

Invitation for Bids NO. IPB No: [CPC/JICA/ICB/4/17-18]			
Reference Identification No: [OPTCL/JICA/PKG-4]		Loan Agreement No: [ID-P245]	
NAME OF PROJECT:3. Procurement of 220/132/33kV Turumunga S/S and T/L and 132/33kV Chandipur S/S and T/L in Odisha State of India under Package-4.			
PRE-BID MEETING HELD ON 23.10.2017: REPLY TO PRE-BID QUERIES RECEIVED FROM FIRMS ON VARIOUS DATES			
NAME OF CLIENT:- ODISHA POWER TRANSMISSION CORPORATION LIMITED, Bhubaneswar			
SL.NO.	CLAUSE	BIDDER'S QUERIES.	OPTCL REPLY
1	Site Access	We understand that the land for all the proposed site is already acquired by OPTCL.Encumbrance free levelled land shall be handed over by OPTCL within 2 weeks from the date of LOA. Also we understand that any tree cutting (if applicable) approval from concern statutory authorities is excluded from bidder's scope. Please confirm	Encumbrance free project land will be handed over to the bidder in the event of successful award of the contract.. Bidders are requested to visit the proposed sites before submitting their bids.
2	VOL-III (TS) ES-DESIGN CLAUSES FOR SUB-STATION /I.O GENERAL The sub-station shall adopt switching scheme as shown on the attached single line diagrams.	As per referred clause single line diagram is enclosed along with tender document however same is not enclosed along with hard copies purchased from OPTCL/We request you to provide the single line diagram of proposed sub-stations.	Indicative SLDs of proposed sub-stations uploaded on OPTCL website
3	Turumunga Site BOM / S.No. 30.14/ Earth Flat , Cable Tray , Telephone cable , foundation rail, junction box...	Please furnish the following drawings for assessment of lot quantities: 1. Electrical Layout (Plan & Section) for assessment of above ground earthing material.	Electrical Layout (Plan & Section) is under Bidder's Scope.
4	Tender Documents	Bus bar scheme for 132/33kV sub-stations is not mentioned anywhere in the tender document. Kindly mention the same for proper review of the layout and well understanding of the system.	As per SLD & technical specifications. BUS CONFIGURATION FOR 220KV SYSTEM IS TWO MAIN BUS ARRANGEMENT AND 132 KV & 33 KV SYSTEM IS SINGLE MAIN BUS & ONE TRANSFER BUS ARRANGEMENT. MAIN BUSES SHALL BE WITH TWIN ACSR MOOSE CONDUCTOR. (220kv, 132 KV & 33 KV MAIN BUS). RESERVE/TRANSFER BUS SHALL BE WITH SINGLE ACSR MOOSE CONDUCTOR.
5	Tender Documents	220kV, 132kV & 33kV bus-bar current rating is not mentioned anywhere in the tender documents. Kindly furnish the same.	BUS ARRANGEMENT IN SUBSTATION SYSTEM: 1. 220 KV SIDE: Two Main Bus as per SLD attached.(3150 Amp) 2. 132 KV SIDE: Main and Transfer Bus as per SLD attached.(3150 Amp) 3. 33 KV SIDE: Main and Transfer Bus as per SLD attached.(2000 Amp)
6	Tender Documents	Whether 75x10 GI flat shall be used as riser up to FGL level (from Mesh) or 50x6 GI flat shall be used for riser from earthmat level (below 700mm) to "Plinth level & above". Please clarify to understand the philosophy of the earthing.	50x6 GI flat shall be used for riser from Plinth level & above.
7	Tender Documents	As per IEEE-80, the shock duration shall be 0.5 sec.Please confirm.	As per relevant IS & IEC
8	Tender Documents	Kindly furnish soil resistivity report or soil resistivity value and cross check earthing system. Material	Bidder's Scope
9	Tender Documents	"Interconnections to equipment shall be made from Aluminium tubes or suitable flexible ACSR conductor" is not clear from the tender documents. Kindly clarify and confirm the same. Also in AL tubular pipes , kindly confirm the size.	Aluminium Tubes are to be used for 220kv equipment inter-connections and suitable flexible ACSR conductor for all other equipment interconnections.

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10	Tender Documents	"DSLP shall be achieved through shield wire or LMs", is not clear from the tender documents. Please confirm and clarify the same.	DSLP shall be achieved through earthing Spikes to be mounted on the Columns. Pl refer BOQ for the same.
11	Tender Documents	Wave trap qty is not mentioned in the BPS. So we assume that the communications shall be done through OPGW, FOTE etc. not with PLCC. Kindly confirm our understanding.	Wave traps are not in scope of supply. The provision of speech, protection & data shall be through OPGW and FOTE system.
12	BPS/ SI.No.17.12	Quantity of Earthflat, cable tray, junction boxes are given in the BPS in SI.No. 14.1 & 14.2, 14.6.1-3 and 14.7.1-5 respectively. Hence please clear the specific item of which LDT quantity to be estimated.	These items are under the main heading ACCESSORIES FOR PLCC SYSTEM With OPGW. You are requested to quote the same as per the Amended BOQ uploaded.
13	BPS/ SI.No.23.1.17 & 23.2.10	Whether mentioned quantity of DCDB is of 48V or something else? Please clarify. Further if mentioned DCDB is 48V it means that 132kV & 33kV Systems have their one independent 48V DCDBs. But as per sub-station practice it is not possible. Please clarify in detail.	Control & Protection voltage is 220V DC. Hence, DCDB is of 220V DC. 48V DCDB is only for telecom equipments.
14	BPS/ SI.No.23.4.1	Kindly furnish the LT SLD to review the load list and LT switchgear requirement or kindly provide the LT SLD indicating the practice of OPTCL to prepare load list and finalize the vendor.	Pl refer Technical specification for detail.
15	BPS/ SI.No.23.4.1.3	As the quantity of the illumination fixtures are finalized. So kindly provide the illumination SLD for understanding the load distribution in various lighting DBs e.g. MLDB, ELDB, CRB LDB etc.	Bidder's Scope. Bidder has to design the same as per the TS and submit for approval.
16	Control & Protection : SAS	<ol style="list-style-type: none"> 1. We are envisaging two future bays in bus bar protection. 2. We confirm relay test kit required as supply item or not 3. We understand that in new sub-station RTU is required with 104 protocol for data transmission to LDC whereas sub-station automation system is required for local station monitoring in local station. 4. We presume that ports/ gateway/software are available in the LDC for proposed substation data integration. 5. Any modification & integration work in LDC not envisaged in present scope for proposed sub-stations work. 6. Any modification/ equipment replacement/ integration will not be envisaged for any other location / end except proposed new & extension side under present scope. 7. Standalone disturbance recorder is not considered for any voltage level except 400 & 220kV lines. Please confirm. 	As per amended BOQ and respective technical specifications.
17	Telecommunication/ Teleprotection	<p>Please confirm the following:</p> <ol style="list-style-type: none"> 1. Distance from local stations to LDCs 2. We presume that PLCC need not to be considered as wave trap is not there under present scope. Only FOTE with OPGW type communication will be in present scope for proposed sub-stations as per requirement. 	Indicative Schematic Layout for provision of Speech & data through OPGW applicable to Turumunga and Chandipur uploaded in OPTCL website.
18	Fire protection system for 160 MVA	As per technical specification of Power Transformer we understand that water based fire fighting system is applicable only for 400kV and above sub-station. Since proposed sub-station is of 220kV & 132kV water based fire fighting system is not applicable. Please confirm. Also we understand that any other fire protection system for 160MVA Power Transformer such as Nitrogen fire protection system etc. if applicable shall be free issued by OPTCL as same is not appearing in tender BOM and specification. Please confirm our understanding.	As per amended BOQ.

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19	Type test	We understand that type test reports of similar or higher rating power transformer is acceptable and bidder need not to carry type tests on offered transformers. Please confirm.	As per SBD & technical specification.
20	Nature of contract	We understand that the contract under proposed package is composite in nature and OPTCL will issue single contract to successful bidder. Accordingly uniform GST @ 18% shall be applicable on all items under proposed scope of work. Please confirm our understanding.	As per Standard Bidding Document.
21	General	We understand that in case of any discrepancy between tender drawings, technical specification and price schedule on scope of works, price schedule shall prevail over all other sections. Please confirm our understanding.	As per Standard Bidding Document.
22	General	Kindly provide us the pre-liminary soil report for our reference and estimation purpose or all site.	Bidder's Scope
23	Land Acquisition/ General (For all sub-stations)	We understand that the land for all the proposed site is already acquired by OPTCL. Please confirm.	The land for all the proposed site is available.
24	TS_Civil Works	As per technical specification, the contouring and site levelling is under bidder scope of work. In view of the same please confirm the following: 1. Kindly furnish the Highest Flood Level or the nearest external road level to finalize the FGL within the sub-station plot. 2. Kindly furnish the minimum height required for from existing road top for sub-station FGL.	To be provided in the event of award of the contract.
25	TS_Civil Works	As per technical specification Civil Works, Control building is given in sq.mtr. We request you to kindly provide the control room building drawing for civil work estimation.	Bidder's Scope. Pl refer the Technical specification for Control Room Building.
26	BOQ	Item for piling is not there in Bill of Materials. We understand that piling is required. In case required, same shall be paid separately as an extra item. Please confirm.	Pl. refer amended BOQ. Piling work for Chandipur package is available in the scope of work. Bidders are requested to visit the sites before submitting their bids.
27	TS_Civil Works	Please confirm the seismic zone to be considered for each package.	Turumunga (Keonjhar District) is located in Seismic Zone-II Chandipur (Balasore District) is located in Seismic Zone-III *As per information as acquired from NDMA.
28	TS_Civil Works	Kindly confirm whether building colony quarters need to be protected with FDA system.	As per technical specification.
29	TS_Civil Works	Kindly provide the drawings of cable trench, security room, main gate, quarters (D & E type), road, drain, boundary wall, fencing, pump house, platform and store.	Pl refer Technical specification for detail.
30	BOQ	In price schedule item for earth work in excavation & filling is given for site levelling. During project execution if the excavated earth (i.e cut earth) is found not suitable for filling then borrowed earth may be required for filling. However the item for the same is not included in price schedule.	Pl refer Schedule No. 4, Installation and Other Services-(Sub Station) for detail.
31	TS_Civil Works	Please confirm the grade and thickness of PCC to be used in foundation work of tower and equipment as it is not mentioned in technical specification of civil work.	Foundation design is in bidder's scope.
32	TS_Civil Works	Please confirm the distance of terminal point for water supply from sub-station site for all sites.	Bidder's Scope

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33	TS_Civil Works	Please confirm whether the bidder can use RMC for execution works. If yes kindly provide the contact and information of approved agency.	Bidder has to take the initiative and should submit the details of the agency for approval of Engineer-in-charge.
34	TS_Civil Works	Please confirm any special requirement for the roof treatment of control room building.	As per technical specifications.
35	TS_Civil Works, Test and reports	Please provide the contact information of the approved agencies and laboratory of OPTCL for various tests of soil, aggregate and concrete.	OPTCL will assist in obtaining such information in the event of award of the contract.
36	TS_Civil Works, Disposal of Surplus	Please confirm the location and distance from site for disposal of surplus earth for all sub-station.	Bidder's Scope
37	TS_Civil Works	Please confirm the capacity of septic tank and soak pit for sewage treatment.	As per technical specifications.
38	TS_Civil Works	Please confirm the capacity of oil pit for transformer whether it is 100% or different for our estimation purpose.	As per BOQ and Technical specification.
39	TS_Civil Works	We request you to kindly confirm that water and electricity shall be made available free of cost to contractor at one point.	Bidder's Scope
40	TS_Civil Works	As we envisage a larger time frame preparation of offer we request you to please extend bid submission date at least by 3 weeks from present due date to enable us to offer a competitive bid.	As per SBD.
SL.NO.	CLAUSE	BIDDER'S QUERIES.	OPTCL REPLY
1	Section III Evaluation Criteria Para No.2.4 B. Bidder should have constructed one no. 220/33kV or higher voltage class Grid Sub-Stations (AIS) with power transformer and 220kV or higher transmission line 47Kms (Route Length) on EPC Contract/ Turnkey contract basis for any transmission utility during Last Seven years preceding to the year from the date of NIT. (lead bidder to meet 50% technical qualification)	We understand that 50% technical qualification means either the bidder should have constructed the requisite 47 Kms of transmission line or one 220kV Sub-Station (since technical qualification of sub-station division is not logical.) Please clarify the same	Pl.refer Section III. Evaluation and Qualification Criteria - Without Prequalification- Clause 2.4 b Specific Experience: Compliance Requirements- For Single Entity - The bidder must meet 100% of the requirement. For Joint Venture/Consortium (existing or Intended): - All Parties Combined must meet 100% of the requirement. One Member of the Joint Venture/ Consortium must meet 50% of the requirement (In case of a fraction next higher no. to be considered) i.e. he must meet the requirement of one no. 220/33KV or higher voltage class Grid Sub-Stations (AIS) with power transformer and 220kV or higher transmission line 24 Kms. (50% of 47Kms) (Route Length) on EPC Contract/ Turnkey contract basis for any transmission utility during Last Seven years preceding to the year from the date of NIT.
SL.NO.	CLAUSE	BIDDER'S QUERIES.	OPTCL REPLY
1	Section VII. General Condition-Tax & Duties 14.2 (b) Other domestic taxes such as GST on the plant specified in price schedules No.1 and 2 and that is to be incorporated in to the facilities.	As per the Bid document of OPTCL, all the supply and installation portion cover under one work contract which is 18%, so please give us information product which come under 28% of GST.	Pl.refer SBD. Uniform GST @18% is applicable presently to both supply and installation Portion covered under one works contract (to be treated as services under GST Act).

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Sl. No.,	Volume / Section	Clause No / Drawing No.	Bidder's Query	Client's Reply
3. ELECTRICAL QUERIES				
229/132/33kV Turumunga substation				
1	Price Schedule	Sch-1, Scope description	As per Bid price Sch, the number of 33kV line bays is indicated as 7#. However, as per Volume-I, Section-VI, page-177, scope of works, the number of 33kV line bays has been indicated as 5#. Please check and confirm the actual requirement.	PI quote as per amended BOQ.
132/33kV Chandipur substation				
1	Price Schedule	Sch-1, Sl. No. 2.1, 5/1 without earth switch	As per the referred clause of Bid price Sch, the number of 145kV single isolators without earth switch is indicated as 9#. However, as per the the present scope of works the same shall be 8#. Please check and confirm the actual requirement.	PI quote as per amended BOQ.
Common Details				
1	Price Schedule	Sch-1 (Turumunga), Sl. No. 8 & 9, 145kV CT & Isolator Sch-1 (Chandipur), Sl. No. 1 & 2, 145kV CT & Isolator	As per the line item description of the referred clauses, 145kV isolators and current transformers are rated for short circuit fault level of 31.5kA. However 132kV circuit breakers are rated for short time current rating of 40kA. As both these clauses are contradictory, please confirm the short circuit level & duration to be adopted for 145kV system.	PI quote as per amended BOQ.
2	Price Schedule	Sch-1 (Turumunga), Sl. No. 17, 36kV, 1250A isolators Sch-1 (Chandipur), Sl. No. 9, 36kV, 1250A isolators	As per the line item description of the referred clause, the current rating of isolators is indicated as 1250A. However, as per technical specification, Volume-III, section-E13, Clause 1.0 (Table), Sl. No. 8, the rated current of 36kV isolators is indicated as 800A. As both these clauses are contradictory, please check and specify the actual requirement.	PI quote as per amended BOQ.
3	Price Schedule	Sch-1 (Turumunga), Sl. No. 26, Cable trays Sch-1 (Chandipur), Sl. No. 14.6, Cable trays	As per the line item description of the referred clause, different cable trench sections are indicated. In this regard, please furnish the relevant cable trench section drawings as the same is not enclosed along with the Bid documents.	PI refer TS-Civil Works for details of cable trenches.

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4	Volume-III	Sch-1 (Turumunga), Sl. No. 27.6 and 27.7, Apex Energy meter Sch-1 (Chandipur), Sl. No. 14.7.6 and 14.7.7, Apex Energy meter	Please clarify the following with respect to Energy meter; a) We presume the ABT compliant energy meter is for the 33kV supply arranged by OPTCL for station auxiliary requirements. b) Whether the same shall be installed on the 33kV side or 415V side of the station transformer c) Please clarify from where the CT/PT inputs for the energy meter shall be taken d) Whether the Energy meter panel shall be located outdoor or inside the control building e) Please furnish the specification for Energy meter & communication requirements (if any)	Deleted from scope of supply and amended BOQ uploaded.
5	Volume-III	Sch-1 (Turumunga), Sl. No. 30, Accessories for PLCC system Sch-1 (Chandipur), Sl. No. 17, Accessories for PLCC system.	As per the line item description of the referred clause, PLCC system has been defined. However, as per the sub clauses of this line item we understand that only Fiber optic communication equipment's are included in the present scope of works. Hence we do not envisage any supply and installation of PLCC equipment in the present scope of works. Please confirm.	As per amended BOQ and Technical specification.
6	Volume-III	Sch-1 (Turumunga), Sl. No. 30.3, SDH equipment Sch-1 (Chandipur), Sl. No. 17.2, SDH equipment	We presume that only speech and data interfaces are required in the SDH equipment. No protection interfaces are envisaged in the scope of this package. Please confirm.	Both speech and protection interfaces are required.
7	Volume-III	Sch-1 (Turumunga), Sl. No. 30.3, SDH equipment Sch-1 (Chandipur), Sl. No. 17.2, SDH equipment	We presume that the Fiber optic communication equipment including the base equipment, interface cards, multiplexer and tributary cards are required only for the substation under present scope. In this regard, we do not envisage supply of any remote end equipment's. Please confirm whether Bidder's understanding is correct.	Indicative Schematic Layout for provision of Speech & data through OPGW applicable to Turumunga and Chandipur uploaded in OPTCL website.
8	Volume-III	Sch-1 (Turumunga), Sl. No. 30.6, RTU Sch-1 (Chandipur), Sl. No. 17.4, RTU	As the Substation automation system is having an inbuilt gateway which can communicate to the Main and back-up control centres on IEC 60870-5-104, please check and confirm the requirement of RTU system.	As per amended BOQ.
9	Volume-III	Sch-1 (Turumunga), Sl. No. 35, SAS Sch-1 (Chandipur), Sl. No. 23, SAS	We request OPTCL to furnish bay-wise BoQ for the control & relay panels instead of indicating the quantity of Bay control units, Main protection relays and auxiliary relays. Please check and revise the Bid price Sch as applicable.	As per amended BOQ.

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10	Volume-III	Price Sch no.1 (supply Sch for Turumunga) item no. 38 & Price Sch no.1 (supply Sch for Chandipur) item no. 23.4.2.4, 220V battery charger	As per the referred line items of price Sch, for Turumunga 2set of 220V Float & Float-cum-boost chargers are indicated. However, for Chandipur station the same is indicated as 1set. Please clarify the battery charger configuration to be adopted.	As per amended BOQ.
11	Volume-III	E3-System data, page-2 of 3 (Table), Short time current withstand duration	As per the system data, the duration for short time current withstand is indicated as 1seconds. However, as per the respective equipment specifications (CB, Isolator, CT, CVT/IVT), the duration has been specified as 3seconds. Please check and clarify the actual requirement.	As per technical specifications
12	Volume-III	E10-General equipment & substation accessories, Cl.No.12.0	As per the referred clause, whether Bidder can offer composite silicon insulators? Please confirm.	Long rod porcelain Insulators as per amended BOQ.
13	Volume-III	Section-E14, Station transformer, Clause 1.0 (Applicable standard) & 20.0 (losses)	In referred clause of technical specification, IS-2026 is mentioned as the applicable standard and separate no-load and load losses are indicated. However, as per recent amendments by Bureau of Indian Standards / Bureau of Energy Efficiency & notified in Gazzette, all manufacturers are instructed to manufacture distribution class transformers in line with IS 1180 only. As per the gazette notification, total loss figures of distribution transformers are indicated for loading conditions only (50% and 100%). Separate iron & copper losses are not indicated. Further, loss figures are pre-defined in gazette amendment for various ratings, corresponding to appropriate star ratings. Hence, we request OPTCL to inform the star rating & corresponding loss figures as per IS-1180.	STATION TRANSFORMER 33/0.4KV, 250 KVA, shall confirm to Energy Efficiency level-2, IS 1180 (pt-1):2014.
14	Volume-III	Line Differential protection	In the price Sch & technical specification for CRP the requirement of Line differential relays are not mentioned. In this regard please confirm the following: a) All 220kV & 132kV lines shall be provided with distance protection only b) If differential protection is envisaged for any of the lines, please clarify whether the same shall be supplied for remote end also?	Line Differential protection is not provided in the BOQ.
15	Volume-III	E21, Control & relay panel, clause 7.6.1, Busbar protection	As per the referred clause of technical specification under Sl. No. 10, it is mentioned that high speed tripping relays shall be provided for future bays also. In this regard, please specify the number of future bays to be considered in 220kV & 132kV busbar protection.	Future bays to be considered- 220KV - 2 nos and 33KV- 2nos.

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16	Volume-III	E21, Control & relay panel, clause 7.6.1, Busbar protection	We presume that the control & protection panels shall be located in yard AC kiosks as the substations are SAS based and line item for kiosk is also indicated in the price Sch. However, as centralised busbar protection is indicated for 220kV & 132kV systems, please clarify the location of Busbar protection panel (in kiosk or in control room).	Busbar protection shall be distributed type and is only for 220KV system.
17	Volume-III	E29, Clause 2.02.00, HVWS for transformers	As per the referred clause of technical specification, HVWS fire prevention system is mentioned only for 400kV class transformers. Hence, we do not envisage HVWS for the transformers being supplied under this package.	As per Amended BOQ.
18	General	BCU for Station Auxiliaries	Please furnish a separate line item for Bay control unit for Substation auxiliaries as the same is indicated in the technical specification for substation automation system, Volume-III, E-37, Clause-XI, Page-15.	As per Amended BOQ.
19	General	Main bus Bar	We presume that no bus work is required for the future bays. Please confirm.	As per Amended BOQ.
20	General	Drawings	Please furnish the following inputs pertaining to Turumunga & Chandipur stations in the scope of work: a) Single Line Diagram b) Overall plot plan indicating the location of control building and present scope c) Plan & section drawings for 220kV, 132kV & 33kV switchyards d) Control Building layout e) Cable Trench Section details	Indicative SLDs pertaining to Turumunga & Chandipur stations uploaded on OPTCL website. Rest of all are in Bidder's scope as per the Technical specification.
21	General	Conductor details	Please furnish details conductor configuration (2x ACSR Moose / 1x ACSR Moose) to be used for strung bus/equipment connections/jumpers for the following bays: a) 220kV Line bays b) 220kV transformer bays c) 132kV Line bays d) 132kV transformer bays e) 33kV Line bays f) 33kV transformer bays	BUS CONFIGURATION FOR 220KV SYSTEM IS TWO MAIN BUS ARRANGEMENT AND 132 KV & 33 KV SYSTEM IS SINGLE MAIN BUS & ONE TRANSFER BUS ARRANGEMENT. MAIN BUSES SHALL BE WITH TWIN ACSR MOOSE CONDUCTOR. (220kV, 132 KV & 33 KV MAIN BUS). RESERVE/TRANSFER BUS SHALL BE WITH SINGLE ACSR MOOSE CONDUCTOR.

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22	General	Station transformer	Please clarify the source of 33kV supply for Station transformer. We understand that the station auxiliary supply (2Nos.) shall be arranged by OPTCL at 33kV level. In this regard if so, please check the requirement of any 33kV cables and include the same in the price Sch	Pl. refer the indicative SLD uploaded. The source of 33kV supply for Station transformer shall be from 33KV Bus.
23	General	DG Set	We do not envisage the supply of DG set under the present scope of works as the same is not mentioned in the price Sch. Please confirm whether our understanding is correct.	As per Amended BOQ.
24	General	Price Sch	Please include the following as a separate line item in price Sch required for completion of project. 1) 220kV single suspension (90KN) H/W fittings for twin moose ACSR 2) 33kV single suspension (90KN) H/W fittings for twin moose ACSR 3) Welding sleeves & corona Bell	As per Amended BOQ uploaded.
25	General		We presume that supply of tension insulator for 33kV outgoing lines are not in present scope of work. Please confirm.	As per Amended BOQ.
26	General	Technical specification document for 332/33KV Power Transformer	Pl. provide the same	Uploaded in website

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