

Invitation for Bids NO. IFB No: [CPC/JICA/ICB/3A/19-20]

NAME OF PROJECT: Procurement of 220/132/33 kV KUAKHIA S/S (OUTDOOR GIS) in Odisha State of India under Package-3A Under Japan International Cooperation Agency (JICA)'s ODA Loan.

REPLY TO PRE-BID QUERIES RECEIVED FROM FIRMS ON VARIOUS DATES

NAME OF CLIENT:- ODISHA POWER TRANSMISSION CORPORATION LIMITED, Bhubaneswar

Sr. No.	Clause Reference	Clause Description	Observation	OPTCL's Reply
1	General	General	Please furnish Tender SLD for 220/132kV Substation	Indicative SLD uploaded in OPTCL website.
2	Vol III, E1 Pg. No. 4/13, Cl. 2	-		Indicative Layout drawing uploaded in OPTCL website.
3	Vol III, E1 Pg. No. 4/13, Cl. 2	Substation Description- 400kV Busbar shall be rigid type and 220kV busbar shall be flexible string type.	We understand the said clause reference is general in nature and not applicable for proposed 220/132kV Kuakhia S/S. Please confirm.	Yes
4	Vol III, E1 Pg. No. 5/13, Cl. 3	Drawings attached with the Tender Documents	Bidder couldn't find any drawings along with the Tender documents. Kindly furnish the same for Bidder to study the same.	As above.
5	Vol III, E3 System Data	220KV Fault Duration - 40kA / 1s 132kV Fault Duration - 31.5kA/ 1s	As per Bid Price Schedule, 220kV GIS shall be rated for 50kA/3s and 132kV GIS shall be rated for 40kA/3sec. Please confirm that fault rating for GIS shall be considered as per rating indicated in Bid price schedule and for all other equipments the SC rating shall be followed as per System Data.	Short time rating of all other equipment shall be same as GIS equipment rating (i.e. 50kA for 3sec & 40kA for 3sec respectively for 220kV & 132kV system)
6	General	Bid Price Schedule	Please confirm that ratings & sizes indicated in Bid price schedule for Batteries & Earthing conductors are firm and there is no need to perform sizing calculation for the same.	As per BOQ
7	General	-	Please furnish following drawings for estimation of the Tender quotation: 1. Key Single Line Diagram of 220/132/33kV Proposed substation. 2. Reference layout drawing of AC Yard Kiosk. 3. Aux. Single Line Diagram. 4. Control Building Layout. 5. Overall Plot Plan. 6. Cable trench sections.	Indicative Layout drawing and SLD uploaded in OPTCL website. Other drawings are in Bidders scope.
8	General	-	Please inform whether 132kV cable will be laid in Trenches on cable rack supports or will be directly buried.	132kV cable will be laid in Trenches on cable rack supports
9	General	-	Please inform whether 132kV cable will be grounded at both ends or only at one end.	Both ends.
10	Vol-II, Bid price Schedule, Cl.no. 26.1.1	Main ACDB rating is indicated as 800A, 50kA/1s	Please note that Station Transformer feeding Main ACDB is rated for 250kVA as per Bid Price Schedule. As the Main ACDB doesn't have any feeders which can substantially back feed the fault current only the Station Transformer will feed fault to Main ACDB. Considering the above scenario Bidder proposes rating of Main ACDB as 630A, 25kA/1s. Please confirm if Bidder's proposal is acceptable.	As per BOQ.
11	General	-	We understand that there is no remote end modification/supply is in scope of this tender. Please confirm.	As per BOQ.

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12	Vol III, E6, Cl. No. 16.2	"An open space of 1 meter shall be provided on periphery of rows of Panels.....".	Bidder proposes to keep Panels wall flushed or 200 mm on the rear side of Panel rows for panels located in Yard AC Kiosk. Please confirm.	To be decided during detailed engineering.
13	BPS Item No. 25.5.4	Bus Bar Protection	We presume to supply the BB Protection System is limited to Current scope of work. No Future is considered - Kindly confirm	There should be provision for Future bays (minum two bays) as per the TS.
14	BPS Item no. 1.3 & 2.4	Bus PT Modules for Bus bars at 220kV & 132kV GIS	We have observed that for 220kV level & 132kV Level only 1 set of BUS PT modules were specified in the BPS. We understand that quantity at each Voltage Level shall be 2 numbers.	As per SLD, Each Bus contain 3 Nos Single(1) Phase PT with 1 No three(3) phase disconnecter. The description at Price shchedule is correct. The bidder is requested to review it carefully. Hence, for each Voltage Level having One Bus PT Module
15	BPS Item no. 2.9 ,2.10 & 2.11	132kV XLPE 1000sqmm Copper Cables	As per BPS item no. 2.9, we understand that 132kV connectivity from GIS equipment to Auto transformer & Power transformer is through 1000sqmm copper cables, However in item no. 2.10 & 2.11, cable termination kit is indicated only for connection between Auto transformer and outdoor GIS. Please clarify.	As per SLD & Layout, the (220/132kV) Auto Transformer shall be connected to 132 kV GIS through 132kV Cable. The (132/33kV) Power Transformer shall be connected to 132 kV GIS through 132kV GIB.
16	BPS Item no. 2.7 & 2.9	145kV 2000A, 40kA SF6/Air bushing	As per BPS item no. 2.9, we understand that 132kV connectivity from GIS equipment to Auto transformer & Power transformer is through 1000sqmm copper cables, However in item no. 2.7, SF6/Air bushing is quantified as 12 no. Please clarify.	As per SLD & Layout, the 132kV SF6/Air bushing shall be required for connection between 132kV GIB to 132/33kV Power Transformer OR 132kV Transmission line.
17	BPS Item no. 3.5.4, & 3	33kV Cable and Cable termination kit	As per BPS item no. 3.5.4, 33kV connectivity between GI equipment and station transformer is done through 33kV Cable and Cable termination kit, However no station transformer GIS module is considered in BPS. Please clarify.	As per Latest SLD & Layout, 2 Nos 500kVA 33/0.433kV Aux. transformer indicated in the SLD and Layout. Here Aux. Transformer referred to be as Station Transformer.
18	BPS Item no. 3	33kv station transformer GIS module	As per BPS item no. 3 , no 33kV GIS module is considered for station transformer, so Please confirm the source of power supply to 33/0.4kV station transformer.	As per SLD 2 Nos 33/0.4kV station transformer shall be supplied from 1 No 1250A 33kV outgoing Module(listed under SL No 3.2)
19	BPS Item no. 10.1.2 & 10.1.3	Long Rod Insulators	As per BPS item no. 10.1.2, 160KN insulators are quantified in sets and 120KN insulators are quantified in nos. Please clarify the difference between them.	Pl. refer amended BoQ uploaded.
20	BPS		No Tension Hardware fittings are indicated in BPS, So we understand that line side tension long rod insulators and hardwares are not in our scope for 220kV and 132kV system.	Pl. refer amended BoQ uploaded.
21	BPS Item no. 16.2	ABT Meter	As per BPS ABT meter is quantified as 8 no. Please confirm how many meters considered for each 220kv and 132kV line, and also the location of the metering panel.	Pl. refer amended BoQ uploaded.
22	BPS Item no. 19.6 & Vol III, E19 Distribution Board, pg. No. 24/26	48V Battery	1 set 48V battery and charger is indicated in BPS, However as per Volume III distribution Board specification 2 sets for 48V DCDB are required . Please clarify.	As per BOQ.
23	BPS Item no. 19.12	ACDB, DCDB	As per our understanding, no separate ACDB is required for 48V system, all communication panels will get the AC supply from main ACDB only.48V DCDB is indicated as 1 set, however as per our understanding 2 set of 48 V DCDB required, Please confirm and amend the BPS.	As per BOQ.

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24	BPS Item no. 21.1	Substation Switchyard Lighting	As per BPS item no. 21.1, switchyard lighting fixtures are indicated , however supporting poles for switchard fixtures are not included in BPS apart from lighting cum lightning mast. Please include it into BPS and send the revised BPS.	As per BOQ.
25	BPS Item no. 22.2	Indoor Lighting	As per BPS item no. 22.2, we understand that indoor lighting for staff building/ staff colony is not in our scope. Please confirm.	Indoor lighting for staff building/ staff colony is in bidder's scope as per SI No.39- Civil Works of Schedule-4
26	BPS Item no. 22.2,22.1 & 21.4	Illumination cables	Illumination cables used for item no 22.2, 22.1 & 21.4 are covered in the BPS Power cable items. Please confirm.	AS per BOQ.
27	BPS Item no. 18.1.1 & 18.2	Power and Control cables	Cables from LCC to GIS is covered in BPS cable item. Please confirm.	As per BOQ.
28	BPS Item no. 25.6	132kV Protection Panels	As per BPS item no. 25.6 we understand that no bus bar protection panel is required for 132kV system.Please confirm.	As per BOQ.
29	General	-	Please confirm interfacing between station transformer and SAS is required or not.	Required
30	BOQ, Schedule-1 GIS SS, Clause no. 20.2	POWER TRANSFORMER : 132/33 KV, 40 MVA	We are not considering any Fire Protection System for 40MVA Power Transformer, as the same is not mentioned in BOQ. Please confirm.	As per BOQ.
31	BOQ, Schedule-4 GIS SS, Clause no. 31.9	Provision of Water Tank for fire fighting below ground.	We will consider above ground RCC Water tank of suitable capacity for Fire Fighting System. Please confirm	As per BOQ & TS.
32	Technical Specification Fire Fighting System	Typical Drawing/document	Kindly provide Typical drawings mentioned on Page 3 of 68 of TS. (P&ID, Fire Detector Location & HVWS System Drawings)	Bidder's Scope.
33	Technical Specification Fire Fighting System, Clause no.2.03.00	Fire Detection & Alarm System	As per TS, Fire Detection & Alarm system is Conventional Type, However as per BOQ, the same is addressable Type. Kindly let us know the type of Fire Detection & Alarm system to be considered. Also, if FDA system shall be Addressable type, please provide the detail Specification.	As per BoQ.
34	Technical Specification Fire Fighting System, Clause no.2.05.00 & BOQ, Schedule-1, Clause no. 37	Water Supply System	We will follow BOQ, Schedule-1, Clause no. 37, for Fire Fighting Pump equipment to be considered for this project, as only Water Supply requirement for 400KV and above SS is mentioned in refered clause of TS for Fire Fighting System. Also, we understand that, no. Air vessel is to be proided for this project as the same is not mentioned in the BOQ. Please confirm	As per BOQ.
35	Technical Specification Fire Fighting System, Clause no.2.04.00	Fire Extinguishers	Fire Extinguisher Quiantity is estimated in BOQ, Schedule-1, Clause no. 24. We will supply the same quantity as per BOQ. Please confirm.	As per BOQ.
36	Technical Specification for Split Type Air Conditoner, Clause no. 1.3	PROPOSED NO OF A.C UNITS	As per refered clause, Proposed no. of AC Units is mentioned for different substations, however As per BOQ Schedule-1, Clause no. 22.3, quantity is mentioned as LOT. Kindly let us know, whether we have to follow TS or BOQ.	As per revised BOQ.
37	BOQ, Schedule-1 GIS SS, Clause no. 22.3	HI-Wall Split AC	If we have to follow BOQ, then Standby AC units Qty will be considered 20% of required tonnage capacity for critical area line Control Room & Relay & Protection Rooms only (as applicable). For other Room, No Stand-by AC unit shall be provided. Pls confirm.	As per revised BOQ.
Sl. No..	Volume / Section	Clause No / Drawing No.	Bidder's Query	OPTCL's Reply

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1. COMMERCIAL QUERIES				
1	Volume-I , section IV Bidding Forms	Bid security Format	Please provide the client Swift details for taking the swift BG. Also please confirm that bid security is payable at Bhubaneswar. If it is payable at bhubaneswar, please provide the list of Bhubaneswar banks and branch details where the BG will be encashed.	ICICI Bank Bhubaneswar, (The Unique Identifier for field 7037 is "OPTCL541405793") IFSC Code ICIC0000061. Branch Address: ICICI Bank Ltd Bhubaneswar Main Branch, Bhubaneswar
2	Volume-I , BDS & Section-III Evaluation & Qualification Criteria	, ITB, 11.2 (i) & cl no: 1.1.3.1	As per referred clause, the following to be submitted, 1. Details of Manufacturing / Fabrication / Service facilities of the Bidder or its Sub-Vendor / Sub-Manufacturer. 2. Type Test certificate of the Bidder or its Sub-Vendor/Manufacturer, of the Major items of Plant & Equipment (GIS Equipment with GIB, Transformers, CR panel, CT & PT, LA and Isolator) conducted as per EQC to be supplied under this contract. 3. Details of credential of Sub-Vendor/Manufacturer to be engaged under the Contract in satisfaction of EQC. 4.Details of credential of Sub-Contractor(s) to be engaged under the Contract in satisfaction of EQC. Also, as per cl no: 1.1.3.1 of evaluation & qualification criteria, type test and supply record to be furnished for Transformers, CT & PT, CRP, SAS, GIS. Since, specific qualification criteria is mentioned for GIS & SAS equipment's for manufacturers in EQC 2.5, we propose to submit credentials and Type test reports of the above mentioned equipments only during bid submission. Balance type test reports of the main equipment's will be submitted after award of contract. Kindly confirm.	It is recommended to submit all the credentials and type test reports during bid submission itself.
3	Volume-I Sec-IX Contract Forms	Effective Date of Contract	As per the referred clause, "The Effective date of contract shall be reckoned from the date when the Contract Agreement has been duly executed for and on behalf of the Employer and the Contractor. we understand that contract agreement will be executed only after the clear handing over of site for construction of Substation in addition to the above clause. Kindly confirm.	As per SBD.
4	Volume-I General	Bocw cess	We understand that 1% BOCW cess shall be applicable only on the Civil & Installation works. Please confirm.	BOCW cess shall be applicable on the whole contract value. The same shall be deducted from bills as applicable from time to time(the present rate being @1%)
5	General		We understand that operation and maintenance of the substation is not in the scope of the bidder. Please confirm.	Yes.

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6	General		We trust that, OPTCL will hand over the legally encumbrance free land to the bidder at the time of NOA. Please confirm.	Yes.
7	Vol-I, Section - IX, contract forms	Appendix - 4 Time schedule	In reference to the referred annexure of work completion format, the total scheduled duration for completion of works is 24 months and Defect Liability period is 12 months from the date of commissioning. Kindly Confirm.	As per SBD.
8	section IX, contract Forms	Appendix 5 List of Major items of plant and installation Services and List of Approved Subcontractors	As per the referred clause, The bidder can propose any Subcontractors/Manufacturers for items, but no Subcontracts shall be placed with any such Subcontractors/ Manufacturers for items until the Subcontractors have been approved in writing by the Employer and their names have been added to this list of Approved Subcontractors. If so, please confirm the approval time and procedure from the date of request for a Subcontractors/Manufacturer.	As per SBD.
9	Vol-III - Technical specifications of Transformer	Technical Annexures, Annexures - I to Annexure - IX	As per the referred clause, for the power transformers, various documents like "Annexure-I: Schedule of quantity & Delivery, Annexure-II: Maximum flux density & Core weight calculation, Annexure-III: Details of loss calculation, Annexure-IV: Guaranteed Technical Particulars, Annexure-V: Additional schedule of information, Annexure-VI: Check-List towards type test reports, Annexure-VII: Calibration status of testing equipment's & Instruments/ meters, Annexure-VIII: Check List for delivery schedule & Annexure-IX: Abstract of Terms & Conditions", Annexure-II to IX are to be filled up in complete shape by the bidders, failing which their tenders are liable for rejection". We understand that, above documents as per annexures are being asked by OPTCL while inviting tenders for procurement of individual equipment directly from manufacturers. However, in this regard we would like to highlight that, present tender being turnkey package for construction of overall substation involving numerous equipment's & multiple manufacturers for each equipment/ items, it is very difficult for an EPC contractors to collect all of the documents during tendering stage apart from its own qualification documents. Hence we request you to accept our proposal of submission of only the Manufacturer's standard GTPs along with the Manufacturer's authorization letters during tendering stage &	As per SBD. Further an undertaking must be accompanied with all part/deficit submissions.

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10	Vol III , Technical Specification for 400 / 220 / 132 kV Outdoor Gas Insulated Switchgear (GIS)	cl no: 4.2.13, other services	As per the referred clause, We understand that consultant is applicable for the said project. Therefore, We request you to provide the consultant details and also kindly define the contractor scope with the consultant during the prebid, post bid and in getting the engineering approvals after the award of contract.	Any issue in the pre-bid phase may be intimated to OPTCL. Other issues can be discussed during kick-off meeting post contract agreement.
11	Volume-I , Section-IV Section- VII General Conditions	Biding Forms , Such No: 6, Grans Summary GCC cl no: 14, Taxes & Duties	As per the referred clause " GST/ any other taxes/ duties/ levies shall be inclusive in the bid price and shall not be paid/reimbursed separately" Also "If any rates of Tax are increased or decreased, a new Tax is introduced , an existing Tax is abolished, or any change in interpretation or application of any Tax occurs in the course of the performance of Contract, which was or will be assessed on the Contractor, Subcontractors or their employees in connection with performance of the Contract, an equitable adjustment of the Contract Price shall be made to fully take into account any such change by addition to the Contract Price or deduction therefrom, as the case may be, in accordance with GC Clause 36 hereof" Kindly explain on the term "equitable adjustment" and the modality in which it will be operated.	As per SBD.

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12	Vol-I, Section-III - Evaluation and Qualification Criteria	Clause 1.2.1 - ii (a) - Quantifiable nonmaterial nonconformities	<p>As per the referred clause, "ii. The cost of all quantifiable nonmaterial nonconformities or omissions (minor omissions or missing items) shall be evaluated as follows: (a) To this effect, the Bid Price shall be adjusted for comparison purposes only, to reflect the price of missing or non-conforming item or component, by taking the price equal to highest unit rate quoted for the same item(s) by other bidders. However, if there is only one bid, the rate of that/those missing item(s) as estimated by the employer would be taken and Bid Price shall be adjusted for evaluation and comparison purposes only. In case of award of contract, the successful bidder would be required to supply missing item(s) free of cost and tax liability will be borne by the successful bidder".</p> <p>In this regard, since the complete scope has to be quoted by the Bidders on single responsibility basis, we request you not to add any amount on account of any missing item/ in case any items are not loaded as it may change the competitive position of a bidder due to highest price loading for a missing item. We request to modify the clause as below: "Any material/works not specifically priced by a bidder in BPS, shall be deemed to be included in the price of other material/ works." Please confirm your acceptance & amend the document accordingly</p>	As per SBD.
13	Vol-I, Section-IX - Contract Forms	Appendix 1. Terms and Procedures of Payment Appendix 6 - Scope of works & Supply by the Employer	<p>As per the clause 1. a (ii), First instalment of the advance of 5 % shall be paid against evidence (Rental agreement with land lord) of establishment of site office.</p> <p>However, we understand that the contractor can set up their site office within the substation premises to speed up the execution activities, which is the normal industrial practice being followed. Please confirm.</p> <p>Further, the necessity of "Rental agreement with land lord" does not arise in such condition. Hence we request you to delete such requirement for availing the advance amount.</p>	As per SBD.

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14	Vol-I, Section-IX - Contract Forms	Appendix 1. Terms and Procedures of Payment	<p>As per the referred clause it states that " All advance payment shall be interest bearing and shall be recovered progressively from each running bill"</p> <p>From the above clause we presume that interest bearing advance is optional and if contractor doesn't opt for the advance, then progressive payment shall be 90% on prorata basis for supply and installation services.</p> <p>Kindly confirm.</p>	As per SBD.
15	Vol-I, Section-IX - Contract Forms	Appendix 1. Terms and Procedures of Payment	<p>As per the referred clause it states that " All advance payment shall be interest bearing and shall be recovered progressively from each running bill"</p> <p>Being the JICA funded project, we request you to provide the interest free advance to facilitate the mobilization activities.</p> <p>Kindly confirm our request.</p>	As per SBD.
16	Vol-I, Bidding Forms	Bidding Forms, price schedules, schedule No:1 & Schedule No: 2	<p>From the referred schedules of Bidding Forms, We understand that the unit price as quoted in Sch-1/Sch-2 includes the Exworks price along with respective freight Charges and respective taxes(GST/Custom Duty) as applicable.</p> <p>Also, confirm that Taxes and Duties including custom Duties is taken for evaluation.</p> <p>Kindly confirm.</p>	As per SBD.
2. CIVIL QUERIES				
1	General	--	<p>We wish to inform that GA drawing of the proposed 200/132/33kV Kuakhia S/S is not attached with tender documents.</p> <p>Kindly furnish the same.</p>	Indicative Layout drawing uploaded in OPTCL website.

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2	Price schedule, schedule No.2 (Plant supplied from within the Employer's country) & Price schedule, schedule No. 4. Installation and Other Services (Sub-station), PART A - Civil Works	Sl. No.14 & Sl. No.16	In schedule No. 2 - Supply, Sl. no: 14, Item for GI Cable trays including support GI angle for various cable trench section is given in meter. In schedule No. 4 - Installation and Other Services (Sub-station), Part A- Civil works, Sl. no: 16, item for cable trench is given meter and mentioned that this also including supply of GI angle for cable trays support. Please clarify, the GI angle required for cable trays support will be paid under supply schedule or Installation schedule(Civil works).	Pl. refer amended BoQ. GI angle required for cable trays support will be paid under supply schedule only.Installation of the same only will be paid under Installation schedule.
3	Price schedule, schedule No. 4. Installation and Other Services (Sub-station), PART A - Civil Works	--	Please furnish the soil investigation report (if available), in order to decide the foundation depth.	In scope of the bidder.
4	Price schedule, schedule No. 4. Installation and Other Services (Sub-station), PART A - Civil Works	--	Please furnish the contour map showing existing ground level(if available), in order to decide the foundation depth.	In scope of the bidder.
5	Price schedule, schedule No. 4. Installation and Other Services (Sub-station), PART A - Civil Works	SL no: 1.1, 1.2, 1.3, 1.4 & 1.5	We trust that, the unit Qty. given in referred Sl. Nos. (i.e. Excavation, PCC, RCC, Reinforcement, Pile works) is inclusive of Foundation works required for the following : i. Towers structure foundations (Including LM) ii. Equipment structure Foundation iii. Bus duct & SF6 air bushing foundation iv. Outdoor GIS foundation Kindly confirm our understanding.	As per BOQ.
6	Volume - III (TS) E6 - Civil works, Page no: 23, 40 & 41	13.1 & 1.4	The referred clause, the grade of reinforcement is mention as Fe 415. We propose to use Fe 500 grade, Since the same is not readily available in the market. Kindly confirm.	the grade of reinforcement shall be Fe 500 or above. Pl refer BoQ.
7	Volume - III (TS) E6 - Civil works, Page no: 38 & 41	16.10 & 1.4 a	As per the clause no:16.10, the minimum thickness of external walls shall be 230mm. However as per clause no:1.4 a), it is indicated as " external walls shall be 250mm thick". Please clarify the wall thickness.	External walls shall be 250mm thick

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8	Volume III (TS) E6 - Civil works, Page no: 53 of 61 & Price schedule, schedule No. 4. Installation and Other Services (Sub-station), PART A - Civil Works	III & --	As there is a discrepancy between Civil mode of measurement and price schedule. Please clarify whether the civil works will be paid as per price schedule or mode of measurement. If the Civil works shall be paid as per mode of measurement. Please include the following item in the price schedule separately. 1.Reinforcement steel 2.Misc. Structural Steel 3. Stone filling for Transformers. 4. PCC 5. RCC	As per price schedule.
9	Price schedule, schedule No. 4. Installation and Other Services (Sub-station), PART A - Civil Works	Sl.no : 19 & Sl.no : 20	In the price schedule item for drain is given separately, however in road work it is mentioned that, the road shall be have Provision of drains on both the side of the roads for easy discharge of rain water. Please clarify, whether the drain will be paid along the road work (or) the same shall be paid separately.	The drains on both the side of the road are an integral part of "road works" and will not be paid separately.
10	Price schedule, schedule No. 4. Installation and Other Services (Sub-station), PART A - Civil Works	Sl.no : 32.2	As per the referred item no. 32.2 of Price Schedule, the pump house shall be connected to the main road of the switchyard with an approach road. Please confirm whether the approach road for the pump house will be paid as per item no. 32.2 or item no. 19 of Price Schedule.	Approach road to the pump house is a part of the total scope of the item 'PUMP HOUSE'.
11	Volume-III (TS) E2 - General Technical Clause for Design, Page no: 16 of 36	10.2.2	As per referred clause, it states that "The minimum weight of the zinc coating shall be 610 gm/sq. m". We wish to propose the following galvanizing thickness for structures as per codal provisions of IS 4759 1. 610gm/sq. m for fabricated steel articles 2. 300gm/sq. m for threaded works (10mm dia and over) Kindly confirm.	As per technical specifications and relevant IS.
12	Price schedule, schedule No. 4. Installation and Other Services (Sub-station), PART A - Civil Works	--	We trust that , if any additional civil item is required in addition to Price schedule item, the same shall be payable as additional item with mutually agreed rate by M/s OPTCL. Please confirm.	As per SBD.
13	Volume III (TS) E6 - Civil works, Page no: 13 of 61	8.1	As per referred clause, Manholes shall be provided wherever required. However there is no separate item for the same in the price schedule. Kindly add an item for the same in price schedule.	As per BOQ.

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14	Volume III (TS) E6 - Civil works, Page no: 23 of 61 & 25 of 61	13.1 & 14.1	As per referred clause, Building plinths shall be minimum 300mm above finished ground level. However, as per clause no:14.1, Building plinths shall be minimum 500mm above finished ground level. Please confirm which clause has to be followed.	Building plinths shall be minimum 500mm above finished ground level.
15	Price schedule, schedule No. 4. Installation and Other Services (Sub-station), PART A - Civil Works	Sl.no : 32	As per referred item (Sl. No. 32) in price schedule, construction of security shed and watch tower shed at the corners of switch yard is in bidder's scope. However item for security shed is given under SI. No : 32.1 and item for watch tower shed is not included in Price Schedule. Please include the item for the watch tower shed in Price schedule.	As per BOQ.
16	Volume III (TS) E6 - Civil works, Page no: 4 of 61& 46 of 61	2.1.1 & 25.0	As per referred clause, The garden to be developed in front of the control room building shall be of size 30mX20m. As per referred clause, a garden in front of the control room building to be developed shall be of size 30mX10m. Please confirm the size of garden to be developed.	As per BOQ.
17	Price schedule, schedule No. 4. Installation and Other Services (Sub-station), PART A - Civil Works	Sl.no : 17, 31, 32 & 39	Kindly provide following drawings in order to estimate quantum of civil work. 1. Control Room Building 2. Fire fighting and DG building (one building) 3. Security shed 3. Residential Quarters - D type & E type	Bidder's Scope.
18	Price schedule, schedule No.2 (Plant supplied from within the Employer's country)	Sl. No. 18	We trust that the foundation bolts required for all 220/132kV gantry and equipment structures are included in the referred items. Kindly confirm.	As per BOQ.

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19	Price schedule, schedule No. 4. Installation and Other Services (Sub-station), PART A - Civil Works	Sl. No. 31	<p>As per referred item of the price schedule, it states that "FIRE FIGHTING & DG BUILDING:(one building). Area of the fire fighting & DG room with portico at front side, stair case to the top of the building,. The details of building constructions shall be as per the Tech spec. ".</p> <p>However, building area required for fire fighting building and DG room and details of building construction are not mentioned in technical specification.</p> <p>Kindly furnish the same along with drawing in order to estimate the quantity.</p>	As per BOQ and TS.
20	Volume III (TS) E6 - Civil works, Page no: 40 of 61 & Price schedule, schedule No. 4. Installation and Other Services (Sub-station), PART A - Civil Works	Clause no. 1.4 & Sl. No. 17	<p>As per referred clause of the civil works, the size of the control room mentioned as 50m x 25m. However in BPS the same is mentioned as 25mx15m.</p> <p>We trust that, the control room building size shall be considered as per BPS. Please confirm.</p>	As per BOQ.
21	Volume III (TS) E6 - Civil works, Page no: 45 of 61 & Price schedule, schedule No. 4. Installation and Other Services (Sub-station), PART A - Civil Works	Clause no. 22 & Sl. No. 32.1	<p>As per referred clause of the civil works, the size of the security shed mentioned as 5m x 3.5m. However, the size mentioned in the BPS is 6.5m x 3.5m. We trust that the size given in the BPS is the actual requirement in present scope.</p> <p>Kindly confirm our understanding.</p>	As per BOQ.
22	Volume III (TS) E6 - Civil works , Page no: 15 of 61	Clause no. 10 & 1.2	<p>As per referred clause of the civil works, it is mentioned that " A minimum seven meters black topping with 1.6m wide shoulders on either side of the road shall be constructed for double lane roads."</p> <p>However, as per cl. 1.2, it is mentioned that approach roads and main road shall be 7m wide with both side shoulder of 1.75m."</p> <p>As there is a discrepancy in shoulder width, Kindly confirm which clause has to be followed .</p>	As per BOQ.
3. ELECTRICAL QUERIES				
1	Vol- II, Schedule-1-SS , S.No.1, Outdoor 220kV GIS equipment		<p>As per the line item description, the Short Circuit rating for 245kV outdoor GIS is indicated as 50kA for 3 sec. However, the same is indicated as 40kA for 1 sec as per E3-System data Sl.No.11. Please check and clarify the actual short circuit level & its duration.</p>	Short circuit rating for 245kV outdoor GIS shall be 50kA for 3 seconds.

Sr. No.	Clause Reference	Clause Description	Observation	OPTCL's Reply
2	Vol- II, Schedule-1-SS , S.No.2, Outdoor 132kV GIS equipment		As per the line item description, the Short Circuit rating for 132kV outdoor GIS is indicated as 40kA for 3 sec. However, the same is indicated as 31.5kA for 1 sec as per E3-System data Sl.No.11. Please check and clarify the actual short circuit level & its duration.	Short circuit rating for 145kV GIS shall be 40kA for 3 seconds.
3	Vol- II, Schedule-1-SS , S.No.3, Indoor 33kV GIS equipment		As per the line item description, the Short Circuit rating for 33kV Indoor GIS is indicated as 31.5kA for 3 sec. However, the same is indicated as 25kA for 3 sec as per E3-System data Sl.No.11. Please check and clarify the actual short circuit level & its duration.	Short circuit rating for 36kV GIS shall be 31.5kA for 3 seconds.
4	Vol- II, Schedule-1-SS , S.No.1 & 2, 220kV and 132kV Current transformer		From the line item description, 6 nos (2sets) of single phase current transformers are mentioned. We understand the number of CT cores as mentioned in technical specification i.e. 5 cores for 220kV & 4 cores for 132kV shall be distributed among the 2sets of CTs in each bay. Please confirm whether Bidder's understanding is in order.	As per Note on SLD, the number of secondary core & windings of CT & VT with class & VA will be as per detail engineering without any additional cost.
5	Vol- II , Schedule-1-SS , S.No.1.3 & 1.4, Outdoor GIS equipment (245kV) Bus bar and Bus coupler		As per referred line item description of price schedule, 2000A current rating is mentioned for 220kV bus bar and Bus coupler. However, as per Volume-I, section VI employers requirement, the current rating of Bus bar and Bus coupler is indicated as 3150A. Please check and confirm the bus bar and bus coupler current rating	The current rating of Bus bar and Bus coupler is 3,150A.
6	Vol- II , Schedule-1-SS , S.No.1.3, 2.4 & 3.3, Bus bar module with Bus PT		As per referred line item description of price schedule, 1 set of Bus bar module along with bus PT and disconnecting switches are mentioned. However, we understand that for double main bus bar scheme, 2 sets of Bus bar module along with bus PT and disconnecting switches shall be provided. Please amend the BPS suitably.	As per SLD, Each Bus contain 3 Nos Single(1) Phase PT with 1 No three(3) phase disconnecter. The description at Price shcedule is correct. The bidder is requested to review it carefully. Hence, for each Voltage Level having One Bus PT Module which contain 6 Nos Single Phase PT with 2 Nos three(3) phase disconnecter.
7	Vol- II , Schedule-1-SS , S.No.1.2, 1.3, 2.3, 2.4 & 3.3, Potential transformer		From the referred line item description, single phase potential transformer 4 winding is mentioned. However, we understand that 4 winding shall refer to 1 primary winding and 3 secondary winding. Please confirm whether bidders understanding is correct.	Confirmed.
8	Volume-II of III, Schedule-1-SS - S.No. 1.5 & 2.6		As per the line item description, the Bus Duct quantity for the 220kV and 132kV is given as 620RM and 170RM respectively. However the same item is given in "lot" items in the employer's requirement. We presume the same shall be executed as unit rate item. Please confirm.	Confirmed.

Sr. No.	Clause Reference	Clause Description	Observation	OPTCL's Reply
9	Volume-II of III, Schedule-1-SS - S.No. 2.6		As per the line item description, single or three phase Bus Duct is mentioned. Please clarify whether the provided length 170 RM is for single phase design or three phase design. Also we request OPTCL to provide separate line items for 1-phase & 3-phase GIB.	PI refer amended BoQ
10	Vol- II , Schedule-1-SS , S.No.2.9, 132kV XLPE cable		We understand that the 132kV, 1000 Sq.mm copper XLPE cable connectivity shall be from 132kV GIS ICT feeder to 220/132kV, 160 MVA Autotransformer (132kV side) only. Please confirm whether bidder's understanding is correct.	Confirmed.
11	Vol- II , Schedule-1-SS , S.No.3.1, 33kV GIS Transformer bay		From the line item, the transformer bay module quantity is mentioned as 2 sets. However, as per section VI employers requirement, sl.no.3, 33kV transformer feeder is indicated as 3 nos. As both the clause are contradicting with each other, please confirm the number of transformer bay panels.	As per BOQ.
12	Vol- II , Schedule-1-SS , S.No.3.1, 33kV GIS Outgoing feeder bay		From the line item, the Outgoing feeder bay module quantity is mentioned as 5 sets. However, as per section VI employers requirement, sl.no.3, Line feeder is indicated as 4 nos. As both the clause are contradicting with each other, please confirm the number of Outgoing feeder bay panels.	As per BOQ.
13	Vol- II , Schedule-1-SS , S.No.3.5.4 & 3.5.5, 33kV cable termination kit		From the line item, 33kv cable termination kit for indoor and outdoor is mentioned as 21 No's each. However, we understand that the total 33kV outgoing feeders is 5 no's as per Employers requirement. Please check the quantity of the 33kV termination kit and revise the price schedule accordingly	As per BOQ.
14	Vol- II, Schedule-1-SS , Sr.no.4 & 7, Isolator		The short time rating as per the technical specification of outdoor isolators shall be 40kA for 3sec & 31.5kA for 3sec respectively for 220kV & 132kV system. However, as per E3 (system data) the same is indicated as 40kA for 1sec & 31.5kA for 1sec respectively for 220kV & 132kV system. As per BPS, the short time rating of GIS equipment shall be 50kA for 3sec & 40kA for 3sec respectively for 220kV & 132kV system. Hence, please check and confirm the actual short time current & duration to be followed for 220kV & 132kV outdoor air insulated isolators.	Short time rating of outdoor isolators shall be same as GIS equipment rating (i.e. 50kA for 3sec & 40kA for 3sec respectively for 220kV & 132kV system)
15	Vol- II, Schedule-1-SS , Sr.no.4 & 7, Isolator		Outdoor type center break Isolator is mentioned in Line item for 245kV and 132kV . But the technical specification provided is for double break isolator. Please check and confirm the type of isolator. If it is centre break isolator, please provide the specification for the same.	TS_ 220KV and 132KV HCB isolator uploaded in OPTCL website

Sr. No.	Clause Reference	Clause Description	Observation	OPTCL's Reply
16	GIS surge arrester		We do not envisage GIS surge arresters in the present scope of works for 220kV, 132kV & 33kV. We understand all surge arresters shall be outdoor AIS type. Please confirm	Confirmed.
17	Vol- II, Schedule-1-SS , S.No.16.3, Energy meters		With respect to Energy meters please confirm the following: a) Specification detailing the requirements such as ABT & TOD features b) Whether separate CT & PT cores are required? c) Bays for which Energy metering is required at each voltage level	As per amended BOQ.
18	Vol- II, Schedule-1-SS , Sr.no.19, FOTE		Please specify the following for FOTE: a) Number of directions b) Distance between Kuakhia & Remote end stations	To be provided in the event of award of contract.
19	Vol- II, Schedule-1-SS , Sr.no.19.5, RTU		As per referred line item description of price schedule RTU is indicated in scope. As Substation Automation system is envisaged for this package, we presume RTU is not required. Please confirm.	As per amended BOQ.
20	Vol- II, Schedule-1-SS , S.No.19.6, 48V battery		As per referred line item description of price schedule, 300AH maintenance free VRLA type battery is mentioned. Whereas, as per Technical specification of battery E17-BATTERY & BATTERY CHARGER, the rating is 350AH. Please check and confirm the requirement.	E17A-TSfor48V VRLA BatteryandBatteryCharger uploaded.
21	Vol- II, Schedule-1-SS , S.No.19.6 & 19.7, 48V battery and battery charger		The quantity of 48V Battery & charger is indicated as 1set. We presume 1set as 1number. Please confirm.	As per BOQ.
22	Vol- II, Schedule-1-SS , S.No.19.6 & 19.7, 48V battery and battery charger		As per Volume-II, Chapter- E19-Distribution board, Clause No. 10.1 (A), SL No. 8, 2 set of 48V DCDB is mentioned. However, as per BPS, the battery & charger set shall be 1 number only. Please clarify the 2nd incomer source for 48V DCDB.	As per BOQ.
23	Vol- II, Schedule-1-SS , S.No.19.12, ACDB, DCDB.		Please clarify which ACDB & DCDB are to be quoted against this line item, as these items are already covered under SI. No. 26.	As per amended BoQ.
24	Vol- II, Schedule-1-SS , S.No.19.13, Earth Flat, Cable Tray, Telephone cable, ACDB, DCDB, Foundation rail, Junction Box,.		Please note that Earth flat & ACDB are once again repeated under SI. No. 19.12 of BPS. Already these items are covered under SI. No. 13 & 26 respectively. Please clarify the items to be quoted under this line item of BPS against Earthling & ACDB.	As per amended BoQ.
25	Vol- II, Schedule-1-SS , Sr.no.20.1		As per referred line item description of price schedule,160MVA, 220/132kV Auto transformer is mentioned. However, the technical specification provided is for 160 MVA, 220/132/33 KV AUTO TRANSFORMER. Please check and confirm the requirement of tertiary winding.	As per TS.

Sr. No.	Clause Reference	Clause Description	Observation	OPTCL's Reply
26	Vol- II, Schedule-1-SS , Sr.no.20.3		Please clarify the source of 33kV supply for 33/0.415kV auxiliary transformer-1 & 2.	The bidder is requested to review SLD carefully.
27	Vol- II, Schedule-1-SS , Sr.no.25.1		We understand that location of 220kV and 132kV CRP is in yard AC kiosk. Please confirm whether Bidder's understanding is in order. We also understand that, even though it is GIS package, C&R Panels are to be located in AC kiosk. Kindly confirm.	Confirmed.
28	Vol- II, Schedule-1-SS , Sr.no.25.5.4, bus bar protection panel		Please confirm the type of bus bar protection; whether it is centralised or decentralised?.	Centralized philosophy shall be applied for busbar protection.
29	Vol- II, Schedule-1-SS , S.No.26.2.2, 220V DC Emergency DB		Please furnish the purpose of 220V DC emergency DB and its configuration as the feeder list for the same is not available in Section-E19- Distribution board.	As per BOQ.
30	Vol- II, Schedule-1-SS , S.No.26.2.3, 220V Battery		As per the referred line item description Plante' type battery is mentioned. But the technical specification calls for VRLA type battery. In this regard, please confirm the type of battery to be supplied.	220V Battery is Plante' type.
31	Vol- II, Schedule-1-SS , Sr.no.26.2.4, Battery charger		As per referred line item description of price schedule, 2 set of battery charger is mentioned. However, as per Technical specification requirement, Battery charger shall be float and float cum boost charger. We understand that 1 set of battery charger comprises of 1no. float and 1no. float cum boost charger. Accordingly, 2sets shall consists of 2No. Float chargers & 2No. Float-cum-boost chargers. Please confirm whether bidders understanding is in order.	As per BOQ.
32	Vol- II - Price schedule, Schedule-1-SS , S.No.32, 33 & 34		Please furnish the Annexures-I, II & III as mentioned in the line items 32, 33 & 34 of Bid price schedule.	Pl. refer Technical Specification.
33	E1: General clause, 1.3 Interfacial point of line termination		We understand that Transmission line hardware is not included in the scope of this package. The same shall be supplied by TL contractor. Please confirm whether Bidder's understanding is in order.	Confirmed
34	Technical specification, Vol- II, E2, General technical clauses, Cl. 12.4.4 & 12.4.5		Based on the referred clauses, we propose cable laying on angle supports in outdoor switchyard and on trays inside control building & GIS building. Please confirm.	It shall be as per the technical requirements.
35	Section E3 - System Data, S.No. 17		As per the referred section, the creepage distance is given for 25mm/kV. However the creepage for SF6 to Air Bushing is mentioned as 31mm/kV as per Section E30A, Cl.4.2.7, Page 26 of 50. Please check and clarify.	Creepage for SF6 to Air Bushing mentioned as 31mm/kV as per Section E30A, Cl.4.2.7 shall be considered.

Sr. No.	Clause Reference	Clause Description	Observation	OPTCL's Reply
36	Technical Specification Vol.II - E6, Civil works, Clause No. 12.8.1		As per referred clause, clear (vertical) space of at least 300mm shall be available for each tier in cable trench. But as per same clause, page No. 19(table), gap between two angles shall be 200mm. As both the clauses are contradicting, Please check and confirm actual vertical space between tiers.	300mm
37	E16-IVT & CVT		We do not envisage outdoor CVT and VT for 220kV, 132kV and 33kV in our scope of supply as there is no separate line item in the price schedule. If required please add separate line item in the BPS.	As per BOQ.
38	Vol -II, E21-CONTROL & RELAY PANEL, Clause No.7.6.1.11		As per referred clause, Low/ medium impedance biased differential relay shall be provided for Bus bar protection. We interpret medium impedance as high impedance. Please confirm whether Bidder's understanding is in order.	As per TS.
39	Vol -II, E21-CONTROL & RELAY PANEL, Clause No.7.6.1		We do not envisage any bus bar protection for 132kV & 33kV system as the same is not mentioned in the BPS. If required please add a separate line item. Please check and confirm the requirement.	As per BOQ.
40	Vol -II, E21-CONTROL & RELAY PANEL, Clause No. 11.2, control panel		As per the referred clause of technical specification, separate control panel shall be provided. As SAS based control is envisaged for this package, we presume that separate control panel with Mimic & switches are not required. Please confirm.	Confirmed
41	Vol -II, E21-CONTROL & RELAY PANEL, Clause No. 11.4, 220/132kV Transformer protection panel		The protection requirements & number of protection relays for transformer bay as mentioned under the technical specification is different from the BPS line item description. We presume that the protection requirements shall be as per BPS. Please confirm.	As per BOQ.
42	Vol -II, E21-CONTROL & RELAY PANEL, Clause No. 11.4, 220/132kV Transformer protection panel SL No. 1 & 3		As per referred clause , SL No.1, REF can be in built feature of transformer differential IED. But as per SL No.3 of the same clause, Separate REF relay shall be provided. Please check and confirm the actual requirement.	As per TS.
43	Vol -II, E24 -Sub Station Lighting System		Kindly provide the uniformity ratio (i.e.Min/Max) & Maintenance factor for indoor & Outdoor Lighting.	Will be provided to the bidder during project execution.
44	Vol -II, E24 - Sub Station Lighting System, Cl.7		As per the referred clause the details of Lighting Transformer is provided. But in price bid schedule the same is missing. Please include the lighting transformer in the price bid schedule, if required. The rating of Lighting transformer is indicated as 100kVA (or) 75kVA in specification. Please check and confirm the exact rating.	As per BOQ.

Sr. No.	Clause Reference	Clause Description	Observation	OPTCL's Reply
45	Vol- II , E27-TS-OPGW & OPTIC FIBRE EQUIPMENT		We do not envisage any OPGW communication link between Kuakhia station to remote station in our present scope of works. We presume that the same shall be in TL contractor scope. Please confirm	As per BoQ
46	Vol -II, E30A 400_220_132kV Outdoor GIS Spec		a) Whether Integral type LCC is acceptable for 220kV and 132kV GIS equipment. Please confirm b) Please specify the degree of protection for 220kV and 132kV GIS enclosure and LCC panel?	a)As per TS. b) IP55
47	Vol -II, E30A 400_220_132kV Outdoor GIS Spec, cl.4.2.18		As per referred clause, copper flat size of 50X6 mm with bi-metallic arrangement to connect from the ground earth mat to enclosure of the GIS equipment is mentioned. However, there is no line item for 50x6mm Cu flat in the price schedule. Please add separate line item for 50x6mm Cu flat in the price schedule	Bidder's Scope.
48	Vol -II, E30A 400_220_132kV Outdoor GIS Spec, cl.2.0		As per referred clause, it is mentioned that the bus bar of the 220 KV and 132kV GIS shall be of Aluminium. Whether copper bus bars are also acceptable for 220kV and 132kV GIS?	As per TS
49	Vol -II, E30A 400_220_132kV Outdoor GIS Spec cl.4.2.22, Truck crane		As per the referred clause, Truck crane of suitable capacity is mentioned for outdoor GIS maintenance. In this regard, please add a separate line item in the BPS & furnish technical specifications for the same, if the same need to be supplied under this package.	The bidder is required to include the cost of truck crane for the installation and erection only in Price of GIS modules of schedule no.4 under the bidder's responsibility, but the supply of truck crane is not in the scope of the contract.
50	Vol- II , E30B 33 kV Indoor SWGR Spec		We do not envisage PD monitoring system for 33kV GIS as the requirement is not mentioned in the technical specification. Please confirm	The technical specification shall be referred.
51	Vol- II , E30B 33 kV Indoor SWGR Spec, cl.no.7.3.1.e		From the referred clause, the VT accuracy class is mentioned as 0.2S/3P. However, as per IEC, 0.2s accuracy is not applicable for VT. Please check and confirm.	Accuracy Class of VT shall be 0.2/3P.
52	Vol -II, E31-33 -132-220 KV XLPE CABLE SPEC, Cl.no. A.16.0 sl.no.20 & Cl.no.B.7.3.13, sl.no.23		We shall supply the 132kV & 33kV cables as per the sizes indicated in the Price schedule. We do not envisage any calculations to prove the continuous current ratings as mentioned in the line item description as it varies based on laying conditions. As the current ratings mentioned in the BPS are difficult to be met with single run per phase. Using multiple runs per phase will impose termination difficulties in the GIS modules. Considering the above, we request OPTCL to check the requirement & furnish suitable amendments.	As per BOQ.
53	Vol -II, E31-33 -132-220 KV XLPE CABLE SPEC, Cl.no B.7.1.0		We are not envisage prequalification test for EHV cables under this package. Please confirm	As per TS

Sr. No.	Clause Reference	Clause Description	Observation	OPTCL's Reply
54	Vol -II, E31, 132kV Power cable, Clause No. 1.3.5, Cable parameter, SL No. viii), Fault level		As per referred clause, Fault level for Conductor & Metallic sheath shall be 31.5kA for 1 sec for 132kV Power cable. But, as per price schedule, 132kV GIS short circuit rating is 40kA for 3 sec. In this regard, please check and confirm the Fault level to be considered for 132kV Cable.	Short time rating of Cable shall be same as GIS equipment rating (i.e. 40kA for 3sec for 132kV system)
55	Vol -II, E31, 132kV Power cable, Clause No. 2.0 Page No. 45/80		As per referred clause, Bonding cable and link boxes are envisaged for 132kV XLPE power cable. Please add separate line item for the following a) Cable Joint b) Bonding & Earthing cable c) Link box Else, please clarify in which item these accessories shall be quoted.	As per amended BOQ.
56	Vol -II, E31, 132kV Power cable, Clause No. 2.1.3 Page No. 45/80		As per referred clause, validity of type test reports for 132kV power cable shall be 5 years. But as per clause no. 7.1.0.5, Page no. 47/80, Type test validity for the 132kV Cable & accessories shall be 10 years. We shall provide valid test reports not older than 10 years as on date of Bid submission. Please confirm acceptance.	Type test report should not be more than five years old, reckoned from the date of bid opening.
57	Vol -II, E31, 132kV Power cable laying , Clause No. 1.1.5 Page No. 43/80		Please clarify the following w.r.t 132kV Power cable: a) Type of laying- trefoil formation or flat formation. b) Whether cables are laid on support angles inside trenches (or) laid on direct buried trenches? If laid in trenches, then thermal backfilling is not applicable c) Please confirm the no. of cable runs per phase as the current rating of 1000A with single runs of 132kV, 1000Sq.mm copper cable is difficult to attain. Please check and confirm the requirement	cables are to be laid on support angles inside trenches
58	Vol -II, E31-33 -132-220 KV XLPE CABLE SPEC, Clause No. 1.3.1, page No. 34 of 80		As per referred clause, 132kV Cable shall be preferred of FIPC type i.e. Fibre Integrated in the Power Cable. However, in price schedule FIPC type is not mentioned. Hence, we understand that FIPC type cable is not applicable for this tender. Please confirm.	As per BOQ.
59	Vol -II, E31-33 -132-220 KV XLPE CABLE SPEC, Cl.no B.7.1.0 & 7.3.6		We do not envisage any repetition of type test and short circuit test on 132kV EHV cables if bidder submit valid test reports not older than 10 years. If type test and short circuit test need to be repeated, then please inform all Bidders & include separate line item in the price schedule to quote special test charges. Please confirm	Validity shall not be more than 5 years.

Sr. No.	Clause Reference	Clause Description	Observation	OPTCL's Reply
60	Vol -II, E31-33 -132-220 KV XLPE CABLE SPEC, Cl.no B.7.1.1 & C.1.6.0		As per referred clause of technical specification, reports of type tests conducted only at CPRI, KEMA (Netherland) & CESI (Italy) are acceptable. In this regard, we request OPTCL to accept test reports from the following renowned laboratories also: a) F.G.H,Germany, b) CERL,U.K., c) EDF, France, d) KERI, South Korea e) IPH-Berlin – Germany f) Xihari, China Please confirm acceptance	As per TS.
61	Vol -II, E32, Digital power line carrier equipment		As part of tender documents, specification for PLCC is enclosed. However, there is no separate line item for PLCC and its accessories in the BPS. We presume PLCC is not required for this project. Please confirm.	As per BoQ.
62	Vol -II, E35, Fibre Optic Terminal Equipment, Clause No. 1.7, Network Management System (NMS)		We are considering only SDH equipment with necessary interface cards as per BPS. Network Management System as indicated in the referred clause is not envisaged in the present scope of work. We presume that NMS shall be included in a separate contract as it involves work at SLDC. Please confirm whether Bidder's understanding is in order.	As per BoQ and TS.
63	Vol -II, E21 & E37, TS of control and relay panel		There are two different Specification for Control and relay panel (E21 & E37). We presume that E21 is applicable for conventional control & relay panels. Hence we shall follow only E-37 which is SAS based. Please confirm whether Bidder's understanding is in order.	Confirmed.
64	PRP Architecture		Please confirm whether Parallel Redundancy Protocol (PRP) architecture is required for Bay Control Unit (BCU), Bay Control Protection Unit (BCPU), protective relays both at bay level and station level.	The SAS shall be in the PRP based. The relays should be compatible to redundant communication architecture and shall be complied with IEC 62439-3 standards of parallel redundancy protocol (PRP) as per Technical specification for SAS.
65	Vol -II, 160MVA, 220/132/33kV Auto transformer & 40MVA, 132/33kV Power transformer		We are not envisaging online DGA , Online insulating oil drying system & NIFPES for power transformers as same is not mentioned in the technical specification. Please confirm.	As per TS & BOQ.
66	Vol -II, 160MVA, 220/132/33kV Auto transformer & 40MVA, 132/33kV Power transformer		Please confirm whether tank mounted radiators are acceptable?	As per TS.

Sr. No.	Clause Reference	Clause Description	Observation	OPTCL's Reply
67	Vol -II, 160MVA, 220/132/33kV Auto transformer, cl.no.4.0, sl.no.15.ii)		We presume from the referred clause that the tap changer shall be provided on the HV end i.e. 132kV end of the series winding. Please confirm whether Bidder's understanding is in order.	As per TS.
68	Vol -II, 40MVA, 132/33kV Power transformer, cl.no.4.0, sl.no.15.ii)		We propose from the referred clause that the tap changer shall be provided on the HV end of neutral i.e. 132kV. Please confirm	As per TS.
69	Vol -II, 160MVA, 220/132/33kV Auto transformer & 40MVA, 132/33kV Power transformer, Annexure-I to Annexure-IX		<p>In the transformer specification certain Annexures (Annexure II to IX) & calculations/curves were asked to be submitted along with the Bid.</p> <p>We understand that, above documents as per annexures are being asked by OPTCL while inviting tenders for procurement of individual equipment directly from manufactures. However, in this regard we would like to highlight that, present tender being turnkey package for construction of overall substation involving numerous equipment's and multiple manufacturers for each equipment/items, it is very difficult for an EPC contractors to collect all of the documents during tendering stage apart from its own qualification documents. Hence we request you to accept our proposal of submission of only the manufacturer's standard GTP's along with the manufacturer's authorization letters during tendering stage & remaining documents shall be submitted during execution stage for all the equipment's as applicable, as per tender documents. Undertaking to this effect can be submitted from our end during tendering stage. Please confirm your acceptance.</p>	As per SBD.
70	Vol -II, 160MVA, 220/132/33kV Auto transformer & 40MVA, 132/33kV Power transformer, Type test charges		As per referred clause, the charges for conducting each type test shall be quoted in the relevant price schedule. But in BPS there is no line item for type test charges. If type test shall be conducted, please include separate line item for same.	The cost of transformer shall be inclusive of all costs towards type test charges, Mandatory spares, Spanners & Special tools, and accessories, etc as specified in the Technical specification.
71	Vol -II, 160MVA, 220/132/33kV Auto transformer & 40MVA, 132/33kV Power transformer, Type test charges		Please confirm if Bidder submits valid type test reports of already type tested transformer, can the repetition of type tests be waived off?	

Sr. No.	Clause Reference	Clause Description	Observation	OPTCL's Reply
72	33/0.433 KV STATION TRANSFORMER, cl.no.15		As per the latest Gazette Notification, revised losses & star ratings are assigned for Distribution transformers. Hence, please inform the star rating to be followed for the proposed 500kVA transformer.	STATION TRANSFORMER 33KV/0.43 V,500 KVA shall confirm to Energy Efficiency Level 2 -AS PER SPECIFICATION & relevant IS.
73	General Inputs		Please furnish the following details: 1. Single line diagram 2. Plot Layout with dimensions 3. Control room building layout 4. Equipment layout for Type-D & Type-E quarters 5. Remote end location and total length of the line 6. Cable trench section drawing	Indicative SLD and Layout drawing uploaded. Other drgs are in Bidder's scope.
74	General		Please furnish the specification for the following equipment: a) 48V SMPS charger b) 350Ah plante battery c) Truck crane	The specification for the following equipment: a) 48V SMPS charger b) 350Ah plante battery uploaded.
75	General		Kindly confirm whether the LBB protection is acceptable as inbuilt feature of Bus bar protection relay.	LBB can be as inbuilt feature of Busbar protection relay.
76	Modular Cable sealing system		Modular Cable sealing system is not indicated in BPS. In this regard, we request OPTCL to check the requirement of cable sealing system and include a separate line item in the BPS if required.	Bidder's scope.
77	Visual monitoring system.		We do not envisage Visual monitoring system (VMS) for this package. If required, please provide the technical specification and add separate line item in the price schedule.	As per BOQ.
78	EPABX & Telephone system		We are not envisaging any EPABX & Telephone system in the present scope of work. If required, please add a separate line item in the BPS and furnish technical specification for the same.	As per TS.
79	Remote end substation		We do not envisage any scope of work in the remote end substations. Please confirm	As per BOQ and technical specification.
80	Order of precedence		In case of discrepancies between Technical specification, Drawing & Bid price schedule please clarify the order of precedence to be followed.	As per SBD.

Sr. No.	Clause Reference	Clause Description	Observation	OPTCL's Reply
81	Dynamic short circuit withstand test for transformer		<p>We understand that Dynamic short circuit withstand capability of 160MVA & 40MVA transformer can be proved by means of calculations, as no testing requirements are envisaged in the specification.</p> <p>Further, we request OPTCL to accept Dynamic short circuit withstand tests conducted on similar or higher rated transformers (both MVA & voltage) in line with IEC60076-5.</p> <p>If Dynamic short circuit withstand test need to repeated, then please inform all Bidders & include separate line item in the price schedule to quote special test charges.</p>	As per TS.
82	Vol-III of III, Section E30A - 400/220/132kV - Outdoor GIS, Page 5 of 50, Cast-Aluminium		<p>As per the referred clause, Internal surfaces (cast-aluminium) : Seevenax protective paint RAL 7038 (grey) Internal surfaces (aluminium wrought alloy): without surface treatment.</p> <p>We would like to inform you that the internal surface treatment and painting shall be as per manufacturer painting procedure. Please confirm.</p>	As per type test report and IEC.
83	Vol-III of III, Section E30A - 400/220/132kV - Outdoor GIS, Clause 4.1.18, Page 14 of 50, Repair		<p>As per referred clause, any failure shall be immediately signaled by the system's inherent self-supervision with clear description of the nature and the location of failure.</p> <p>But, as per manufacturer standard design, we do not envisage any inherent self-supervision feature. Please confirm acceptance.</p>	As per TS.
84	Vol-III of III, Section E30A - 400/220/132kV - Outdoor GIS, Clause 4.1.20 (a), Page 15 of 50, Earthing of Main Circuits		<p>As per referred clause, "<i>To ensure safety during maintenance work, all parts of the main circuit, to which access is required, shall be provided with facilities for connecting removable earthing device, after opening the enclosure, on the circuit element which is previously earthed via main earth switch</i>".</p> <p>But Separate removable earthing switch is not envisaged for GIS. During maintenance, the earth switch can be operated to drain the charges. For every module, to undertake maintenance, respective earth switches shall be provided to drain the charges as mentioned below :-</p> <p>For Bus side DS module, Bus H-ES can be used. For GCB & CT maintenance, Bus side ES and Cable side ES of respective bay can be used. Please confirm.</p>	As per TS.

Sr. No.	Clause Reference	Clause Description	Observation	OPTCL's Reply
85	Vol-III of III, Section E30A - 400/220/132kV - Outdoor GIS, Clause 4.2.1 - Circuit Breaker, Page 16 of 50, S.No. 2 - Technical Particulars		<p>As per the referred clause, for Circuit Breaker Number of operations permissible without maintenance: At no load 10000 At rated current 2000 At rated short-circuit breaking current 20.</p> <p>We understand that the number of Operation permissible without maintenance shall be in line with OEM recommended standard maintenance intervals for Circuit Breaker. In this regard, our OEM recommendation is to perform inspection after 10 interruptions at rated short circuit current and maintenance, if any that are required. Please confirm.</p>	As per TS.
86	Vol-III of III, Section E30A - 400/220/132kV - Outdoor GIS, Clause 4.2.1 - Circuit Breaker, Page 19 of 50, S.No. 9 - Operating Mechanism		<p>As per referred clause, Low stored operating energy shall be detected as per following operations: 1. start spring charge motor 2. block auto-reclosing if stored operating energy is insufficient to complete a break-make-break operation 3. block closing if stored operating energy is insufficient to complete a make-break operation 4. block tripping if stored operating energy is insufficient to complete a break operation.</p> <p>But, GIS offered is of motor charged spring operated mechanism. Hence, the above mentioned clause is not applicable for GIS with Spring Operated Mechanisms. Please confirm.</p>	As per TS.
87	Vol-III of III, Section E30A - 400/220/132kV - Outdoor GIS, Clause 4.2.3 - Maintenance Earthling Switch, Page 20 of 50, S.No. 1 - General		<p>As per referred clause, The common point of the two bus bars along with earth switch shall be designed and housed in a separate compartment so as to avoid complete shutdown of the system in case of maintenance required in any disconnecter.</p> <p>But, OEM's standard design for 220kV GIS is with 3 position DS switch with ES. Further, all mandatory interlocks will be provided from safety point of view. OEM do not recommend to place earth switch in the common point of the two bus bars from safety point of view. We request your kind review and acceptance of our recommended configuration.</p>	As per TS.

Sr. No.	Clause Reference	Clause Description	Observation	OPTCL's Reply
88	Vol-III of III, Section E30A - 400/220/132kV - Outdoor GIS, Clause 4.2.4 - Fast acting Earthing Switch, Page 22 of 50, S.No. 3 - Operating Mechanism		<p>As per referred clause, In case of failure of auxiliary supply, the mechanism shall have sufficient energy stored to perform at least one O-CO cycle.</p> <p>We understood that this requirement is only applicable for the operating mechanism of GCB and not for Fast Acting Earth Switches. In this connection, we understand that these descriptions of stored energy is not applicable for Fast acting Earthing switch. Please confirm.</p>	As per TS.
89	Vol-III of III, Section E30A - 400/220/132kV - Outdoor GIS, Clause 4.2.5 - Current Transformers, Page 24 of 50, S.No. 4 - Constructional Details		<p>As per referred clause, The Current transformers incorporated into GIS will be used for protective relaying and metering and shall be of metal enclosed type.</p> <p>We wish to clarify that the CTs for 400kV and 220kV GIS are externally mounted CTs (Secondary Windings Mounted externally around the enclosure) from constructional point of view. We request your kind review and acceptance of our standard configuration which is widely accepted across many utilities.</p>	As per TS.
90	Vol-III of III, Section E30A - 400/220/132kV - Outdoor GIS, Clause 4.2.10 - Local Control Cubicle, Page 28 of 50, S.No. 1 - General		<p>As per referred clause, The LCC shall be factory tested and shipped together with the bay as one transport unit.</p> <p>But, OEM standard philosophy for HV / EHV GIS for Utility applications is with Stand Alone LCP i.e not Skid Mounted on GIS Bay(s). In this regard, we understand that the LCC are shipped separately from the GIS Bays. Please confirm.</p>	As per TS.
91	Vol-III of III, Section E30A - 400/220/132kV - Outdoor GIS, Clause 4.2.15 - Arrangements, Page 31 of 50, Wiring		<p>As per referred clause, The wiring must be carried out with stranded copper conductors of at least 7 strands. The size of the conductors shall be suitable enough for the expected usage, but it must not be less than 2.5 sq.mm.</p> <p>But as per standard manufacturing practice of OEM, we recommend to use stranded 1.5 sq.mm. wire considering the current carrying capacity and ease of termination. Please confirm.</p>	As per TS.

Sr. No.	Clause Reference	Clause Description	Observation	OPTCL's Reply
92	Vol-III of III, Section E30A - 400/220/132kV - Outdoor GIS, Clause 4.2.15 - Arrangements, Page 32 of 50, Voltage Transformer		As per referred clause, The cable from voltage transformers shall be terminated in the cubicles with removable fuses and shall be padlocked. The fuses are connected in such a way that the locking devices forbids access to the cells corresponding to the conductors from the voltage transformers. But, The cable from VT secondary shall be terminated at VT cubicle on terminal blocks. The VT box shall have provision for padlocking. However we recommend to use MCBs instead of removal fuses for VT. The MCB for VT shall be placed at LCC. Please confirm.	As per TS.
93	Vol-III of III, Section E30A - 400/220/132kV - Outdoor GIS, Clause 4.2.16 - Low Voltage Cables and Control Cables, Page 33 of 50		As per referred clause, The size of the 1.1 kV XLPE/PVC insulated copper tape shielded control cables shall be more than 2.5 sq. mm. But, as per standard manufacturing practice of OEM, we recommend to use stranded 1.5 sq.mm. wire considering the current carrying capacity and ease of termination. Please confirm.	As per TS.
94	Vol-III of III, Section E30A - 400/220/132kV - Outdoor GIS, Clause 4.2.19 - Testing and Commissioning, Page 35 of 50, S.No.4 - Power frequency test		As per referred clause, as on site testing of GIS the power frequency test voltage at site shall be 80% of the factory test voltage for 1 min. We would like to inform you that the frequency of the power frequency test shall be 50Hz or higher depending on the testing circuit and equipment condition at site. This is as per the generally followed and accepted practice followed during the post installation HV Test on Site. Please confirm.	As per TS.