Clarification no 3 (technical) dated 21.07.2026 to bidding documents of Refurbishment of HVDC Control, Protection, SCADA, Valve Hall Equipment and Valve Cooling System for 1x500 MW Vizag HVDC Back to Back (BTB) Station under Add-Cap.; Specification Number: CC/NT/W-HVDC/DOM/A02/26/06464				
Sr. No.	**Clause No.**	**Existing Provision**	**Clarification required**	**POWERGRID REPLY**
1	1.0	The details of existing pole-2 of Vizag (Gazuwaka) HVDC System is enclosed as Annexure-A2 (Details of Station/Master control including interface signal list). However, Contractor is advised to visit the site at their own cost to familiarize the system before submission of bids.	Details of Station/master control is not available in Annexure A2. Kindly provide.	Refer Amendment-no 6 S.No: 1. Other relevant details shall be provided to successful bidder in case of Award.
2	1.14	Detailed Cyber Security Requirements, FAT Checklist & SAT Checklist of Control and Protection IEDs & other components are attached as Annexure -S12 (Annexu re II)-Cyber Security Requirements_ R0, Annexure-S13 (Annexure-III) --FAT_Checklist_R0 & Annexure-S14 (Annexure-IV) --SAT_Checklist _ R 0 respectively	Annexure S12, S13 & S14 not available. Instead, Attachment:Annexure-VI-SAT_v8.pdf as SAT checklist Attachment:Annexure-V CyberSec_requirements_v8.pdf Attachment:Annexure-VII-FAT_v8.pdf as FAT checklist . Kindly confirm if they are same .	Refer Amendment-no 6 S.No: 2.
3	4.1.3.10.2	It shall be possible to set the Frequency target anywhere within the range of 47.5 Hz to 51.5 Hz in steps of 0.05 Hz, provided the frequency of the other region is within the Frequency Band. The Frequency Target shall be met within 0.05 Hz of the setting. It shall also be possible to set the Frequency Band by setting lower limit and upper limit to a value between 48.5 Hz to 51.0 Hz. While trying to meet the Frequency Target the Frequency Band shall not be deviated for more than 0.01 Hz.	Section 2.2.1 mention, AC side frequency For Performance: 48.5 -50.5 Hz; However this requirement(4.1.3.10.2) mentioned required frequency band is 48.5 to 51.0 HZ. Please confirm, which section will be applicable.	Requirements specified in T.S. Cl. 4.1.3.10.2 shall prevail in this regard.
4	4.2.4	The temporary overvoltage, as stated in Clause 4.4.3.1, shall not exceed 600 kV on either side i.e. 1.50 times the nominal ac bus voltage. The actual temporary overvoltage shall be determined by the Contractor but equipment shall be designed for temporary overvoltages not less than the values given in Clause 4.4.3.1.	The bidder understands that the equipment shall be designed for temporary overvoltage's upto 1.5 times(600 kV) of the nominal AC voltage i.e 400 kV.	Bidder's understanding is correct. However, The actual temporary overvoltage shall be determined by the Contractor but equipment shall be designed for temporary overvoltages not less than the values given in Clause 4.4.3.1.
5	1.1 (Scope of work) (S.no-17)	LED based Video Projection System (VPS) of reputed make and latest technology, comprising of minimum 4x2 array (minimum 55” screen size for each LED) for optimum viewing from control desk, shall be supplied. The above shall be used for monitoring the DC and AC equipment associated with the converters, complete with status indication devices and measured values. LED display shall include full active display for the complete DC equipment and AC systems of Vizag BTB station and essential indications and measured analog values.	Bidder understand that 55" LED TV Screen can be supplied instead of VPS array. Pl confirm	Video Projection System (VPS) shall be supplied in line with requirements of T.S.
6	1.1 DISMANTLING	SCOPE OF WORK 16. Suitable covered storage Area as per Annexure store area. Space for storage Area is marked in Annexure store Area, approx. 1800 Sq.meter. Space for Valve cooling coolers are shown in Annexure Valve cooling Area. (Page 6 of 27)	1) As per “Annexure – Store Area”, area identified for the proposed covered store building is understood to be free from existing trees/buildings or any other obstructions. Employer is requested to kindly confirm that any existing encumbrances, if present within the allocated area, shall be removed/cleared by employer before commencement of construction activities for the new covered store building.	Bidder's understanding is correct.

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Sr. No.	**Clause No.**	**Existing Provision**	**Clarification required**	**POWERGRID REPLY**
7	1.3.5 CIVIL WORKS	ii) Additional Civil work for installation of new equipment like cooler fans foundation, valve cooling system, new store building, DG Set, Cable trench (if required) etc. If required, existing PLC filter and DG Set foundation may be used and if any modification is needed the same is bidder scope. If any modification or change in the existing foundation of Valves structure is required, the same is included in the present scope of work. (Page 13 of 27)	Bidder understands that if existing DG foundation or its existing location is not suitable/can not be used for New DG set, in such a case bidder can propose the new location for DG set.	If existing DG set foundation or its location is not suitable, then new location (if found necessary) shall be decided during detailed engineering with mutual agreement. Further, new foundation shall be under present scope of Contractor.
8	1.3.6 DISMANTLING, INSTALLATION, TESTING AND COMMISSIONING	The dismantling shall be carried out in a structured manner with all safety precautions as required for the works by the Contractor. The dismantled materials shall be removed and placed at storage areas at site. The contract or shall construct suitable storage sheds as per cl 1.3.5 for the storage of dismantled equipment. (Page 16 of 27)	Bidder understands that the dismantled & new supplied materials/equipment shall be stored within the proposed new store building. Kindly confirm.	T.S. Cl. 1.3.5.4 & 1.3.6 is amply clear.
9	-	-	Bidder request employer to clarify scope for debris disposal and indicate its location.	Relevant details shall be provided to successful bidder in case of Award.
10	Cl 1.1 Page 4 of 27 SCOPE OF WORK Cl No. 8	DISMANTLING The Contractor shall carry out safe and structured dismantling of the existing valve-hall equipment of Pole-1 (including thyristor valves, quadruple valve structures, ZFCT, valve hall arresters, DC voltage divider, Optical fibres, UV/arc detector, Bus work and connectors, Valve cooling system including controls and valve cooling mimic, HVDC control & protection equipment, HVDC station mimic, AC control and protections system, PLC Filter with CVD (East and South), DG Set, power and control cables, Battery and Battery chargers (48V & 220V) etc. before taking up the Installation of new equipment in scope of supply. Hybrid UV+IR fire detection system inside valve hall	Bidder understand that existing Fire and detection system is in healthy condition and UV / Arc detectors for Valve hall under present scope shall only be replaced with new one and same shall be interfaced with the existing Fire Detection system. Kindly confirm.	"Hybrid UV+IR fire detection system inside valve hall" is under present scope of works.
11	Cl No. 7.4 Page 6 of 9	Air conditioning and / or other environmental control systems shall be provided for the Valve Hall to ensure satisfactory operation of the HVDC system under the range of climatic conditions to which the station may be subjected. These systems shall provide equipment operational reliability. The details of the existing Valve Hall Ventilation and Air Condition Systems are provided as Annexure_VH Environment Control. The bidder may consider this existing system for the replacement of valve hall equipment. Bidder shall provide detailed heat load calculation for checking the adequacy of existing air conditioning and ventilation system of valve hall.	With reference to the Annexure VH Environment and existing details of HVAC equipments we assume that existing HVAC system including AHU, Air cooled condensing units and associated equipments are running in full capacity and are in healthy condition. Kindly confirm.pls share the heat load calculations, ducting layout of existing HVAC system to validate existing capacities w.r.t present requirement.	Details of existing HVAC system are already provided in Annexure VH Environment Control. Air conditioning and / or other environmental control systems as per Cl. No: 7.4 shall be provided considering this existing system in full running capacity.

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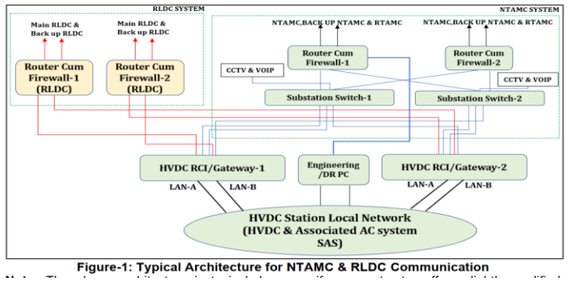
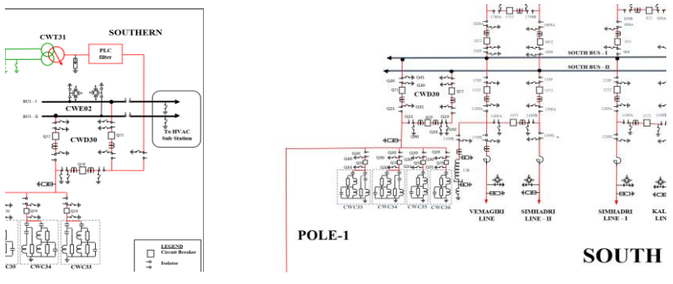
Sr. No.	**Clause No.**	**Existing Provision**	**Clarification required**	**POWERGRID REPLY**
12	SCOPE OF WORK, cl25	Employer intents to Bypass the FSC of 400kV Jeypore-Gajuwaka line in case of detection of ferro resonance. Such Bypass feature need to be provided for Pole-1 under present scope. This Bypass facility is already functional for Pole-2. Input of ferro resonance may be taken from Pole-2.	Bidder understands that the Fixed Series Capacitor (FSC) is located at 400kV Jeypore Substation, Odisha, and the present Bidder scope is limited to provision of tripping command initiation towards FSC CB at remote end in case of detection of ferro-resonance at Vizag end. It is understood that extension of tripping command up to remote end through Owner's telecommunication system, including DTPC arrangement, shall be under Owner's scope. Further, any modification/addition required in existing FSC control, protection, logic, or associated system at Jeypore end is not included in Bidder's present scope. Customer is requested to confirm the above understanding.	Bidder's understanding is correct.
13	Annexure-NTAMC Remote Operation	Annexure-..... **Integration of HVDC Substation with NTAMC & RLDC.** **13. Typical Architecture Diagram:**  **Figure-1: Typical Architecture for NTAMC & RLDC Communication**	Bidder understands that HVDC & HVAC SCADA / SAS Systems and HMIs are separate and dedicated. Two IP address sets shall be assigned for AC & HVDC SAS data reporting to SLDC/RLDC & NTAMC. One set of IP address shall be assigned for HVDC terminal and second set of IP address shall be made available for AC Substation, inline with bidder's proposal for separate SAS for AC & HVDC. Please confirm.	To be discussed in detailed engineering in case of award.
14	Annexure A1 Annexure East South SLD (Annexure Vizag SLD)	- 	1. As per Annexure-A1 SLD, Section Isolator is shown after CWD30 diameter, whereas, in Annexure East South SLD for Pole -1 side, same diameter CWD30 is shown without section Isolator connecting rest of the HVAC South Bus. Pls confirm the actual configuration.	As per the present configration isolator is present after CWD30 diameter.
15	1.4.4.2 1.SITE AUXILIARIES	Station Supply is existing from tertiary of ICT and additionally 33 kV feeder from state electricity board.	Bidder assume that the MV system up to LT transformer (including MV Cable) and the capacity of the LT transformer is sufficient to cater new load requirement including the load of new store building and cooling system. Please confirm .	Bidder's understanding is correct.
16	1.4.4.2 3. Earthing Connections	Earthing of panels and additional equipment and structures under the present scope is in the scope of the contractor.	Bidder understand that only above ground earthing for newly supplied structure /equipment will be in present scope and existing earthing can also be utilized.	Bidder's understanding is correct. Existing earthing (Earthmat and Risers) can be used for new equipment also

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Sr. No.	Clause No.	Existing Provision	Clarification required	POWERGRID REPLY
17	4.8.1	4.8.1 A limited (as defined further) remote monitoring of the HVDC system from the Load dispatch centres in Southern region and Eastern regions shall be provided. The transmission mode between HVDC terminals and Load dispatch centres shall be through an optical fibre communication system provided by the Employer. Existing Fibre Cable from the Gantry structure to the communication equipment can be used by the Contractor. Link / Voice (Administrative, Express) / Data/VOIP/VC (Asynchronous (300/600/1200 bps), Synchronous (2 Mbps)) NRLDC: √ √ √ (2 nos.) √	The Bidder understands that the remote monitoring for the Link from Southern and Easter region are required. If so, table has to be correted by replacing NRLDC to SRLDC and ERLDC.	Refer Amendment-no 6 S.No: 4
18		4.8.1 For performing the remote control, monitoring and telemetering function at the LDC, the Contractor shall provide two serial ports at Vizag. Each serial port shall support the EIA RS 232C (CCITT V.24/V.28 asynchronous/synchronous interface capable of operating between 50 and 9600 bps. The communication protocol shall be as per IEC 60870-5-101 (hamming distance 4) at converter station. The Contractor shall demonstrate the required signals at the interface point in the converter station. 1.3.1, d) All necessary studies to determine the requirements for communication between HVDC station and the remote load dispatch centres at Kolkata (ERLDC) and Bangalore (SRLDC) and RTAMC Secunderabad, NTAM C Manesar and Back up NTAMC at Bangalore . The contractor's work shall be limited to the design, engineering, supply, installation, commissioning and integration of the interface equipment like serial port, modems etc. to establish the communication with remote load dispatch & remote operation centre for above locations using IEC 60870-5-104 protocol. Telecommunication link (OPGW link) through AC Lines Network shall be provided by Employer.	Bidder understands that the coomunication with the remote Load Dispatch centre is on IEC 60870-5-104 protocol as mentioned in Chapter 1 , 1.3.1. Kindly confirm. Accordingly Clause 4.8.1 of Chapter 4 is to be corrected.	Refer Amendment-no 6 S.No: 5
19	Valve Hall	Floor Repair	Lot of cracks and damages were observed on floor adjacent to cable trench covers and crack on the floor. Pl confirm whether bidder needs to repair the existing damages. If yes, pl add a new line item in the price schedule.	Such requirements (if any) are already deemed to be considered in present scope of works.
20	Switch Yard	Cable Support structures	Cable support structural steel inside cable trenches found to be rusted and damaged. These cannot be reused. As an alternative, we propose to use pre-fabricated uni strut cable tray support type C1/C2. Pl add new line item in the price schedule.	Refer Amendment-no 6 S.No: 3

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Sr. No.	**Clause No.**	**Existing Provision**	**Clarification required**	**POWERGRID REPLY**
21	Switch Yard	Cable Trench cover slabs	Found that cable support cover slabs were filled with fillers. Approximately 40 -50% cover slabs may get damaged during dismantling of cables and relaying of new cables. Request to add new line item for cable trench cover slabs	Refer Amendment-no 6 S.No: 3
22			CCTV & LED Screen is missing in the Price schedule, Request to pls add	LED display is included in the BOQ PR no. 7000037070 , CCTV shall also be deemed to be included in the same price schedule.
23	Ch.11 Cl.11.8(d)	If Energy Availability < 98% of rated capacity at end of guarantee period the system may be rejected and ALL payments recovered from Contractor.	As per Appendix-8(b) of the 'Forms & Procedures', relevant provisions of SCC / GCC in conjunction with the Technical Specification, shall govern in case of shortfall in performance gurantee.Hence we request you to suitably amend the existing 'Rejection Clause' so that it is aligned with the clause mentioned in Appendix- 8 (b).	Refer Amendment-no 6
24	1.2	Gateway for remote supervisory control (to RSCC), the gateway should be able to communicate with RSCC on IEC 60870-5-101 protocol. The specific protocol to be implemented is enclosed as Appendix-I.	Please provide Appendix I	Appendix I is already enclosed in Annexure- Substation Automation system
25	4.3.2.2	The bidder shall propose a fully automatic strategy to control overvoltages at the 400 kV buses. The overvoltage control strategy shall aim at controlling the steady state, temporary and transient overvoltages. The logic to control the overvoltages shall fully coordinate with the overvoltage control strategy adopted by the Employer in its 400 system.	Bidder kindly requests more information on the overvoltage control strategy adopted by the Employer	Relevant details shall be provided to successful bidder in case of Award.
26	4.4.3.1	The converter equipment shall be designed for temporary overvoltages which are not less than 1.5 times 420 kV on both Southern & Eastern sides of 400 kV ac busbars with converters blocked and also for deblocking from this condition. The converter equipment shall be designed for temporary overvoltages which are not less than 1.2 times the ac system pre disturbance voltage (which can be up to 440 kV) for not less than 5 seconds following de blocking with the converters deblocked. The Contractor shall undertake to confirm during final design studies that the temporary overvoltage factor of 1.2 is adequate and if not to adjust design accordingly at his own cost.	The bidder understands that the equipment shall be designed for temporary overvoltage's upto 1.5 times(600 kV) of the nominal AC voltage(400 kV) and this understanding is in line with the requirement of Clause 4.2.4 of this document. Kindly confirm the same.	Bidder's understanding is correct. However, The actual temporary overvoltage shall be determined by the Contractor but equipment shall be designed for temporary overvoltages not less than the values given in Clause 4.4.3.1.
27	4.5.1	All protection settings shall be properly coordinated with the discharge currents of arrestors and capacitors located in the various zones for all operating modes.	Bidder understands that, as per amendment of chapter 4 , the protection settings shall be applicable for independent mode of operation of pole I only , kindly confirm	Bidder's understanding is correct.
28	4.7.1.1	a) Such changes/ updates shall be proposed and approval obtained from Employer along with the approval of Drawings/ documents. b) The proposed equipment shall be equivalent or with better features than the equipment included in the Contract. c) Complete justification along with a comparison showing the original and the proposed hardware features/ parameters including brochures shall be submitted to the Employer for review and approval. d) Changes/ updates proposed shall be at no additional cost to the Employer.	Bidder complies however the implications if any due to the changes/updates shall be discussed and mutually agreed during detailed engineering, kindly confirm	T.S. Requirement is clear.

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Sr. No.	**Clause No.**	**Existing Provision**	**Clarification required**	**POWERGRID REPLY**
29	4.1	Existing AC Harmonic Filters to be utilized. The details will be provided to the successful bidder during detail engineering. The control system supplied by the Contractor shall not compromise the existing filters ratings. Measurement for AC Harmonics currents of the converter shall be carried out for pre- refurbishment and post — refurbishment for same active power conditions with one block and two blocks in operation .	Bidder understands that, the refurbishment for active power conditions will only apply for Pole 1, kindly confirm	Bidder's understanding is correct.
30	2.4.7.2	AC SYSTEM EQUIVALENTS The dynamic performance studies shall be carried out at the Contractor's works. For the purposes of these studies, to verify the dynamic performance of the Pole-1 and its integration into the network, and for over voltage studies the complete system may be represented by the equivalent networks (to be developed by the Contractor) based on the system data given by the Employer. Further, dynamic performance of the entire Vizag HVDC system and overvoltage studies are also to be carried out. For dynamic performance study, equivalent model of Vizag Pole-2 is to be developed by the contractor based on the data provided by the employer. The Contractor shall validate and demonstrate the suitability of the derived equivalents to the satisfaction of the Employer before commencing any studies.	Bidder understands that, as per amendment of chapter 4 , joint operation of Pole 1 & pole 2 shall be envisaged only during Pole 2 refrubishment . Hence dynamic performance stuides shall be limited for Pole 1 only. kindly confirm	T.S. Requirement is clear. Dynamic performance of the entire Vizag HVDC system and overvoltage studies are to be carried out. For dynamic performance study, equivalent model of Vizag Pole-2 is to be developed by the contractor based on the data provided by the employer. The Contractor shall validate and demonstrate the suitability of the derived equivalents to the satisfaction of the Employer before commencing any studies.
31	1.1	ii. Converter transformers bays, Line bays (Jeypore 1 & 2) along with associated Reactors and AC filter bays for Pole-1 on both East and South side	Bidder understands that Existing line bays and south bus energy meters (L&T-ER300P) to be shifted to new SPR. Kindly confirm	Bidder's understanding is correct.
32	1.1	ii. Converter transformers bays, Line bays (Jeypore 1 & 2) along with associated Reactors and AC filter bays for Pole-1 on both East and South side	Bidder requested customer to share the make & model of existing CSDs associated with CBs along-with bay locations	Relevant details shall be provided to successful bidder in case of Award.
33	1.1	ii. Converter transformers bays, Line bays (Jeypore 1 & 2) along with associated Reactors and AC filter bays for Pole-1 on both East and South side	Bidder understand that Existing Travel Wave Fault Locators and existing Phasor Measurement Unit (PMU) panel is applicable for Line bays. Existing panel shall be shifted to new SPR. Kindly confirm.	Bidder's understanding is correct.
34	1.3.1	d) All necessary studies to determine the requirements for communic at io n between HVDC station and the remote load dispatch centres at Kolkata (ERLDC) and Bangalore (SRLDC) and RTAMC Secunderabad, NTAM C Manesar and Back up NTAMC at Bangalore . The contractor's work shall be limited to the design, engineering, supply, installation, commissioning and integration of the interface equipment like serial port, modems etc. to establish the communication with remote load dispatch & remote operation centre for above locations using IEC 60870-5-104 protocol. Telecommunication link (OPGW link) through AC Lines Network shall be provided by Employer.	In-order to transfer HVDC SAS & AC SAS data to remote control centres-, Pls confirm availability of 24 nos. of Ethernet ports on 104 protocol ((Ethernet Interface 10/100 Base T Card) in existing SDH / FOTE Telecommunication Panel to interface with present scope i.e. separate AC SCADA & DC SCADA Gateways. It is requested to provide Telecom ports' details dwg.	Ethernet ports are not availbale. Same need to be considered by the bidder. Further, Telecom ports details to be provided to the successful bidder in case of award.
35	2.4.3	REACTIVE POWER CAPABILITY OF THE AC SYSTEM	In reference to Chapter 2, Figure 2.4.3.1 and Figure 2.4.3.2 both contain two separate Reactive Power Exchange Figures. There is a difference in Reactive Power exchange required in both the figures. Bidder wants to understands which requirement is applicable for this tender scope.	Figure 2.4.3.1 (Eastern System) shows Reactive Power Exchange Capability of the Eastern region transmission system at Vizag (East) bus for both Rectifier & Inverter Mode. Similarly, Figure 2.4.3.2 (Southern System) shows Reactive Power Exchange Capability of the Southern region transmission system at Vizag (South) bus for both Rectifier & Inverter Mode.

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Sr. No.	**Clause No.**	**Existing Provision**	**Clarification required**	**POWERGRID REPLY**
36	3.10.1.6	All anti friction bearings shall be guaranteed to operate successfully for a minimum of 131,000 hours	A bearing life of 131,000 hours is substantially higher than the typical bearing life specified for industrial cooler/motor applications under ISO 281 / IEC 60034-1, which generally in range from 20,000 to 25,000 hours for standard applications. Bidder regeuest to recheck this requirement & confirm.	T.S. requirements shall prevail.
37		Valve Cooling System Mandatory Spares	Bidder understand that the shared mandatory spare requirement of Valve cooling system (Annexure_VC) is for 2 Blocks instead of 1 Block. Bidder request customer to pls recheck & confirm.	Annexure_VC corresponds to present scope of supply.
38	Valve Hall	MVU repalcement	We have observed that existing VESDA system supported with Monorail structure needs to be dismantled while dismantalling of existing Valve & Installation of new Valve. Pl confirm if Dismantling and re-erection of the same by VESDA OEM needs to be considered as part of bidder's scope.	Dismantling and re-erection of the VESDA system is not envisaged in current scope of works.
39	Valve Hall	Valve Hall Monorail	Bidder request customer to please share the load capacity of the existing monorail beam.	Relevant details shall be provided to successful bidder in case of Award.
40	Control Room Building	False Floor	Bidders understand that after implementation of the SPR & new C&P system, Control room will have vacant spaces of dismantled panels,which are required to coveedr by New False Flooring. Please confirm if same needs to be considered as part of bidder's scope.	In such open spaces, necessary false flooring/ chekkered plates to be provided.
41	Converter Transformer	Repalcement of Converter Transformer Cables	Please confirm that Transformer singnals to interface panels & precommissioing support shall be arranged by OEM thru POWERGRID.	Refer Amendment no 4 S.No:5. Contractor may make suitable arrangements to bring the signals of Pole-1 to interface panel in control room. Further, Transformer singnals to interface panels, if required are under present scope of contractor.
42	4.1	The requirements for power transmission are defined in this section. The existing power levels and AC filters requirement shall not be compromised by the Contractor. In addition, wherever not specified, the various overload, reduced ambient, reduced voltage and other power transmission capabilities under the specified conditions quoted by the Contractor in his Bid shall be guaranteed by him for the equipment in scope of the supplies.	Kindly provide the existing power levels. Bidder understands that the power requirement is 1 pu, 1.1 pu and 1.2 pu. 1 pu here refers to 500 MW.	T. S. Cl. 4.1.3 is amply clear.
43	4.1.3.5	The pole shall be capable of operating at increased capability that is inherently available depending upon the ambient temperature conditions, cooling equipment availability, ac filter and shunt capacitor status, prior loading and any other relevant parameters. Feature for display of this inherent capability shall be made in the control room as specified in clause 4.7.1.4.	What is the increased capacity for the overload with the mentioned conditions.	The inherent increased capability depending upon ambient temperature conditions shall be decided by Bidder during detailed engineering.
44	4.4.3.1	The converter equipment shall be designed for temporary overvoltages which are not less than 1.5 times 420 kV on both Southern & Eastern sides of 400 kV ac busbars with converters blocked and also for deblocking from this condition. The converter equipment shall be designed for temporary overvoltages which are not less than 1.2 times the ac system pre disturbance voltage (which can be up to 440 kV) for not less than 5 seconds following de blocking with the converters deblocked. The Contractor shall undertake to confirm during final design studies that the temporary overvoltage factor of 1.2 is adequate and if not to adjust design accordingly at his own cost.	The bidder understands that the equipment shall be designed for temporary overvoltages upto 1.5 times(600 kV) of the nominal AC voltage(400 kV) and this understanding is line with the requirement in Clause 4.2.4 of this document. Kindly confirm the same.	Bidder's understanding is correct. However, The actual temporary overvoltage shall be determined by the Contractor but equipment shall be designed for temporary overvoltages not less than the values given in Clause 4.4.3.1.