. ➤ Steel tubular piles - S355 to BS EN 10025 (refer to the Drawings and Specification for final subgrades adopted in the design). ➤ Any steel used elsewhere in the foundations or platforms - S355; the subgrades to be used shall be as follows: J2+N to EN 10025-2:2004 for thicknesses less than 35 mm; K2 or N or M to EN 10025-2 or 10025-3 for steel thicknesses between 35 & 45mm; NL or ML to EN 10025-3 or EN 10025-4 for steel thicknesses between 45 & 120mm. Kindly Confirm, that we can use steel of a higher grade than S355 for steel tubular piles.	Please follow the bidding documents.
76	<u>Volume 2 of 3, Section-8: Towers, Annex 8.13 (5) : 400kV Double Circuit Towers</u> Foundation forces provided in the global direction includes total vertical force, total longitudinal force and total transverse force for four load cases. We understand that, bidder has to perform pile design, considering same foundation load provided in above annexure for all four legs. Kindly Confirm. If not, than kindly arrange to provide individual vertical force, longitudinal force & transverse force at each tower leg of four legs for each of four load cases.	Provided foundation reactions are for one leg only and Foundation reactions are same for all four legs.
77	<u>Volume 2 of 3, Section-8: Towers, Annex - 8.13(5), 400kV Double Circuit Towers</u>	Confirmed.

	The foundation reactions for the tower are given for four (4) load combinations. We understand that, these given foundation reactions for the tower (mentioned as “total”) are for one tower leg only. Kindly confirm.	
78	12mm liner cannot be driven beyond certain level and for cast in situ pile, we understand that the steel liner of 12mm is sacrificial and is not part of the design. Hence, driving it till scour level is not necessary, as it is only required during execution stage. We request you, allow bidder to decide liner depth as per the execution requirement.	Please follow the bidding documents.
79	<u>Ship Impact:</u> Please refer Clause 6.8 (Morphological Study of Rivers), Volume-2 : <i>“Actual Ship impact load for the particular location and any other additional data/force (not available in the study report) which are necessary for river crossing foundation design and construction, shall be collected by the bidders with their own cost.”</i> Please also refer IWM reply to PGCB dated 31st Jan-2022 : <i>“Ship impact load provided in the morphological study is based on some similar data and assumptions. It should be taken as guideline purpose. Actual Ship impact load for the particular location/river is not available with IWM. You are advised to collect actual ship impact data for design of tower foundations.”</i>	i) As per bidding documents, collection of all necessary data is the responsibility of bidders. ii) Please follow the bidding documents.




	<u>Queries:</u> i. At tender stage, it seems difficult to collect authenticate actual Ship impact load for the particular locations/river from BIWTA or any other relevant government authorities, without proper support from PGCB. We have tried, but did not succeed yet. We request PGCB to collect the relevant Ship Impact load data for particular locations / river from relevant authorities and furnish to bidder earliest possible for suitable considerations in foundation design. ii. If its also not possible for PGCB to arrange & furnish the ship impact load at this tender stage, then we request PGCB to clearly guide Bidders to consider 3000 DWT with impact speed of 3.25 m/s for pile design to avoid any confusion & equal design base for all bidders. Please, clarify / confirm.	
80	<u>As per Technical Specification, Volume 2, Recommendation Letter of IWM in the Morphological report, it states:</u> In general, the total scour is the summation of general scour, constriction or contraction scour and local scour. The general scour has been calculated from model simulation after passing the 100 year flood event (design event). However, incorporation of the Transmission Tower in the river made the river constricted a little bit. Thus, the constricted scour has been estimated by subtracting the bed level at end of the monsoon of "with Tower" condition from the end of monsoon of base condition. So, the Total scour = General scour + Constriction scour + Local scour = 13.2 + 2.4 + 16.87 = 32.47 m As per this letter, value of local scour is 16.87 Moreover as per Technical Specification, Volume 2, Morphological Report,	In IWM's recommendation it is described how total scour should be calculated. Value of local scour shall be as per article 6.8, volume 2 of bidding document.




Hydraulic Parameters	Unit	Values	Remarks
		Barapukuria 400KV on Jamuna River	
Design Discharge	m ³ /s	102436	Model estimated
Design High Water Level (HFL)	mPWD	14.303	Model estimated
	MSL	13.843	
Design Low Water Level	mPWD	4.88	Observed data using slope analysis
	MSL	4.42	
Maximum average velocity	m/s	3.21	2D model estimated
Minimum Bed Level	mPWD	-17.22	surveyed
	MSL	-17.68	
General Scour	m	13.20	model estimated
Constriction Scour	m	2.40	model estimated
Maximum Local Scour	m	30.19	Calculated from equations (Type-1: 8 Piles of 2m Dia)
		39.73	Calculated from equations (Type-2: 8 Piles of 3m Dia)
Total Scour	m	45.79	Calculated Type-1: 8 Piles of 2m Dia)
		55.33	Calculated Type-2: 8 Piles of 3m Dia)

The Value of Local Scour is 30.19 / 39.73.

Please clarify, which local scour value needs to be consider for Pile Foundation Design.

81 Please refer Annex 8.13(5) : 400kV Double Circuit Towers, Page 8-49, Volume 2 of 3 of the bid documents, where in the given Annex of the specification, Foundation Reactions are available for '4DR' tower with maximum extension only.

Kindly request you to furnish Foundation Reactions for 4DR+50.6m and 4DR+36.6m extensions.

The foundation reaction for tower type '4DR' with maximum extension as provided in the bid document will be applicable for both '4DR+50.6m' and '4DR+36.6m' extensions.

82 As per Clause 4.6 Seismic, Appendix-7.A9, Section-7 Foundations, Volume 2 of 3 of the bid documents.

Please follow the bidding documents.

	a) As per the tender report seismic analysis has to be done for two levels of earthquake; 'Operational' and 'Contingency levels', for both scoured and non-scoured conditions. Also, a performance criterion for operational level earthquake is fully functional. b) From the Morphological study report the maximum scour level is 45.79m / 55.33m. For this scour level the structure may be critical during Operational Level Earthquake. Kindly request you to please review and confirm, if serviceability requirements are to be checked for OLE. c) From the tender report for the seismic analysis, 'LUSAS' and 'SHAKE' software are mentioned. Please confirm whether Staad.Pro can be used as a replacement.	
83	'Steel Tubular Piles' for river foundations will be provided with anticorrosive paint on the outer surfaces, which will have guaranteed corrosion protection life for 5 years. Subsequently anticorrosive paint will be periodically applied on the pile surfaces by PGCB to prevent corrosion for rest of the design life of the structure. It is presumed that this consideration for corrosion prevention is acceptable.	No, it is not acceptable. Design & construction of steel tube piles should ensure its strength throughout the design life.
84	"Morphological Study of Rivers", Memo No. 42.07.016.06.05.2306.2021/0583, Date 08.04.2021 It is mentioned that <i>"Ship impact load provided in the morphological study is based on some similar data and assumptions. It should be taken as guideline purpose. Actual Ship impact load for the particular</i>	As per bidding documents, collection of all necessary data is the responsibility of bidders.




	location/river is not available with IWM. You are advised to collect actual ship impact data for design of tower foundations." However, in tender stage, we are unable to get such information from any authority. We request PGCB to collect and provide the necessary information from competent authority as this will significantly have the impact on design of steel tube pile foundation.																															
85	IWM Morphology Report, Cl. 7. Ship Impact Load, Input data required to calculate Velocity attack and Wave attack, p.g.7-1 The given Ship Impact load is for the vessel movement in the main stream of the Jamuna River. <u>Reference 02: Inland Waterways Ports, Waterways and Inland Navigation, Lectures Notes, 2012.</u> For classification of ships and waterways a world-wide classification is developed by PIANC (Permanent International Association of Navigation Congresses). Table 2-2 Several ship types <table><tr><th>Class</th><th>Ship type</th><th>Tonnage (t)</th><th>Length (m)</th><th>Beam (m)</th></tr><tr><td>I</td><td>Péniche Barge</td><td>250 - 400</td><td>38.50</td><td>5.05</td></tr><tr><td>II</td><td>Campine barge</td><td>400 - 650</td><td>50</td><td>6.60</td></tr><tr><td>III</td><td>Dortmund-Ems-Canal standard vessel (D.E.K.)</td><td>650 - 1000</td><td>67</td><td>8.20</td></tr><tr><td>IV</td><td>Rhein-Herne-Canal standard vessel (R.H.K.)</td><td>1000 - 1500</td><td>80</td><td>9.50</td></tr><tr><td>Va</td><td>Large Rhine vessels</td><td>1500 - 3000</td><td>95</td><td>11.40</td></tr></table> As per your, we understand that the locations in the river bank shall be designed considering Ship Impact Load. On enquiry from BIWTA, Ship movement and hydrological data in the tributary canal near bank locations and other locations in bank of river are relatively less compared to main stream of river. In this context: We understand the ship impact load for river bank location shall not be same as for locations in main stream of river. We request you to indicate the ship impact load to be considered for river bank locations.	Class	Ship type	Tonnage (t)	Length (m)	Beam (m)	I	Péniche Barge	250 - 400	38.50	5.05	II	Campine barge	400 - 650	50	6.60	III	Dortmund-Ems-Canal standard vessel (D.E.K.)	650 - 1000	67	8.20	IV	Rhein-Herne-Canal standard vessel (R.H.K.)	1000 - 1500	80	9.50	Va	Large Rhine vessels	1500 - 3000	95	11.40	Please follow the bidding documents.
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	Please refer Section-7, Clause- 7.1.4.6.1: Considerations for design on river bed. As per Clause (b): For river crossing foundations, the minimum length for Steel driven pile is 80m for 400kV transmission line (as specified in the given clause). In this regard, kindly clarify the following: In case while driving the pile if refusal strata is achieved, whether pile length can be reduced below minimum length as specified in the above clause. Kindly confirm.	The length of driven steel piles CAN NOT BE REDUCED below minimum length. The pile driving technology is to be determined in the execution process based on geotechnical investigations. If a refusal strata is achieved, bidder shall investigate and find suitable design/location/ technology for pile driving. No extra cost will be provided by employer in any case.
86	Please refer Section-7, Clause- 7.1.4.6.1: Considerations for design on river bed. In Clause (K) under this section, it is mention here that: A conceptual design & drawing of 400kV transmission line tower foundation on the Padma river is provided in APPENDIX 7.A9. The contractor may follow the design guidelines provided there. We have following clarification in this regards: The provided annexure 7.A9 is for conceptual understanding of the Bidder and not the binding technical condition to be followed and adhered to. It is the bidder's responsibility to design and deliver the foundation, which are complying to the technical specification requirement as specified in this chapter under various clauses. Please confirm if our understanding is correct or else clarify your position in this regards.	Please follow the bidding documents.
87	"Volume 2 of 3_400kV JRC TL(P-1, L-3)_Re-Tender", Annex 6-7: Morphological study of rivers	Please follow the bidding documents.



	4DAX-1 and 4DAX-2 (both left bank), Clause_IWM In Jamuna River, the proposed Anchor towers are near to Cross bar 4. The flow velocity near cross bar 4 is 0.79m/s which is much less as compared to flow velocity of main channel (Refer table 5.8) As there will be limited flow & velocity in these locations, please confirm what scour magnitudes (general, Constriction and Local) should be considered at location 4DAX-1 and 4DAX-2 (left bank) same as Mid River location or as per calculation?	
88	"Volume 2 of 3_400kV JRC TL(P-1, L-3)_Re-Tender", Annex 6-7: Morphological study of rivers 4DAX-1 and 4DAX-2 (both left bank), Clasue-IWM Table 7.2 of the IWM report suggests that only some of the tower platforms are susceptible to a velocity attack. Velocity and direction values are provided for Anchor Towers 4DAX-1 and 4DAX-2 . Please confirm ship impact for Anchor Tower 4DAX has to be considered as per the values provided under table 7.2.	Please follow the bidding documents.
89	Section-6, Clause 6.8 Morphological Study of the River Morphological study of Jamuna river has been conducted by an independent consultant. The final report of the study is provided in the bidding document as Annex 6-7. Bidders shall follow the study report. However, Based on contractor's foundation design "Local Scour" shall be re-calculated following all the methods provided in the morphological study report. Total scour shall be the determined from general & constriction scour (from morphological study) and local scour (contractor's calculation). Actual Ship impact load for the particular location and any other additional data/force (not available in the study report) which are necessary for river crossing foundation design and construction, shall be collected by the bidders with their own cost	Please follow the bidding documents.

	We have the following clarifications - The Contractor shall need to calculate the local scour for individual tower location during execution stage. However, which methodology shall be used for Local Scour Calculation has not been clarified. As a normal practice PGCB uses IRC standard. We understand that the same shall be used in this case also. Please clarify your position in this regard. - We suggest that Foundation on the River Bank must be allowed to be designed without Ship Impact. Pls clarify your position in this regard. While going through the morphological study report it is found that in the annexure detailing the Ship Impact Load, there is no mention of Fenders which is extensively used for absorbing the kinetic energy of the ship impact and reduce load on the main structure. It is hereby requested that the bidders must be allowed to design their foundation considering the use of fenders to absorb the major ship impact energy as it shall help in giving optimal solution to PGCB. Kindly confirm your position in this regard.	
Volume 3 of 3		
90	<u>Volume 3 of 3 Attachment: Price Schedule - Schedule 4, no. 3.3 - Pile Integrity test (PIT) :</u> Which method shall be adopted for PIT, low strain method or ultrasonic method? As per our understanding, Cross Hole Sonic Logging test (CSL) required to check the integrity of pile. Please clarify.	Detail methodology of PIT shall be finalized in execution stage.
91	<u>Volume 3 of 3 Attachment: Price Schedule - Schedule 4, no. 3.1 – Individual Test Pile for steel tube pile :</u> As per our understanding, Static load test not required on steel tube piles, so it is strongly recommended to test with dynamic load test. In case of steel tube driven piles, pile capacity can be calculated during pile driving itself.	Please follow the bidding documents.




92	<u>Volume 3 of 3, page schedule 4-1, Section-2.1 : Normal/Overland locations (Non-river crossing foundation)</u> <table><tr><td>2</td><td colspan="5">Foundations for towers</td></tr><tr><td>2.1</td><td colspan="5">Normal/Overland locations (Non-river crossing foundation)</td></tr><tr><td>2.1.1</td><td colspan="5">Foundations for towers including all setting out, Concrete, Reinforcement, Excavation, Pumping, Stub-Setting, Geotechnical Investigation (Level 2), Shuttering, Leveling, supply & installation of foundation steelwork, Earthing Materials, Backfilling, approved Protective Coating, site clearing & any other required work etc.</td></tr><tr><td>2.1.1.1</td><td>Pile Foundation for 4DAX (Any chimney height, any soil category)</td><td>per tower</td><td>1</td><td></td><td></td></tr></table> As understood from price schedule, 4DAX over land location should be design as non-river crossing foundation. Total four nos. of 4DAX tower on left bank and one no. on right bank. Please confirm the location of non-river crossing 4DAX location out of five locations and ship impact not required to consider in this design for overland non-river crossing location.	2	Foundations for towers					2.1	Normal/Overland locations (Non-river crossing foundation)					2.1.1	Foundations for towers including all setting out, Concrete, Reinforcement, Excavation, Pumping, Stub-Setting, Geotechnical Investigation (Level 2), Shuttering, Leveling, supply & installation of foundation steelwork, Earthing Materials, Backfilling, approved Protective Coating, site clearing & any other required work etc.					2.1.1.1	Pile Foundation for 4DAX (Any chimney height, any soil category)	per tower	1			Please follow the bidding documents.
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93	<u>Transaction for Goods & Services Procured Locally</u> For transaction between Bidder / main Contractor and its local Subcontractor/ Service Provider (for Goods and Services procured locally by Bidder for Price Schedule -2, 3, & 4 of respective Lot), please clarify & confirm followings: We understand that VAT for the transaction between main Contractor & Sub-contractor for back-to-back Subcontract work will also be exempt reimbursed by PGCB. Please Confirm.	Your understanding is not correct. Please follow the bidding documents.																								
94	Please refer, Volume-3, Price Schedule No. 3 & Price Schedule No.4: a) Under the Price Schedule No. 3 (Design Services), almost Complete Scope of design & Testing works has to be executed outside Bangladesh and hence Not giving the option of USD quoting is not in line with the project requirement. It is hereby requested to kindly provide USD currency option in Schedule No. 3.	Your request cannot be accepted. Please follow the bidding documents.																								

	b) We request you to kindly provide us the option to quote in USD for Schedule No. 4 (Installation and Other Services) also, as some services will be imported for the work covered under this schedule.	
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The above mentioned clarification will form part of the Bidding Documents.

-End-