भारत हेवी इलेक्ट्रिकल्स लिमिटेड
Bharat Heavy Electricals Limited
पारेषण व्यापार समूह, नोएडा/ TBG, Noida
सामग्री प्रबंधन / Material Management
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Corrigendum no. 03 Date 15.11.2023
Due date extension of tender and Pre bid clarifications

1. Project : Vishnugad Pipalkoti Hydro Electric Project (4X111 MW)
2. **Equipment / Item** : 400 kV XLPE Cable & accessories
3. **Enquiry No. / Date** : 92G2400174 Date 15.09.2023
4. **NIT No. / Date on BHEL** : NIT_76941
5. **Enquiry addressed to (Names) :** OPEN TENDER [Through NIC Portal]

With reference to the above, Following clarifications/ Amendment in NIT may please be noted: -

(1) Due date & time for tender submission and technical bid opening are extended as below:

Tender submission date & time: From 15.11.2023: 11.00 Hrs to 30.11.2023: 11.00 Hrs

Technical bid opening date & time: From 15.11.2023; 16.00 Hrs to 30.11.2023; 16.00 Hrs

(2) Pre bid clarifications – As per Annexure- Technical and Commercial Clarifications**.**
(3) Activity Schedule- As per attachment

- All other terms & conditions of the tender specifications remain unchanged.

Piyush Kumar Mishra
Manager / TBMM

ANNEXURE- BIDDERS' PRE-BID TECHNICAL CLARIFICATIONS				
Tender Enquiry/ NIT No:	92G2400174 dated 15.09.2023/ 92G2400174			
Item/ Material:	400kV XLPE Cable & accessories			
Project:	400kV GIS Project for Vishnugad Pipalkoti Hydro Electric Project (4x111MW)			
SL. NO.	**DOCUMENT NO./ CLAUSE NO./ PAGE NO.**	**DESCRIPTION OF TS CLAUSE**	**BIDDER'S CLARIFICATIONS**	**CUSTOMER/ CONSULTANT/ BHEL REPLIES/ CONFIRMATIONS**
I. Bidder 1				
1	Doc No. TB-382-316-005 REV 00, TB-382-316-058 REV 05, and Section-11	In Tender Document , There are 3 identical Tech spec : for 400 kV XLPE Cable & Its Accessories with different DOC No B-382-316-005 REV 00, TB-382-316-058 REV 05 & Section-11 TS- 400 kV XLPE Cables are attached.	Kindly Clarify the TS to be followed for 400 kV XLPE Cable & Its Accessories.	Please refer clause 1.0, section-1 of TS (Doc No. TB-382-316-005 Rev 00) for order of priority/ precedence of documents.
2	Doc No. TB-382-316-005 REV 00, Clause no. 11.10.3.2, Section-11: Customer TS for 400kV XLPE Cables	The complete type test certificates and data sheets for cables and accessories shall be furnished by the bidder along with the bid. If the test conducted are not to be satisfaction of the Purchaser ,the tests shall be reconducted by the supplier at his own expenses.	Type Test report of Higher Size shall be submitted at the time of Bid submission as per IEC 62067 as applicable to offered cable	To be complied with Technical Specification in line with IEC Standard.
3	Doc No. TB-382-316-005 REV 00 Clause no. 11.9.1 (S.No: XV-e), Section-11: Customer TS for 400kV XLPE Cables	Maximum resistance of conductor at 20 deg C: 0.0224 ohms/km	Please note that the Maximum cond. Resistance of conductor 0.0224 ohms/km is for metal coated copper conductor. But as per specification conductor is un-coated copper i.e. plain annealed copper. Therefore, max. condcutor resistance shall be 0.0221 ohms/km as per IEC: 60228 Table No: 2. So, kindly correct the cond. resistance of conductor from 0.0224 ohms/km to 0.0221 ohms/km.	Noted in line with Applicable IEC.
4	Doc No. TB-382-316-005 REV 00 Clause no. 11.7.1.6, Section-11: Customer TS for 400kV XLPE Cables Doc No. TB-382-316-005 REV 00 (S.No: XVI-a), Section-11: Customer TS for 400kV XLPE Cables	Inner sheath: Cable inner sheath shall consist of extruded and corrugated aluminum /laminated aluminum tape / lead in accordance with relevant IEC or equivalent standards.	It is to be submitted that inner sheath of EHV cables are being manufactured extrusion as well as seam welding methods, and both the techniques/ methods are prevalent in the cable manufacturing industry. Hence, it is requested to kindly ammend the line as **Extruded / seam welded corrugated aluminium sheath or laminated aluminium sheath**	Short circuit design requirement is to be complied.
5	Doc No. TB-382-316-005 REV 00 Clause no. 11.10.2, Section-11: Customer TS for 400kV XLPE Cables	Inner sheath: Cable Inner sheath shall consist of extruded and corrugated aluminum /laminated aluminum tape / lead in accordance with relevant IEC or equivalent standards.	Kindly amend the line as Extruded / seam welded corrugated aluminium sheath or laminated aluminium sheath Therefore, kindly replace **Extruded** with **Extruded/ Seam welded.**	Short circuit design requirement is to be complied.
6	Doc No. TB-382-316-005 REV 00 Clause no. 11.10.2, Section-11: Customer TS for 400kV XLPE Cables	Sample Tests-As per IEC 62067 The following routine tests shall be conducted on samples of manufactured cables and on components of accessories in order to verify that the finished products meet the requirements of specifications. Test under item b) & g) shall be performed on complete lengths of cable.	Word "component" must be deleted as bidder is concerned with cable only.	Please comply TS & BOQ (Doc No. TB-382-316-005 Rev 00).
7	Doc No. TB-382-316-005 REV 00 Clause no. 11.10.2 (h), Section-11: Customer TS for 400kV XLPE Cables	Sample Tests-As per IEC 62067 The following routine tests shall be conducted on samples of manufactured cables and on components of accessories in order to verify that the finished products meet the requirements of specifications. Test under item b) & g) shall be performed on complete lengths of cable. h) Water Penetration test	Kindly note that water penetration test shall be examined on "one sample per contract for quantity greater than 4km & upto 20 km and 2 samples for quantity greater than 20 km."	Please comply TS & BOQ (Doc No. TB-382-316-005 Rev 00).
8	Doc No. TB-382-316-005 REV 00 Clause no. 11.10.4, Section-11: Customer TS for 400kV XLPE Cables	Type Tests on High Voltage XLPE Power Cables & Accessories : a) Oil Resistance test on Outer sheath b) Measurement of hardness of Outer sheath c) Abration test on Outer sheath d)Insulation Shrinkage Test e) Annealing test (For copper)	Valid type test and PQ test as per IEC: 62067 shall be submitted along with the bid as applicable to offered cable . However Following Tests are not applicable as per IEC 62067 So kindly delete these tests : a) Oil Resistance test on Outer sheath b) Measurement of hardness of Outer sheath c) Abration test on Outer sheath d)Insulation Shrinkage Test e) Annealing test (For copper) after stranding	Please comply TS & BOQ (Doc No. TB-382-316-005 Rev 00). however, details shall be finalized during detailed engineering stage as per project
9	Doc No. TB-382-316-005 REV 00 Clause no. 11.10.5, Section-11: Customer TS for 400kV XLPE Cables	**Site Tests** Following tests shall be conducted after laying of cables and installation of accessories in accordance with relevant IEC or equivalent standards: a) High voltage AC and DC withstand tests b) Partial discharge measurement test	Must be deleted a) High voltage AC withstand tests Since not applicable as per IEC: 62067 and also no testing facility in India is available High volatge shall be performed at U0 as soak test for which voltage shall be provided by BHEL. **b) Partial discharge measurement test** No any testing facility in India is available for Partial discharge measurement test at site .Also no any Test procedure and specfied /reference value at site is mentioned as per IEC 62067. It will be performed as Routine & Acceptance test at works only .So kindly delete the test.	Please comply TS & BOQ (Doc No. TB-382-316-005 Rev 00). however, details shall be finalized during detailed engineering stage as per project

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10	Doc No. TB-382-316-005 REV 00 Clause no. 11.10.6, Section-11: Customer TS for 400kV XLPE Cables	**Test for Loss Measurement** Test to measure losses in conductor and insulation / metallic sheath of XLPE power cables of main run shall be carried out by supplier in the presence of purchaser's representative to prove that actual measured losses during testing at works / site are within guaranteed values specified in GTP. Bidder shall furnish methodology of carrying out loss measurement in his bid. If the actual losses during testing exceed the guaranteed values of losses, the supplier shall pay the penalty to the purchaser at the rates as indicated in these specifications.	Please note that Losses shall be determined in the factory by showing the empirical formula calculations as per IEC: 60287.	Losses shall be determined based on the measured values of AC/ DC resistance in line with relevant IEC.
11	BOQ1: Item Sl No 1.11 (BoQ Item No. A.11) - CONSUMABLES	SUPPLY - HIGH VOLTAGE POWER CABLE : CONSUMABLES WITH LIMITED SHELF LIFE SUITABLE/COMPATIBLE FOR CABLE SYSTEM	Since the XLPE Cable system is a maintanance free system hence we do not recomend consumables for cable system	Please comply TS & BOQ (Doc No. TB-382-316-005 Rev 00), however, details shall be finalized during detailed engineering stage as per project requirement.
12	BOQ1: Item Sl No 1.12 (BoQ Item No. A.12) - TOOLS, TACKLES & EQUIPMENT	SUPPLY - HIGH VOLTAGE POWER CABLE : TOOLS, TACKLES & EQUIPMENT REQUIRED FOR OPERATION AND MAINTENANCE OF XLPE CABLE SYSTEM	Since the XLPE Cable system is a maintanance fee system so we do not recomend any Tools, Tackles & Equipment for Operation and Maintenance.	Please comply TS & BOQ (Doc No. TB-382-316-005 Rev 00), however, details shall be finalized during detailed engineering stage as per project requirement.
13	BOQ1: Item Sl No 1.13 (BoQ Item No. A.13) - HAND TOOLS AND RACK	SUPPLY - HIGH VOLTAGE POWER CABLE: HAND TOOLS ALONG WITH RACK	As per our understanding there is no requirement of hand tools along with Rack for XLPE Cable System, hence we donot recomend any Hand Tool along with Rack	Please comply TS & BOQ (Doc No. TB-382-316-005 Rev 00), however, details shall be finalized during detailed engineering stage as per project requirement.
II. Bidder 2				
1	Doc No. TB-382-316-005 Rev 00 SECTION - 1, Clause no.3, Specific Technical Requirements, Sl.19 (Page 6 of 18)	Sl. No. 19. Maximum resistance of conductor at 20 deg C - 0.0224 Ω/km	As per Sl. No. 19. required value of resistance at 20 deg C is 0.0224 Ω/km. This resistance is for metal coated annealed copper wires as per IEC 60228. As per Design basis report clause no. 7.0 a) & SECTION - 11, Clause no. 11.7.1.1 the requirement is of uncoated annealed copper wires. Generally for EHV cables, uncoated (i.e. Plain) annealed copper wires are used for conductor, therefore the Maximum resistance of conductor at 20 deg C is	Noted in line with Applicable IEC.
2	Doc No. TB-382-316-058 Rev 05 DESIGN BASIS REPORT, Clause no.4.0, CABLES PARAMETERS, Sl. No.19	Sl. No. 19. Maximum resistance of conductor at 20 deg C - 0.0224 Ω/km		
3	Doc No. TB-382-316-058 Rev 05 DESIGN BASIS REPORT, Clause no.7.0 a), Conductor	Sl. No. 19. Maximum resistance of conductor at 20 deg C - 0.0224 Ω/km		
4	Clause no. 11.7.1.1: Conductor, Section-11: Customer TS for 400kV XLPE Cables	11.7.1.1 Gonductor: Conductor shall consist of uncoated annealed copper wires in accordance with IEC 60228	Please note that as per Table-2 of IEC 60228, the shape of conductor shall be compacted circular upto and including 1000 Sqmm and segmented circular from 1200 Sqmm and accordingly conductor for 800 Sqmm shall be compacted circular. Please confirm.	Noted as per IEC 60228 standard and in line with the Technical Specification.
5	Clause no. 11.7.1.3: Insulation, ii), Section-11: Customer TS for 400kV XLPE Cables	11.7.1.3 Insulation ii) Electrical stress shall not exceed 75 kV/mm under impulse withstand test at 1425 KV peak.	Required electrical stress value at impulse i.e. 75 kV/mm is very less and to meet this stress value very a high thickness of Insulation is required which is not feasible to extrude. Request to review this requirement of Electrical stress & amend the caluse accordingly.	Electrical Stress specified in clause 11.7.1.3 (ii) shall be considered for designing of cable (i.e.) Electrical Stress shall not exceed 75KV/mm under impulse withstand test at 1425 KV
6	Clause no. 11.10.1: Routine Tests, a) & b), Section-11: Customer TS for 400kV XLPE Cables	11.10.1 Routine Tests a) Check of dimensions b) Conductor resistance test	Please note that, the tests sr, no. a) & b) are applicable as Sample/ Acceptance tests & not routine tests.	Please comply TS & BOQ (Doc No. TB-382-316-005 Rev 00), however, details shall be finalized during detailed engineering stage as per project requirement.
7	Section-11: Customer TS for 400kV XLPE Cables	11.7.2.1 Cable Termination / sealing ends b) SF6 Indoor Termination / Sealing End The housing of the SF6 indoor termination / sealing end shall be of porcelain / epoxy resin insulator type suitable for use with SF6 gas.....	Please clarify which type GIS termination is necessary (Dry type or Fluid filled type)	Please comply TS & BOQ (Doc No. TB-382-316-005 Rev 00), however, details shall be finalized during detailed engineering stage as per project and GIS OEM requirement.
8	BOQ1: Item Sl. No 1.11	Supply- Consumables with limited shelf life suitable/compatible for cable system	Kindly confirm/provide list of consumables required.	Please comply TS & BOQ (Doc No. TB-382-316-005 Rev 00), however, details shall be finalized during detailed engineering stage as per project requirement.
9	BOQ1: Item Sl. No 1.13	Supply- Hand Tools along with rack	Kindly confirm/provide list of tools required.	Please comply TS & BOQ (Doc No. TB-382-316-005 Rev 00), however, details shall be finalized during detailed engineering stage as per project requirement.
III. Bidder 3				

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1	Doc No. TB-382-316-005 Rev 00 SECTION - 1, Clause no.3, Specific Technical Requirements	35. Sheath voltage: Sheath voltage to ground under normal operating condition shall not exceed 65V 38. Screen earthing method: Single point bonding	As per tender document you shared to us, Required Sheath Induced Voltage value should be less than 65V. The cable length is 4200m and we have calculated route length as 600m reflecting spare cable. In that case, sheath induced voltage is 79.4V which is more than required value. This value has calculated under the condition of Single point bonding without middle jointing based on BOQ. For this issue, we kindly ask 3 options for you to choose one and after that, please let us know. 1. Form the route as single point bonding system without middle jointing neglecting sheath induced voltage. Of course, this option is dangerous and has high possibility of arguing with customers because sheath induced voltage is too high (79.4V). I do not recommend this option. 2. Form the route as single point bonding system including Jointing 6 sets for reducing sheath induced volage. In that case, sheath induced voltage is 39.4V. However, the price of supply and installation of middle jointing should be added so the total price would be increased. 3. Form the route as both end bonding system instead of single point bonding. I would like to recommend this option because this electrical system doesn't need ECC and could select Linkbox without SVL (LBE 3-1 way type) on gas insulated switchgear sealing end side. Under this system, the Continuous Current rating value is 1092A and sheath induced voltage is 39.4V so that these values meet the requirements.	Please comply TS & BOQ (Doc No. TB-382-316-005 Rev 00), however, details shall be finalized during detailed engineering stage as per project requirement.
IV. Bidder 4				
1	Doc. No. TB-382-316-058, REV 05 Clause No. 4.0 Cables Parameters Sl. No. 17 & Clause No.11.7.1.1 , Section-11: Customer TS for 400kV XLPE Cables	Clause 4.0 Sl. No. 17 stipulates shape of conductor as "stranded circular single/ segmented circular" & Clause 11.7.1.1 specifies conductor shape as "compacted or segmented circular".	Please note that as per Table-2 of IEC 60228, the shape of conductor shall be compacted circular upto and including 1000 Sqmm and segmented circular from 1200 Sqmm and accordingly conductor for 800 Sqmm shall be compacted circular. Please confirm.	Noted as per IEC 60228 standard and in line with the Technical Specification.
2	Doc. No. TB-382-316-058, REV 05 Clause No. 4.0 Cables Parameters Sl. No. 20 & Clause No. 11.7.1.6, Section-11: Customer TS for 400kV XLPE Cables	Clause 4.0 Sl. No. 20 stipulates Metallic sheath (i.e. Inner sheath material) as "Extruded corrugated aluminium/ Laminated Aluminium tape" & Clause 11.7.1.6 stipulates that "cable inner sheath shall consist of extruded and corrugated aluminium/ laminated aluminium tape/ lead".	Please clarify whether the Metallic sheath shall be of corrugated aluminium sheath type OR laminated aluminium tape OR lead sheath type as additional copper wires are required for carrying the earth fault current of 40kA for 1 second in case of Laminated aluminium tape type and lead sheath type metallic sheath.	Please comply TS & BOQ (Doc No. TB-382-316-005 Rev 00) in line with applicable IEC duly meeting the requirement of earth fault current of 40kA for 1 second.
3	Doc. No. TB-382-316-058, REV 05 Clause No. 4.0 Cables Parameters Sl. No. 30 & Clause No. 11.7.1.2, 11.7.1.3 (ii) & 11.7.1.4, Section-11: Customer TS for 400kV XLPE Cables	Clause 4.0 Sl. No. 30, Clause 11.7.1.2 & 11.7.1.4 states that Electrical stress on internal semiconducting layer shall not be more than 16kV/mm & Electrical stress on outer semiconducting layer shall not be more than 7kV/mm and Clause 11.7.1.3 (ii) specifies that Electrical stress shall not exceed 75kV/mm under impulse withstand test at 1425kV for insulation.	Please note that two different electrical stresses have been specified in the Technical Specification i.e., Clause 4.0 Sl. No.30, Clause 11.7.1.2 & 11.7.1.4 stipulates that the Electrical stress on internal semiconducting layer shall not be more than 16kV/mm & Electrical stress on outer semiconducting layer shall not be more than 7kV/mm whereas Clause 11.7.1.3 (ii) specifies that the Electrical stress shall not exceed 75kV/mm under impulse withstand test at 1425kV. Please confirm which electrical stress is to be considered for designing the cable.	Electrical Stress specified in Clause 11.7.1.3(ii) shall be considered for designing of cable (i.e.) Electrical Stress shall not exceed 75KV/mm under impulse withstand test at 1425 KV
4	Annexure-1 Page 1 of 2	Annexure-1 Page 1 of 2 sectional view of ventilated cable tunnel	Please clarify the tunnel dimension i.e., Height of tunnel & Width of tunnel for calculating the current rating.	Please refer the drawings attached with TS.
5	BOQ Sl. No. 1.04, 1.05, 1.15 & 1.16	Supply-High Voltage Power Cable: Indoor/Outdoor Termination Kit	The desscription of all these Line Items states the Termination as Indoor/ Outdoor. Please note that Indoor & Outdoor Terminations are two different entities having different design and price, hence, for clarity, plesae specifically stipulate the type of Termination required against all these Line Items.	Please refer the long description of BOQ of TS (Doc No. TB-382-316-005 Rev 00). BOQ Sl. No. 1.04 is termination kit for GIS whereas Sl. No. 1.05 is termination for Pothead yard sealing end, whereas item no. 1.15 & 1.16 is its service item respectively.
6	BOQ Sl. No. 1.11	Supply- high voltage power cable : Consumables with limited shelf life suitable/compatible for cable system	Please note that consumables are supplied along with the Joints & Terminations. These materials are not supplied separately, hence, please delete this line item from the BOQ.	Please comply TS & BOQ (Doc No. TB-382-316-005 Rev 00), however, details shall be finalized during detailed engineering stage as per project requirement.
7	BOQ Sl. No. 1.12	Supply- high voltage power cable: tools, tackles & equipment required for operation and maintenance of xlpe cable system	Please delete this line item as no special tools, tackles & equipments are required for operation and maintenance of the installed cable system.	Please comply TS & BOQ (Doc No. TB-382-316-005 Rev 00), however, details shall be finalized during detailed engineering stage as per project requirement.
8	BOQ Sl. No. 1.13	Supply- high voltage power cable: hand tools along with rack	Please delete this line item or elaborate what & which type of hand tool is required?	Please comply TS & BOQ (Doc No. TB-382-316-005 Rev 00), however, details shall be finalized during detailed engineering stage as per project requirement.

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9	BOQ Sl. No. 1.20	Spares- high voltage power cable: any other item not listed above but are required for completeness of installation & commissioning of system	We do not envisage any additional spares, hence, please delete this line item or elaborate what & which type of spare is required?	Please comply TS & BOQ (Doc No. TB-382-316-005 Rev 00), however, details shall be finalized during detailed engineering stage as per project requirement.
10	BOQ Sl. No. 2.09	Jointing of 400kV straight through joint	The requirement is of installation of Joint whereas it has been elaborated as Termination work. Please correct the same.	Please refer BOQ item no. B.3 of TS (Doc No. TB-382-316-005 Rev 00), wherein Straight throgh joint is part of spares, accordingly, any requirement of service shall be treated under mentioned item.
11	Doc. No. TB-382-316-005 Rev 00, page 8 of 18	Bidder shall submit detailed calculation of altitude correction factor during detailed engineering stage…..	Please let us know the altitude of the place where the Termination is to be installed.	Please refer the drawings attached with TS (Altitute of Pothead yard is EL1101.1, at which oudoor sealing end shall be fixed on structure.
12	Doc. No. TB-382-316-005 REV 05, page 8 of 14	Clause No. 6.0 Guaranteed Power Losses in Cable	This Clause states that the penalty shall be levied/ recovered at the rate of INR 1,50,000/KW whereas Claause No. 11.6.3 states that penalty for losses will be recovered from the supplier at the rate of INR 3,80,000 per KW. Please confirm the correct rate for loss capitalization.	Please refer clause 9.0, section-1 of TS (Doc No. TB-382-316-005 Rev 00).
13	General		Please confirm that supply & erection of Outdoor Termination Steel mounting structure along with construction of its civil foundation is not in bidder's scope.	Noted in line with TS & BOQ (Doc No. TB-382-316-005 Rev 00).
14	General		Please confirm whether the GIS Termination to be supplied is of dry type OR oil filled type.	Please comply TS & BOQ (Doc No. TB-382-316-005 Rev 00), however, details shall be finalized during detailed engineering stage as per project and GIS OEM requirement.
15	General		Please provide Cable Head Box drawing of GIS to select the suitable Terminations for the project.	Please comply TS & BOQ (Doc No. TB-382-316-005 Rev 00) along with applicable IEC.
16	General		Please confirm that BHEL would obtain the Right-of-Way (RoW) permission and make payment for the same directly to the concerned authorities.	The cable route is well within the project premises, hence there is no requirement of Right-of-Way (RoW).
V. Bidder 5				
1	Doc. No. TB-382-316-005 Rev 00 Section-1, Clause No. 3.1 : Specific Technical Requirements, Clause 11.9, Section-11: Customer TS for 400kV XLPE Cables	Type of cable: 400kV, 1Cx800sqmm copper equivalent cross sectional area conductor, extruded crosslinked polyethylene (XLPE) insulated & corrugated aluminium/ laminated aluminium tape sheathed and flame retardant PVC/ PE/ HDPE outer sheathed cable suitable for indoor/ outdoor installation (natural air ventilated cable tunnel, underground GIS hall and pothead yard).	The metal sheath is mentioned as: Corrugated aluminium / Laminated aluminium tape. As this has a cost implication, request confirmation whether to offer Corrugated aluminium/ Laminated aluminium tape.	Please comply TS & BOQ (Doc No. TB-382-316-005 Rev 00).
2	Doc. No. TB-382-316-005 Rev 00 Section-1, Clause No. 3.20 : Specific Technical Requirements Clause 11.9, Section-11: Customer TS for 400kV XLPE Cables	Metallic sheath (i.e. Inner sheath material): Extruded corrugated aluminium/ laminated aluminium tape	In order not to limit the bidding, request clarification/ amendment to this as: Existing: Extruded corrugated aluminium / laminated aluminium tape To be amended as: Extruded/ Seam Welded Corrugated Aluminium OR Laminated aluminium tape/ Seam Welded Smooth Aluminium Tape.	Kindly comply the short circuit design requirement as per technical specification.
3	Doc. No. TB-382-316-005 Rev 00 Section-1, Clause No. 3.20 : Specific Technical Requirements- Notes Page 6 of 18 Clause 11.12.2, Section-11: Customer TS for 400kV XLPE Cables	Notes: 3. Further to above, bidder shall also submit the following design calculations, (iii) Typical graph showing the voltage gradient along the radii of conductor and insulation for 1000A continuous current at different power factor between 0.9 (over-excited) to 0.9 (under excited).	Request re-confirmation on 0.9 (under excited) i.e. can we read it as : 0.7 (under excited) or not.	Please comply TS & BOQ (Doc No. TB-382-316-005 Rev 00) along with applicable IEC.
4	Doc. No. TB-382-316-005 Rev 00 Section-1, Clause No. 4.00 : Specific Technical Requirements- Notes Page 6 of 18	5. Construction supply: For construction requirements, the necessary power supply at site shall be provided by BHEL at one point only, however supply requirements for HV AC/ DC testing etc. shall be arranged by bidder only. Power supply provided shall be on chargeable basis. 9. Site Testing & Commissioning Testing instruments/ kits including HV AC/ DC testing kit and partial discharge measurement equipment for field test, if required shall be provided by bidder along with valid calibration certificate.	In respect of the following seek BHEL specific clarification since it has the cost implication. "However, supply arrangements for HV AC / DC testing etc. shall be arranged by bidder only." Here, it guides as "if required". Request specific confirmation whether this is to be considered in the bid prices or not.	Please comply TS & BOQ (Doc No. TB-382-316-005 Rev 00).
5	Doc. No. TB-382-316-005 Rev 00 Section-1, Clause No. 4.00 : Specific Technical Requirements- Notes	12. Basic Arrangement: a) The two nos. 400kV outgoing GIS line feeder bays located at EL 1046 shall be connected to 400kV pothead yard located at EL 1100.39 by 1Cx800sqmm Copper conductor XLPE cable per phase running inside the cable tunnel. b) Spare 1Cx800sqmm Copper conductor XLPE cable shall run between two nos. GIS line feeders and pothead yard. Spare cables shall be placed on GIS floor with end cap without termination at GIS end and on ground with end cap without termination at pothead yard end. Spare cable shall be kept beyond the farthest end at both side, so that it may be connected to any phase whenever required as per future requirements.	It is indicated that the spare cable shall run between two nos. GIS line feeders and pothead yard. Since this will not facilitate connection to any phase whenever required, Request correction / clarification as: Spare cable shall run after two nos of GIS Line feeders and pothead yard to facilitate connection to any phase whenever required.	Please comply TS & BOQ (Doc No. TB-382-316-005 Rev 00). However, final details shall be finalized during detailed engineering stage as per project requirement.

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6	Doc. No. TB-382-316-005 Rev 00 Section-1, Clause No. 5.00 : Bill of Quantities	2. Bidder may please be noted that the exact cable length shall be decided after joint route survey during site visit and making precise measurements at contract stage. Manufacturing cable cut length and drum length shall be determined with consultation & approval with BHEL/ Customer/ Consultant. a. The Payment of cables length for supply shall be as per approved quantities by BHEL/ Customer/ consultant. b. The Payment of cables length installation will be as per actual measurement at site which shall also include cable terminations.	Since the cables in some specific drum lengths as per approval shall only be brought/ supplied in exact quantities required for the project, and the same shall be fully installed after duly effecting "Technical Cuts" which are mandatory, as such there will be no lengths stands un-installed. Therefore, it is requested for correction as: "The Payment of cables length installation will be for the full lengths approved supplied lengths" which when duly reconciles with the technical cuts lengths."	Please comply TS & BOQ (Doc No. TB-382-316-005 Rev 00).
7	Doc. No. TB-382-316-005 Rev 00 Section-1, Clause No. 7.00 : Type Testing	d) Cable bending test followed by installation accessories and partial discharge test at ambient temperature.	This appears to be a typographical error. Hence, request correction as: "Cable bending test and partial discharge test at ambient temperature followed by installation of accessories at ambient temp."	Noted in line with Applicable IEC.
8	Doc. No. TB-382-316-005 Rev 00 Section-1, Clause No. 8.00 : Quality Plan	Superior quality control system shall be adopted to assure high product quality. Raw materials of the best commercial grade quality and high reliability shall be used in the manufacture of the equipment (400kV XLPE Cable & its Accessories). All materials shall be procured, manufactured, inspected and tested by vendor/ sub-vendor as per approved quality plan. The supplier shall perform all tests necessary to ensure that the material and workmanship conform to the relevant standards and comply with the requirements of the specification. Charges for all tests for the equipment (400kV XLPE Cable & its Accessories) shall be deemed to be included in bidder's scope.	In order to leave no stone un-turned, this may please be indicated as: The same grade of raw materials which were declared in the successful "Type Test Report" are only required to be procured and used in the manufacture of the equipment.	Please comply TS & BOQ (Doc No. TB-382-316-005 Rev 00).
9	Doc. No. TB-382-316-005 Rev 00 Section-1, ANNEXURE 1- BOQ for 400kV XLPE Cable & its Accessories	A.2: Bonding cable along with accessories A.3: Earthing continuity cable along with accessories	Please confirm that for the bidding purpose, can we consider 6.6 kV (UE) 300 sqmm for Bonding cable and 1.1 kV 300 sqmm for ECC cable or not. If no, please specify the size and voltage grade.	Please comply TS & BOQ (Doc No. TB-382-316-005 Rev 00). However, final details shall be finalized during detailed engineering stage as per project requirement in line with applicable IECs.
10	Doc. No. TB-382-316-005 Rev 00 Section-1, ANNEXURE 1- BOQ for 400kV XLPE Cable & its Accessories	C.9: Service Item: Cable Accessories- Jointing of 400kV, Straight Through Jointing kit, compatible for 400kV, 1Cx800sqmm, Copper Conductor XLPE cable, Jointing of Straight Through Jointing kit shall be complete in all respect and comprising of following but not limited to, 1. Termination work shall include all necessary arranngement for access and working such as temporary tent with controlled climate etc. 2. Termination/ jointing of cables shall be done by skilled and experienced jointer duly certified by OEM and approved by BHEL/ consultant/ customer. 3. Any other service/(s) required to complete the work in all respect but not limited to above shall be in bidder's scope. 4. This is optional item and it shall be done at site as per requirement. (1 set= 1-phase termination work)	Since no corresponding item is required for supply, please confirm whether the rate for this item be mentioned or request deletion of this item. Please clarify.	Please refer BOQ item no. B.3 of TS (Doc No. TB-382-316-005 Rev 00), wherein Straight throgh joint is part of spares, accordingly, any requirement of service shall be treated under mentioned item.
11	Doc. No. TB-382-316-005 Rev 00 Section-2, Doc. No. TB-382-31 6-058, REV 05 Clause 4.00: Cable Parameters	Note: 2. Altitude correction factor will be applied for outdoor termination and outdoor pothead equipment.	Request confirmation on the correctness of this factor when consider the same as 0.89 is in order or not.	Please comply TS & BOQ (Doc No. TB-382-316-005 Rev 00). However, final details shall be finalized during detailed engineering stage as per project requirement in line with applicable IECs.
12	Doc. No. TB-382-316-005 Rev 00 Section-2, Doc. No. TB-382-31 6-058, REV 05 Clause 5.00: General Design Aspects	g) Pre-commissioning testing shall be performed on the spare 420kV(Um) XLPE cable also by connecting it to any one of the outgoing GIS feeder bays or any other suitable method.	Since the spare cable is left without terminations, carrying out the No-load commissioning test is not possible. Only DC sheath test and insulation resistance test can be carried out which please confirm is in order or not.	Please comply TS & BOQ (Doc No. TB-382-316-005 Rev 00). However, final details shall be finalized during detailed engineering stage as per project requirement in line with applicable IECs.
13	Doc. No. TB-382-316-005 Rev 00 Section-2, Doc. No. TB-382-31 6-058, REV 05 Clause 5.00: General Design Aspects	l) Linear heat sensor (LHS) for cable shall be provided based on zonal fire protection of 420kV(Um) XLPE cable running inside the tunnel. The design and supply of LHS cable for fire protection of tunnel shall be taken care byy BHEL, PE&SD Hyderabad unit. Cable clamps suitable for flat formation for fixing on cable rack assembly of 420kV(Um) XIPE cable shall be provided.	Please provide the details of LHS cable and quantity for selection of Cable clamps etc. which has a cost implication. Also confirm whether commissioning this LHS Cable system is in the bidder scope or not.	Please comply TS & BOQ (Doc No. TB-382-316-005 Rev 00).Such requirements are not covered under bidder's scope.
14	Doc. No. TB-382-316-005 Rev 00 Section-2, Doc. No. TB-382-31 6-058, REV 05 Clause 5.00: General Design Aspects	h) Outdoor Sealing End Termination: Outdoor sealing end shall be pre-molded type. The housing of the outdoor sealing end shall be porcelain/ epoxy resin of uniform quality and shall have sufficient strength against mechanical, electrical and thermal stresses. The colour of porcelain / epoxy resin insulator shall be brown and the minimum creepage distance in millimeters per unit of the highest voltage shall be minimum 25mm/ kV. The outdoor sealing end shall be insulated from the supporting structures.	Please confirm whether the housing be porcelain (Brown colour) or epoxy (Grey colour) is to be considered since there is a considerable cost implication.	Please comply TS & BOQ (Doc No. TB-382-316-005 Rev 00), however, details shall be finalized during detailed engineering stage as per project and GIS OEM requirement.

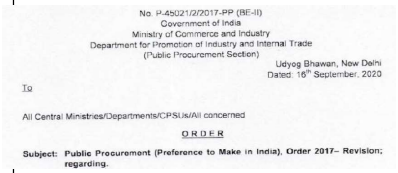
SL. NO.	DOCUMENT NO./ CLAUSE NO./ PAGE NO.	DESCRIPTION OF TS CLAUSE	BIDDER'S CLARIFICATIONS	CUSTOMER/ CONSULTANT/ BHEL REPLIES/ CONFIRMATIONS
15	Doc. No. TB-382-316-005 Rev 00 Section-2, Doc. No. TB-382-31 6-058, REV 05 Clause 5.00: General Design Aspects	i) SF6 Indoor Termination / Sealing End: Indoor sealing end shall be pre-fabricated type. The housing of the SF6 indoor termination/ sealing end shall be of porcelain/ epoxy resin insulator type suitable for use with SF6 gas and shall have sufficient strength against mechanical, electrical and thermal stresses.	The Indoor sealing end shall be Pre-moulded type and shall have only epoxy resin insulator. Please confirm the same is in order for offering.	Please comply TS & BOQ (Doc No. TB-382-316-005 Rev 00), however, details shall be finalized during detailed engineering stage as per project and GIS OEM requirement.
16	Doc. No. TB-382-316-005 Rev 00 Section-2, Doc. No. TB-382-31 6-058, REV 05 Clause 5.00: General Design Aspects	l) Termination/ Sealing End Supporting Structure: Supporting structure for outdoor termination/ sealing end shall consist of galvanized steel members. The supporting structure shall be supplied complete in all respect with necessary embedment, hardware, earthing material etc. The zinc coating shall be uniform, clean, smooth and free from spangle as possible. The zinc coating shall weigh not less than 0.61 Kg/sqm over the area covered and not less than 0.09 mm in thickness.	However, as per, *12. Exceptions* *1. Cable support structure for Cable sealing end shall not be in bidder's scope. It shall be supplied and erected by BHEL/ its contractor.* It appears to be not in the bidder`s scope. Please re-confirm the same.	Please comply TS & BOQ (Doc No. TB-382-316-005 Rev 00). However, final details shall be finalized during detailed engineering stage as per project requirement in line with applicable IECs.
17	Doc. No. TB-382-316-005 Rev 00 Section-2, Doc. No. TB-382-31 6-058, REV 05 Clause 8.4: General/ speciat tools & tackles, testing instruments required for erection, testing & Gommissioning Operation & Maintenance	Note: 1. Size of bonding cable shall be intimated after ordering of cables.	Please confirm for the bidding purpose, can we consider 300 sq.mm size or not?	Please comply TS & BOQ (Doc No. TB-382-316-005 Rev 00). However, final details shall be finalized during detailed engineering stage as per project requirement in line with applicable IECs.
18	Doc. No. TB-382-316-005 Rev 00 Section-2, Section-11: Customer TS for 400kV XLPE Cables	11.5.1.11: Spare cable shall be laid in the tunnel and its outdoor termination end shall be installed at site and will be connected to the spare ACSR bare conductor bus provided in the pothead yard during erection. The indoor end of the spare cable shall also be connected with the SF6 indoor terminal. All the commissioning tests will be performed on the spare cable also by connecting it to any one of the outgoing GIS feeder bays. However the GIS end terminal of the spare cable alongwith the assembled SF6 bushing shall be kept beyond the farthest end of outgoing GIS feeder bay in the GIS hall cavern so as to take this end to any of the GIS outgoing feeder bay connection whenever required.	However, as referred below, *12. Basic Arrangement* *a) The two nos. 400kV outgoing GIS line feeder bays located at EL 1046 shall be connected to 400kV pothead yard located at EL 1100.39 by 1Cx800sqmm Copper conductor XLPE cable per phase running inside the cable tunnel.* *b) Spare 1Cx800sqmm Copper conductor XLPE cable shall run between two nos. GIS line feeders and pothead yard. Spare cables shall be placed on GIS floor with end cap without termination at GIS end and on ground with end cap without termination at pothead yard end. Spare cable shall be kept beyond the farthest end at both side, so that it may be connected to any phase whenever required as per future requirements.* These are to be left without terminations. Please confirm exact scope as it has the cost implication.	Please comply TS & BOQ (Doc No. TB-382-316-005 Rev 00). However, final details shall be finalized during detailed engineering stage as per project requirement in line with applicable IECs.
19	Doc. No. TB-382-316-005 Rev 00 Section-2, Section-11: Customer TS for 400kV XLPE Cables	11.6.3 The losses shall be indicated as firm. On testing, if it is found that actual losses are more than the values quoted, penalty will be recovered from the supplier at the rate of INR 3,80,000 (INR Three Lakhs Eighty Thousand) per KW or its equivalent in bid currency for each kW of excess in losses.	However, as referred below, *Note:* *2. The bidder shall guarantee the above parameters of XLPE power cables and the same shall be verified at the manufacturer's works. However, in actual supplied 400kV XLPE cable, if it is found that actual losses are more than the values guaranteed above, penalty shall be levied/ recovered at the rate of INR 1,50,000 (INR One lakh fifty thousand)/ KW.the penalty rate is mentioned as INR 1,50,000.00* Please confirm which rate to be understood as correct.	Please refer clause 9.0, section-1 of TS (Doc No. TB-382-316-005 Rev 00).

ANNEXURE- BIDDERS' PRE-BID COMMERCIAL CLARIFICATIONS				
Tender Enquiry/ NIT N	92G2400174 dated 15.09.2023/ 92G2400174			
Item/ Material:	400kV XLPE Cable & accessories			
Project:	400kV GIS Project for Vishnugad Pipalkoti Hydro Electric Project (4x111MW)			
SL. NO.	**DOCUMENT NO./ CLAUSE NO./ PAGE NO.**	**DESCRIPTION OF CLAUSE**	**BIDDER'S CLARIFICATIONS**	**CUSTOMER/ CONSULTANT/ BHEL REPLIES/ CONFIRMATIONS**
I. Bidder 1				
1	A) Technical PQR Technical Qualifying Requirements & Experience For 400kV XLPE Cable & its accessories	The bidder must have experience in design, manufacture and supply of 420kV (Um) single core conductor of min. 600mm2 copper or equivalent cross sectional area Cross Linked Poly Ethylene (XLPE) insulated power cables, which shall have been in successful trouble free operation for at least 2 successive years in last 10 years after commissioning as on scheduled date of submission of technical bid called upon by BHEL (i.e. proposed tender).	We have successfully supplied 420KV XLPE Cable system and our supplied 420KV cable system are Type Tested and PQ Tested, Since Manufacturing of 420KV XLPE cable has started in India just 3-4 years back, Hence we hereby suggest following Technical PQR: "The bidder must have experience in design, manufacture and supply of 420kV (Um) single core conductor of min. 600mm2 copper or equivalent cross sectional area Cross Linked Poly Ethylene (XLPE) insulated power cables in last 10 years as on scheduled date of submission of technical bid called upon by BHEL (i.e. proposed tender). and the supplied cable systems should be PQ Tested before commercial supply." Kindly Accept the above proposed PQR or otherwise allow us to submit the Technical PQR through Technical Collaborator's Credential as per following PQR: "The bidder must have experience in design, manufacture and supply of 420kV (Um) single core conductor of min. 600mm2 copper or equivalent cross sectional area Cross Linked Poly Ethylene (XLPE) insulated power cables, which shall have been in successful trouble free operation for at least 2 successive years in last 15 years after commissioning as on scheduled date of submission of technical bid called upon by BHEL (i.e. proposed tender)." We hereby enclose some PQR document of other HEP and Power Utility which allows Collaborator's Credentials for your reference. 1. NHPC, 2. TANTRANSCO.	As per NIT
2	ANNEXURE-II	A. For items except BOQ Item Sr No 1.10-1.13	Please refer our proposed revised Activity Schedule Annexure-II for Item Except BOQ Item Sr. No. 1.10-1.13	Revised and revised activity schedule enclosed.
3	ANNEXURE-II	For BOQ Item Sr No 1.10-1.13	Please refer our proposed revised Activity Schedule Annexure-II for BOQ Item Sr No 1.10-1.13	Revised and revised activity schedule enclosed.
4	Clause No. 13 of GTC(Supply portion) / Clause No 15 of document No: BHEL/TBG/GTCETC/ 2016/Rev 01	LD shall be levied for delay in execution of Purchase Order as per below: a) In case of delay in supply of material beyond the contractual delivery time allotted for supply, an amount of 0.5% of the total Purchase Order value* per week of delay or part thereof subject to a maximum of 5% of the total Purchase Order value* shall be deducted as Liquidated Damages (LD) along with applicable GST (if any) on LD. b) In case of delay in providing the services beyond the contractual completion time allotted for services, an amount of 0.5% of the total Purchase Order value* per week of delay or part thereof subject to a maximum of 5% of the total Purchase Order value* shall be deducted as Liquidated Damages (LD) along with applicable GST (if any) on LD and the specific intimation thereof shall be given to the supplier immediately via mail or letter or online portal.	Since this is a turnkey contract LD should not be deducted on the basis of delay of particular Supply item, it should be deducted on overall basis i.e. delay after complete delivery period, So we hereby request to amend the LD Clause accordinlgly.	As per NIT

SL. NO.	DOCUMENT NO./ CLAUSE NO./ PAGE NO.	DESCRIPTION OF CLAUSE	BIDDER'S CLARIFICATIONS	CUSTOMER/ CONSULTANT/ BHEL REPLIES/ CONFIRMATIONS
5	ANNEXURE - XVI	Price adjustment for the supply of 400 kV XLPE Cable Ca=[{Acu-Bcu}*Vcu] + [{Aal-Bal}*Val]	We hereby suggest to accept IEEMA Price Variation Formula because it is more praticaL and acceptable to almost all Power Utility and PSUs. Copy Enclosed	As per NIT
II. Bidder 2				
1	Additional General Terms and Conditions: Cl no 2: Prices	Prices shall be firm for the total contract period and no price variation shall be applicable.	Kindly confirm, Price Variation for 440KV XLPE EHV Cable is applicable.	Price Variation ia applicable for supply of 440KV XLPE EHV Cable only.
2	Price Variation Formula: Annexure XVI	Price adjustment for the supply of 400 kV XLPE Cable Ca=[{Acu-Bcu}*Vcu] + [{Aal-Bal}*Val]	We request you to consider latest IEEMA Price variation circular, as US Dollar rate is also inflated and varies up& down.	As per NIT
3	Liquidated Damages: (STC Cl No 10, Pg No 12)	min 0.5% % max. 5% of Purchase order value*'*'Total Purchase Order Value for considering Liquidity Damages(LD)= (Total Ex-works +F&I +Total Service charges excluding GST).	We request you to consider, LD %should be calculated on separate PO's i.e. Supply OR Spares or Services values and it should not be calculated on combined order value.	As per NIT
4	QR	A)Technical PQR Technical qualification requirement & Experience for 400 KV XLPE cable and its accessories The bidder must have experience in design, manufacture and supply of 420KV (Um) single core conductor of min. 600sqmm copper or equivalent cross section area cross linked poly ethylene (XLPE) insulated power cables, Which shall have been in successful trouble free operation for atleast 2 successive years in last 10 years after commissioning as on scheduled date of submission of technical bid called upon by BHEL (i.e proposed tender)	A)Technical PQR Technical qualification requirement & Experience for 400 KV XLPE cable and its accessories. The bidder must have experience in design, manufacture and supply of 420KV (Um) single core conductor of min. 600sqmm copper or equivalent cross section area cross linked poly ethylene (XLPE) insulated power cables, Which shall have been in successful trouble free operation for atleast 2 successive years in last 10 years after commissioning as on scheduled date of submission of technical bid called upon by BHEL (i.e proposed tender). Alternatively, the manufacturer, who have established manufacturing and testing facilities in India based on technological support of collaborator/parent company and not meeting the requirement stipulated above can also participate provided that the collaborator/parent company meets the above requirement	As per NIT
III. Bidder 3				
NA				
IV. Bidder 4				

SL. NO.	DOCUMENT NO./ CLAUSE NO./ PAGE NO.	DESCRIPTION OF CLAUSE	BIDDER'S CLARIFICATIONS	CUSTOMER/ CONSULTANT/ BHEL REPLIES/ CONFIRMATIONS
1	Annexure-I: Prequalifying Requirement:- 400kV XLPE Cable & Accessories	A) Technical PQR (Technical Qualifying Requirements & Experience For 400kV XLPE Cable & its accessories): The bidder must have experience in design, manufacture and supply of 420kV (Um) single core conductor of min. 600mm2 copper or equivalent cross sectional area Cross Linked Poly Ethylene (XLPE) insulated power cables, which shall have been in successful trouble free operation for at least 2 successive years in last 10 years after commissioning as on scheduled date of submission of technical bid called upon by BHEL (i.e. proposed tender). Requisite documents: 1. Performance certificate issued by end customer without any adverse remark(s),consisting the proof of experience of design, manufacture, supply and commissioning.	We would like to draw your kind attention on the Qualification requirement (Annexure-I: Prequalifying Requirement: -400kV XLPE Cable & Accessories), which clearly violates the MAKE IN INDIA Policy of the Govt of India (Ministry of Power Order No 11/05 2018 Coord Dt.28. 7.2020). As per the above order of Ministry of Power, it is mandatory on the part of purchaser to procure items defined in Annexure -1 of the above order from Local suppliers i.e., from Indian manufacturers only for the Hydro Power Plant being built in India . However, the Qualification Requirement of the above tender is such that no Indian Manufacturer would be in position to participate in the above tender despite having all the required manufacturing capacity & capability to produce & install the tendered items (400 KV cable). In fact, the last tender floated by BHEL for ARUN-III Project was also followed the Make in India Policy and allowed the India manufacturer who have the requisite capability to Manufacture 400 KV XLPE cable to participate in the tender through the technical collaborator route and the credentials of technical collaborator was considered for the purpose of meeting the Qualification requirement. We, therefore find it difficult to comprehend the reasons of framing the Qualification Requirement of the tender in such a way that no Indian Manufacturer gets qualified. In view of the above, we would request your good selves to review the Qualification Requirement in the right earnest and allow the Indian Manufacturers who have the requisite capability to Manufacture 400 KV XLPE cable to participate in the tender through collaborator route and arrange to amend the existing qualification criteria (TECHNICAL PQR) as per below: A)T ECHNICAL PQR: Technical Qualifying Requirements & Experience for 400kV XLPE Cable & Its accessories The bidder must have experience in design, manufacture and supply of 420kV (Um) single core conductor of min. 600mm2 copper or equivalent cross-sectional area	As per NIT
2	Special Terms & Conditions	Sl. No. 22, Validity of Purchase Order: 4 years from the date of PO with applicable PV.	As the Price Variation (PV) is applicable for 400kV 800mm2 cable only, please confirm that this Clause is applicable for 400kV cable only.	As per NIT
3	Additional Terms & Conditions	Sl. No. b) & c) states that Unpriced copy of Price Bid is to be furnished along with Techno commercial bid.	As this bid is to be submitted online, please confirm that submission of unpriced price bid in hard copy is not applicable.	To be submitted alongwith technical bid in online mode on GeP NIC Portal.
4	General Terms & Conditions for Tender Enquiry/Contract	Clause No. 1.2 states that the bid is submitted/dropped in the tender box.	As this bid is to be submitted online, please confirm that this clause is not applicable.	Not applicable and Tender to be submitted online on GeP NIC Portal.
5	Additional General Terms & Conditions for Tender Enquiry/Contract	Clause No. 2 Prices states that "Prices shall be firm for the total contract period.....".	Please confirm that the price of 400kV 800mm2 cable shall be variable as per Clause No. 5 of Special Terms & Conditions of the tender documents.	Price of 400kV 800mm2 cable shall be variable and price of other components shall be firm.
6	Price Variation Formula, Annexure-XVI	Ca= Adjusted Unit price after variation per km (USD/km)	The formula addresses only the price quoted in USD. Please elaborate how it will be calculated in INR as no exchange rate factor has been mentioned in the formula.	Please refer Note 2 of Annexure-XVI.
7	Price Variation Formula, Annexure-XVI	Condition applicable to Price adjustement	Point No. 2 specifies that the date of adjustment shall be the midpoint of the period of manufacture. Please elaborate how this midpoint of manufacture will be determined in the course of manufacture of 400kV cable.	Mid Point= Total manufacturing time as per activity schedule/2
V. Bidder 5 (M/s SV Power Links Private Limited)				
1	Prequalifying Requirement		Please confirm that the size mentioned here is 800 mm² of higher or not.	As per NIT
2	CQS	Annexure - XIII	We note that duly filled document of this Annexure-VIII appears to be in the scope of BHEL as a post contract to the Owner. Please clarify.	Based on Input from supplier, BHEL will submit to THDC.
3	STC, Page: 3 of 18	Supply (Foreign Bidder)	Please clarify whether there is any Concessional Customs Duty applicable for this specific project or not.	Concessional Customs Duty,if applicable shall be intimated to all bidders and benefit will be provided accordingly.

SL. NO.	DOCUMENT NO./ CLAUSE NO./ PAGE NO.	DESCRIPTION OF CLAUSE	BIDDER'S CLARIFICATIONS	CUSTOMER/ CONSULTANT/ BHEL REPLIES/ CONFIRMATIONS
4	STC, Page: 4, 5 & 6 of 18	Terms of Payment:	For Supply for Foreign Bidder: 90% within 90 days and balance 10% within 90 days after commissioning is not possible to accept. Hence, request to amend the same as: 10% advance against ABG 80% along with full duties, taxes against LC 5% on pro-rate installation against LC 5% on commissioning against LC. No payment terms indicated could not be seen in the bidding documents for Services Portion i.e. ETC. Request indication of the same.	As per NIT
5	STC, Page: 8 & 9 of 18	In case such delivery plan is considered acceptable by BHEL, the offer shall be loaded with 0.5% of total cost to BHEL after considering the GST input (in case of Indian bidder) calculated based on price quoted by the bidder for the period for which delivery period sought by bidder exceed the delivery period mentioned in Activity schedule (Annexure-II).	Request clarify that 0.5% is per week or not when the bidder is not meeting the specified period.	Confirmed
6	STC, Page: 9 & 10Th of 18	LD	1. Request acceptance of this at 0.5% per week or part thereof subject to a maximum of 5% of the value of the delayed portion for supply and services. 2. However, "*" Total PO Value indicated appear to be for Domestic Bidder. Request please indicate the same for Foreign Bidder too.	As per NIT
7	ATC, Page: 3 of 10	vi) Involvement of representative:	Request clarification whether we, XYZ Ltd., who are the experienced installers of 400 kV XLPE Cables, can submit the bid directly with the Authorization Letter from OEM or not for the complete scope of the tender i.e. Supply + Services. If yes, request please provide the required Format of such authorization letter.	As per NIT
8	AGTC, Page: 2 of 5	8. Idle Labour Charges: No idle labour charges will be admissible in the event of any stoppage of work resulting in the contractor`s workmen being rendered idle due to any reason at any time.	Request clarification that this applicable only when the reason which is attributable to the Contractor.	As per NIT.
9	Tender Notice Critical Dates	Document Download / Sale End Date: 13.10.2023 11.00 A.M Clarification End Date : 13.10.2023 10.55 A.M Bid Submission End Date : 13.10.2023 11.00 A.M Bid Opening Date : 13.10.2023 04.00 P.M	On receipt of the required clarifications against these pre-bid queries, a pre-bid survey is mandatorily being carried out. Hence, request that these critical dates be extended by 30 days from the date of providing the required clarifications against these Pre-Bid Queries.	Already extended two times and further extension will be provided for bid submission.
10	On – Line Price Schedule BOQ 1 & BOQ 2	Name of work: Supply and Services of 400 kV Cable and Accessories for Arun 3 Project.	Request suitable correction to the Project Details.	Please read "Vishnugad Pipalkoti" project in place of "Arun-3".

SL. NO.	DOCUMENT NO./ CLAUSE NO./ PAGE NO.	DESCRIPTION OF CLAUSE	BIDDER'S CLARIFICATIONS	CUSTOMER/ CONSULTANT/ BHEL REPLIES/ CONFIRMATIONS
11	Govt. of India, Make in India ORDER	 No. P-45021/2/2017-PP (BE-II) Government of India Ministry of Commerce and Industry Department for Promotion of Industry and Internal Trade (Public Procurement Section) Udyog Bhawan, New Delhi Dated: 16th September, 2020 To All Central Ministries/Departments/CPSUs/All concerned ORDER Subject: Public Procurement (Preference to Make in India), Order 2017– Revision; regarding.	BHEL-TBG is well aware that there EXISTS "NO" DOMESTIC MANUFACTURER FOR DESIGN AND MANUFACTURE OF THE REQURIED ACCESSORIES FOR 400KV CABLES WHICH IS A DIFFERENT MANUFACTURING ACTIVITY IN TOTAL AND IN ABSENCE OF THESE ACCESSORIES THE SAID 400KV CABLES SHALL BECOME REDUNDANT. Under the circumstances, request BHEL-TBG to clarify how this ORDER be applied to this tender. It is to be mentioned that at times, due to their (accessories) critical technical specific requirements, these might cost more than the cable itself which in this tender is a very small size i.e. 800 sq.mm and also in small quantity. Further this being a non-divisible contract based tender, request clarification to the arrival of establishing local content.	Please refer Circular issued from MoP in Nov-21/ As per NIT.

ACTIVITY SCHEDULE [ANNEXURE II]
A. For items except BOQ Item Sr No 1.10-1.13

Item :- 400 kV XLPE Cable & Accessories (Supply+ Services) for Vishnugad Pipalkoti

SL. NO.	ACTIVITY	TIME ALLOTED [IN WEEKS]*	SCOPE
1.	P.O Acceptance	1	IN SCOPE OF SUPPLIER
2.	Submission of documents necessary for getting manufacturing clearance (MFC) like Drawings, data sheet, QAP etc.	3	IN SCOPE OF SUPPLIER
3.	Review and Approval of documents from BHEL/Customer and issue of manufacturing clearance (MFC) lot wise as defined	4	IN SCOPE OF BHEL
4.	Manufacturing time for each lot after issuance of Manufacturing Clearance (MFC) by BHEL#	16	IN SCOPE OF SUPPLIER
5.	Inspection by BHEL/Customer/TPI	1	IN SCOPE OF BHEL
6.	Issue of Dispatch clearance	1	IN SCOPE OF BHEL
7.	Dispatch	10	IN SCOPE OF SUPPLIER
8.	Services (Other Than Type Tests)	16	IN SCOPE OF SUPPLIER

Inspection call to be raised 2 weeks in advance (4 weeks in case of foreign bidder) from the proposed date of inspection. In case 2/4 weeks (as applicable) of advance notice is not given for inspection call, the short period shall be considered as time attributable to vendor & delay shall be computed accordingly. Inspection call should be given in the prescribed format only. Inspection calls not in the prescribed format shall not be entertained.

1 Supplier must ensure the completeness and correctness of the requisite documents before submission for approval. Delay in approval on account of incomplete / inadequate information shall be the responsibility of supplier. Bidder to submit revised drawing and documents **within 1 week**s from the date of comments of BHEL/Customer. Delay in submission / resubmission of drawing documents beyond the stipulated time will be considered delay attributable to the vendor and shall be reduced from the time allowable to manufacture, Type Test.

2. Delay in each activity pertaining to BHEL not attributable to vendor as listed above shall be added (if required) in time extension case and will be re-fixed accordingly based on delay analysis.

SIGNATURE AND SEAL OF TENDERER

ACTIVITY SCHEDULE [ANNEXURE II]
For BOQ Item Sr No 1.10-1.13
Item :- 400 kV XLPE Cable & Accessories (Supply+ Services) for Vishnugad Pipalkoti

SL. NO.	ACTIVITY	TIME ALLOTED [IN WEEKS]**	SCOPE
1.	P.O Acceptance	1	IN SCOPE OF SUPPLIER
2.	Submission of documents necessary for getting manufacturing clearance (MFC) like Drawings, data sheet, QAP etc.	4	IN SCOPE OF SUPPLIER
3.	Issue of manufacturing clearance (MFC) from BHEL as per readiness of Site	10	IN SCOPE OF BHEL
4.	Manufacturing time for each lot after issuance of Manufacturing Clearance (MFC) by BHEL#	13	IN SCOPE OF SUPPLIER
5.	Inspection by BHEL/Customer/TPI	1	IN SCOPE OF BHEL
6.	Issue of Dispatch clearance	1	IN SCOPE OF BHEL
7.	Dispatch	6	IN SCOPE OF SUPPLIER
8.	Services (Other Than Type Tests)	16	IN SCOPE OF SUPPLIER

Inspection call to be raised 2 weeks in advance (4 weeks in case of foreign bidder) from the proposed date of inspection. In case 2/4 weeks (as applicable) of advance notice is not given for inspection call, the short period shall be considered as time attributable to vendor & delay shall be computed accordingly. Inspection call should be given in the prescribed format only. Inspection calls not in the prescribed format shall not be entertained.

1 Supplier must ensure the completeness and correctness of the requisite documents before submission for approval. Delay in approval on account of incomplete / inadequate information shall be the responsibility of supplier. Bidder to submit revised drawing and documents **within 1 week**s from the date of comments of BHEL/Customer. Delay in submission / resubmission of drawing documents beyond the stipulated time will be considered delay attributable to the vendor and shall be reduced from the time allowable to manufacture, Type Test.

2. Delay in each activity pertaining to BHEL not attributable to vendor as listed above shall be added (if required) in time extension case and will be re-fixed accordingly based on delay analysis.

SIGNATURE AND SEAL OF TENDERER