



दिल्ली ट्रांसको लिमिटेड

(दिल्ली सरकार का उपक्रम)

DELHI TRANSCO LIMITED

(A Govt. of NCT of Delhi Undertaking)

Corporate Identification Number (CIN) - U40103DL2001SGC111529

CORRIGENDUM-II

Subject : Package-I: Design, Supply, Erection, Testing & Commissioning for HTLS Re-Conductoring for Bamnauli-Najafgarh, Najafgarh-Tikrikalan-Kanjhawala, Kanjhawala-Bawana, Bawana - DSIIDC Bawana 220kV D/C ACSR Zebra Transmission Line alongwith replacement of associated equipments/Busbars at interconnecting substations of DTL (Delhi) on turnkey basis.

Package-II: Design, Supply, Erection, Testing & Commissioning for HTLS Re-Conductoring of 220 kV Gopalpur- Timarpur- Subzi Mandi Transmission Line at interconnecting substation of DTL (Delhi) on turnkey basis.

Package-III: Design, Supply, Erection, Testing & Commissioning for HTLS Re-Conductoring of 220KV D/C Geeta Colony-Patparganj, Patparganj-IP and IP-Pragati Zebra Conductor Transmission Line along with replacement of associated equipments/Busbars at interconnecting substations of DTL (Delhi) on turnkey basis.

Package-IV: Design, Supply, Erection, Testing & Commissioning for HTLS Re-Conductoring of DSIIDC Bawana- Narela-Mandola 220 kV D/C ACSR Zebra Transmission Lines along with replacement of associated equipments and Busbars at interconnecting substations of DTL (Delhi) on turnkey basis.

Tender No. : **T25R220472**

Tender ID on e-portal : For Package-I: 2026_DTL_286636_1,
For Package-II: 2026_DTL_286640_1,
For Package-III: 2026_DTL_286645_1, and
For Package-IV: 2026_DTL_286650_1
(<https://govtprocurement.delhi.gov.in>)

DTL Tender Reference No : **DTL-9883-110226** (www.dtl.gov.in)

The Pre-bid Clarification is enclosed as Annexure-I.

All other terms and conditions remain unchanged.

Date: 02.04.2026

(Bharat Tiwari)

Dy. General Manager (T)-CBP



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Reply of the Pre- Bid queries raised by the prospective bidders are as under:

S. No	Reference NIT Clause/ Description	Bidders Query	DTL's Reply
1.	<p>Clause 1.2.2 of Sec-II- Technical Specification of HTLS Conductor, Vol-II</p> <p>The UTS of conductor at ambient temperature and maximum continuous operating temperature shall be declared in the GTP. Further, UTS of conductor achieved at maximum continuous operating temperature (i.e. at the designed maximum steady state conductor temperature corresponding to desired ampacity) shall not be less than 80% of UTS at ambient temperature declared in the GTP.</p>	<p>Please amend as follows.</p> <p>The UTS of conductor at ambient temperature and maximum continuous operating temperature shall be declared in the GTP. Further, UTS of conductor achieved at maximum continuous operating temperature (i.e. at the designed maximum steady state conductor temperature corresponding to desired ampacity) shall not be less than 70% of UTS at ambient temperature declared in the GTP.</p> <p>Remarks / Reason</p> <p>When performing UTS testing at temperatures approaching the maximum operating temperature, the strength of the conductor should take into account two factors:</p> <p>1.The aluminum will lose 60% of its rated strength as the test temperatures approach the maximum use temperature of the conductor.</p> <p>2.For the composite cores, the strength can be approximately 80% of the rated strength as the test temperatures approach the conductor's maximum use temperature.</p> <p>As a result of these two factors, the minimum strength of the conductor for the UTS at elevated temperature should be 70% of UTS at ambient temperature declared in the GTP.</p>	As Per NIT.
2.	<p>Clause 2.1.1 (ii) of Sec-II- Technical Specification of HTLS Conductor, Vol-II</p> <p>(ii) on conductor strand/core</p> <p>a) Heat resistance test on Aluminum Alloy strands or core</p>	<p>Please amend as follows:</p> <p>a) Heat resistance test on Aluminum Alloy strands or core (Not applicable to Composite Core Conductor)</p> <p>Remarks / Reason</p> <p>This test is not applicable for composite core.</p>	Heat resistance test shall be applicable on Aluminium Alloy wire as per NIT Cl. 1.13 Annex-A, Section – II Technical Specification, Volume-II.
3.	<p>Clause 2.1.1 (ii) of Sec-II- Technical Specification of HTLS Conductor, Vol-II</p> <p>(ii) on conductor strand/core</p> <p>c) Compression test on core</p>	<p>Please amend title as follows:</p> <p>c) Compression test on aluminum clad strand</p> <p>Remarks / Reason</p> <p>This test is applicable on aluminum clad core only.</p>	Compression test shall be applicable on Aluminium clad strand as per NIT Cl. 1.15 Annex-A, Section – II

S. No	Reference NIT Clause/ Description	Bidders Query	DTL's Reply
			Technical Specification, Volume-II.
4.	<p>Clause 2.2 of Sec-II- Technical Specification of HTLS Conductor, Vol-II</p> <p>2.2 – Acceptance Tests</p> <p>Note: All the above tests except (k) shall be carried out on Aluminum / Aluminum Alloy and core strands after stranding only.</p>	<p>Please add following note: For composite core conductors, all acceptance tests shall be carried out before stranding on as manufactured samples.</p> <p>Remarks / Reason As per ASTM B987, values declared for various tests on core are on manufactured sample so request to allow to perform test on core before stranding.</p>	As per NIT
5.	<p>Clause 2.1.3 of Sec-II- Technical Specification of HTLS Conductor, Vol-II</p> <p>2.13 – Standards</p> <p>Sr. No. 38 – ASTM B987-17</p>	<p>Please amend as follow. ASTM B987-25</p> <p>Remarks / Reason The latest version of ASTM B987 is published in 2025, hence please consider the latest version.</p>	Latest revisions with amendment/ changes adopted and published shall be considered as per NIT.
6.	<p>Clause 1.5, Annexure A, of Sec-II- Technical Specification of HTLS Conductor, Vol-II</p> <p>Stress-strain test at elevated temperature</p> <p>Stress-strain test as per IEC-61089 shall be conducted keeping conductor temperature at designed maximum temperature (i.e. at the designed maximum steady state conductor temperature corresponding to desired ampacity). UTS for this test shall be 80% of the UTS guaranteed in the GTP.</p>	<p>Amend procedure as follows, Stress-strain test as per IEC-61089 shall be conducted keeping conductor temperature at designed maximum temperature (i.e. at the designed maximum steady state conductor temperature corresponding to desired ampacity). UTS for this test shall be 70% of the UTS guaranteed in the GTP.</p> <p>Remarks / Reason Evaluating Stress Stain behavior at Elevated Temperature does not provide information on how the conductor will perform when operating above the conductor's thermal knee and as it approaches its maximum operating temperature. When the conductor temperature climbs above the thermal knee point all remaining tensile load on the conductor will be on the core. From this temperature and above, only the core will carry the load. Because of this, the aluminum has no influence on the high temperature sag of the conductor from the thermal knee point temperature and upward.</p> <p>When performing this testing at temperatures in excesses of the calculated thermal knee point, the strength of the conductor should take into account two factors: 1. The aluminum will lose potentially up to 60% of its rated strength as the test temperatures approach the maximum use temperature of the</p>	As per NIT.

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		<p>conductor. Thus, the aluminum will not carry any load until very high levels of stress when at high temperatures. For the composite cores, the strength can be ~80% of the ambient strength as the test temperatures approach the conductor's maximum use temperature. As a result of these two factors, the strength of the conductor at its maximum use temperature should be rated at 70% of the ambient strength. A better alternative to adjusting the protocol is to remove the test because it does not model a situation that occurs in operation: High temperature and high loads do not occur together.</p>	
7.	<p>Volume II, Section II, Technical Specification of HTLS Conductor, Annexure A, Clause 1.6- High Temperature endurance and creep test</p> <p>ii) On other conductor sample, the conductor temperature shall be increased to designed maximum temperature in steps of 20 deg. C and thermal elongation of the conductor sample shall be measured & recorded at each step. The temperature shall be held at each step for sufficient duration for stabilization of temperature. Further, the temperature of the conductor shall be maintained at designed maximum temperature +10 Deg. C for 1000 hours. The elongation/creep strain of the conductor during this period shall be measured and recorded at end of 1 hour, 10 hours, 100 hour and subsequently every 100 hour up to 1000 hours' time period. After completion of the above, the core of the conductor sample shall be subjected to UTS test as mentioned above at clause 1.1. The conductor core shall withstand a load equivalent to 95 % of UTS. In case of polymer composite core conductor, the flexural strength & glass transition temperature of the core shall also be evaluated and the same shall not be degraded by more than 10 % over the initial value. The supplier shall plot</p>	<p>Please change the procedure as follows:</p> <p>iii) On other conductor sample, the conductor temperature shall be increased to designed maximum temperature in steps of 20 deg. C and thermal elongation of the conductor sample shall be measured & recorded at each step. The temperature shall be held at each step for sufficient duration for stabilization of temperature. Further, the temperature of the conductor shall be maintained at designed maximum temperature ± 2.5 Deg. C for 1000 hours. The elongation/creep strain of the conductor during this period shall be measured and recorded at end of 1 hour, 10 hour, 100 hour and subsequently every 100 hour up to 1000 hours' time period. After completion of the above, the core of the conductor sample shall be subjected to UTS test as mentioned above at clause 1.1. The conductor core shall withstand a load equivalent to 95 % of UTS. In case of polymer composite core conductor, the flexural strength & glass transition temperature of the core shall also be evaluated and the same shall not be degraded by more than 10 % over the value specified in GTP. The supplier shall plot the thermal elongation with temperature.</p> <p>Remarks / Reason</p> <p>Consider temperature tolerance of ± 2.5 Deg C, which is in line with tolerance specified in Temperature cycle test and which will allow conductor to operate marginally higher or lower than designed maximum temperature.</p> <p>Consider degradation of secondary properties (Tg and Flexural) from value guaranteed in GTP instead of initial value. For primary property (Tensile strength) degradation at high</p>	As per NIT

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	the thermal elongation with temperature.	temperature is verified with reference of declared value likewise secondary properties also verified with reference to declared value in GTP instead of initial value.	
8.	<p>Volume II, Section II, Technical Specification of HTLS Conductor, Annexure A, Clause 1.7 -Sheave Test</p> <p>The conductor sample of minimum length of 35 meter shall be tensioned at 25 % of the UTS and shall be passed through pulleys having diameter of 32 times that of the conductor with angle of 20 deg. between the pulleys. The conductor shall be passed over the pulleys 36 times a speed of 2 m/sec. After this test UTS test on the conductor shall be carried out as mentioned above at clause 1.1. In case of polymer composite core conductors, the core shall be inspected for any sign of damage or cracking through dye penetration test as per ASTM D5117</p>	<p>Please add following; The conductor sample of minimum length of 35 meter shall be tensioned at 20 % of the UTS and shall be passed through pulleys having diameter of 32 times that of the conductor with angle of 20 deg. between the pulleys. The conductor shall be passed over the pulleys 36 times a speed of 2 m/sec. After this test UTS test on the conductor shall be carried out as mentioned above at clause 1.1. In case of polymer composite core conductors, the core shall be inspected for any sign of damage or cracking through dye penetration test as per ASTM D5117/ ASTM B987</p> <p>Remarks / Reason Please amend test tension as during installation maximum tension applied is half of initial tension. Also, add dye penetrant exposure time for composite core.</p>	A per NIT.
9.	<p>Volume II, Section II, Technical Specification of HTLS Conductor, Annexure A, Clause 1.9- Radial Crush Test</p> <p>A section of conductor is to be crushed between two six-inch steel plates. Load shall be held at 350 Kgs for 1 minute and then released. All the strands shall be subsequently disassembled and tensile tested. All the strands shall exhibit full strength retention</p>	<p>Please amend as follow, A section of conductor is to be crushed between two six-inch steel plates. Load shall be held at 350 Kgs for 1 minute and then released. Core / Core strands shall be subsequently disassembled and tensile tested. Core / Core strands shall exhibit full strength retention</p> <p>Remarks / Reason The Radial crush strength test is required to check the retention of UTS by the core of conductor. In conductor the core is the strength member subjected to Tensile forces. The outer layer strands are of annealed aluminum or aluminum alloy which do not play role for subjected tension on the conductor. So, for polymer composite core conductors only core strands shall be tensile tested and should exhibit full strength retention.</p>	As per NIT.
10	<p>Volume II, Section II, Technical Specification of HTLS Conductor, Annexure A, Clause 1.10- Torsional Ductility Test</p> <p>The conductor sample of 10-15 m shall be loaded to 20% of UTS and then rotated in increasing steps of +/- 180 deg. The entire conductor shall</p>	<p>Please amend as follows. The conductor sample of minimum 1500 times diameter of conductor core shall be loaded to 20% of UTS and then rotated in increasing steps of +/-180 deg. The entire conductor shall withstand at least 16 such rotation and there shall not be any damage to Aluminum Alloy or core wires. In case of</p>	As per NIT

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	withstand at least 16 such rotation and there shall not be any damage to Aluminum Alloy or core wires. In case of composite core conductors, after 4 rotations or after separation of aluminum strands, the aluminum wires shall be cut and removed from the conductor and the exposed core shall be twisted and shall withstand up to 16 rotations.	composite core conductors, after 4 rotations or after separation of aluminum strands, the aluminum wires shall be cut and removed from the conductor and the exposed core shall be twisted and shall withstand up to 16 rotations. Remarks / Reason Specify test sample length in reference to diameter of conductor core. For larger size of core sample length specified are not sufficient to perform test.	
11	Volume II, Section II, Technical Specification of HTLS Conductor, Annexure A, Clause 1.12- Temperature Cycle Test Test Methods: - - Mechanical tension, 20 % RBS (rated breaking strength), marks on the conductor at the edge of the conductor - 100 cycles from room temperature up to designed maximum temperature. Hold at Designed maximum temperature + 2.5 deg. C for 05 minutes. - After the above mentioned 100 cycle, Mechanical tension up to 70 % RBS at room temperature during 24 H and release to 20 % RBS. - This cycling test shall be repeated 5 times. - During the test, temperature of connectors, conductor and resistance are recorded according to ANSI C 119. - A breaking load test is applied at the end of the test. Conductor strength has to be higher than 95 % UTS. - In case of polymer composites, the flexural strength should not degrade by more than 10 % and the Glass Transition temperature shall not degrade by more than 10 % after thermal cycling. Flexural strength shall be obtained on the basis of test procedure indicated at 1.32 below.	Please amend procedure as follow, Test Methods: - ▪ Mechanical tension, 20 % RBS (rated breaking strength), marks on the conductor at the edge of the conductor - 100 cycles from room temperature up to designed maximum temperature. Hold at Designed maximum temperature ± 2.5 deg. C for 05 minutes. ▪ After the above mentioned 100 cycle, Mechanical tension up to 70 % RBS at room temperature during 24 H and release to 20 % RBS. ▪ This cycling test shall be repeated 5 times. ▪ During the test, temperature of connectors, conductor and resistance are recorded according to ANSI C 119. - A breaking load test is applied at the end of the test. Conductor strength has to be higher than 95 % UTS. ▪ In case of polymer composites, the flexural strength should not degrade by more than 10% of value guaranteed in GTP and the Glass Transition temperature shall not degrade by more than 10 % of value guaranteed in GTP after thermal cycling. Flexural strength shall be obtained on the basis of test procedure indicated at 1.32 below. Remarks / Reason Consider temperature tolerance of ± 2.5 Deg C, this makes easier for the test lab to reach and maintain the target temperature for the short 5-minute exposure before the heat is turn off and the conductor allowed to cool. Consider degradation of secondary properties (Tg and Flexural) from value guaranteed in GTP instead of initial value. For primary property (Tensile strength) degradation at high temperature is verified with reference of declared value likewise secondary properties also verified with reference to declared value in GTP instead of initial value.	As per NIT.

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12	<p>Volume II, Section II, Technical Specification of HTLS Conductor, Annexure A, Clause 1.17</p> <p>Strand Brittle fracture test (for polymer composite core only)</p> <p>The sample shall be tensioned with simultaneous application of 1N-HNO3 acid directly in contact with naked polymer composite core. The contact length of acid shall not be less than 40mm and thickness around the core not less than 10mm. The rod shall withstand 80% of SML for 96 hours.</p>	<p>Please amend as follows.</p> <p>The sample shall be tensioned to approx. 25% of UTS with simultaneous application of 1N-HNO3 acid directly in contact with naked polymer composite core. The contact length of acid shall not be less than 40mm and thickness around the core not less than 10mm. The rod shall withstand UTS test after 96 hours.</p> <p>Remarks / Reason</p> <p>Please specify value of tension and core should withstand full UTS value after completion of 96 hours.</p>	A per NIT
13	<p>Volume II, Section II, Technical Specification of HTLS Conductor, Annexure A, Clause 1.24- Torsion and Elongation Tests on Composite Core/ INVAR Core wires</p> <p>ii) Torsion Test: The purpose of the test is to determine the resilience of the composite core to twisting and to show that after the composite core has experienced the prescribed twisting, it will not crack or have a loss in tensile strength due to the twisting. A sample length that is 170 times the diameter of the composite core being tested is mounted in the gripping fixtures. One grip shall then be fixed so that it does not twist and the other end shall be twisted a full 360 degrees and then fixed in this position for 2 minutes. Once the twist time is completed, the core is untwisted and inspected for any crazing or other damage. If no damage is observed, the composite core is then tensile tested to failure and the final load recorded. For the test to be accepted, the composite core must withstand at least 100% of its rated tensile strength. Two samples need to be completed in order to satisfy the testing requirement.</p>	<p>Please change the procedure as follow:</p> <p>ii) Torsion Test: The purpose of the test is to determine the resilience of the composite core to twisting and to show that after the composite core has experienced the prescribed twisting, it will not crack or have a loss in tensile strength due to the twisting. The sample length shall be such that the gauge length in between the gripping fixtures is 170 times the diameter of the core in case of High Strength Grade composite cores and 340 times the diameter of the composite core in case of Extra High strength composite core. However, the gauge length shall not be more than 4m. One grip shall then be fixed so that it does not twist and the other end shall be twisted a full 360 degrees and then fixed in this position for 2 minutes. Once the twist time is completed, the core is untwisted and inspected for any crazing or other damage. If no damage is observed, the composite core is then tensile tested to failure and the final load recorded. For the test to be accepted, the composite core must withstand at least 100% of its rated tensile strength. Two samples need to be completed in order to satisfy the testing requirement.</p> <p>Remarks / Reason</p> <p>Please amend sample length requirement for High Strength and Extra High Strength core also sample length should be gauge length so that full rotation can be done.</p>	As per NIT.
14	<p>Volume II, Section II, Technical Specification of HTLS Conductor, Annexure A, Clause 1.25- Breaking load test on Aluminum Alloy & Core strands and D.C Resistance test on Aluminum</p>	<p>Please add as follow for composite core.</p> <p>For composite cores, the breaking load shall be performed as described in Section 9 of ASTM B987.</p> <p>Remarks / Reason</p>	Shall be as per applicable standard.

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	Alloy wire The above tests shall be carried out as per IEC: 888/889 and the results shall meet the requirements of the specification	IEC 888/889 is not applicable to composite core. Please add a reference to Section 9 of ASTM B987 on how to perform a tensile test on composite cores.	
15	Volume II, Section II, Technical Specification of HTLS Conductor, Annexure A, Clause 1.35 Bending test on polymer composite core (Type test): Bending test on polymer composite core (CFC) before stranding shall be performed as per ASTM B987/B987M-17 on polymer composite core samples taken from composite core at conductor manufacturing unit before stranding of conductor. Alternatively Bending test on polymer composite core (CFC) before stranding may be performed at the core manufacturing unit on the samples taken from the same reel being supplied to conductor manufacturer subject to proper traceability of the same at the conductor manufacturers works. Bending test on polymer composite core (CFC) shall be performed as per ASTM B987/B987M-17 on polymer composite core samples taken from stranded conductor. For test after stranding the diameter of cylindrical mandrel shall be as following: a) For high strength grade CFC – 60 times the diameter of CFC b) For Extra high strength grade CFC – 70 times the diameter of CFC	Please amend as follows, Bending test on polymer composite core (CFC) before stranding shall be performed as per ASTM B987/B987M-25 on polymer composite core samples taken from composite core at conductor manufacturing unit before stranding of conductor. Alternatively Bending test on polymer composite core (CFC) before stranding may be performed at the core manufacturing unit on the samples taken from the same reel being supplied to conductor manufacturer subject to proper traceability of the same at the conductor manufacturers works. OR Bending test on polymer composite core (CFC) shall be performed as per ASTM B987/B987M-25 on polymer composite core samples taken from stranded conductor. For test after stranding the diameter of cylindrical mandrel shall be as following: a) For high strength grade CFC – 60 times the diameter of CFC b) For Extra high strength grade CFC – 70 times the diameter of CFC Remarks / Reason Please consider latest amendment of ASTM B987. Also add or so that either bidder can perform tests before stranding or after stranding. Current procedure is written in such a way that bidder needs to perform bending test before and after stranding.	Latest revisions with amendments/ changes adopted and published shall be considered as per NIT.
16	Volume II, Section II, Technical Specification of HTLS Conductor, Annexure A, Clause 1.36-Bending test on polymer composite core (Acceptance test): Bending test on polymer composite core (CFC) shall be performed as per ASTM B987/B987M-17 on polymer composite core samples taken from stranded conductor. For test after stranding the diameter of cylindrical mandrel shall be as following: a) For high strength grade CFC – 60 times the diameter of CFC	Please amend as follows, Bending test on polymer composite core (CFC) shall be performed as per ASTM B987/B987M-25 on polymer composite core samples taken from stranded conductor. For test after stranding the diameter of cylindrical mandrel shall be as following: 1.For high strength grade CFC – 60 times the diameter of CFC 2.For Extra high strength grade CFC – 70 times the diameter of CFC Remarks / Reason Please consider latest amendment of ASTM B987	Latest revisions with amendment/ changes adopted and published shall be considered as per NIT.

S. No	Reference NIT Clause/ Description	Bidders Query	DTL's Reply
	b) For Extra high strength grade CFC – 70 times the diameter of CFC		
17	<p>Volume II, Section II, Technical Specifications of Hardware Fittings and accessories for HTLS conductor (For 400kV and 220kV overhead lines), Annexure A, Clause 2.1 (b)- Heating Cycle Test</p> <p>Heating cycle test shall be performed in accordance with IS 2121 (Part-II- 1981) with following modifications: -</p> <ul style="list-style-type: none"> i. Temperature of conductor during each cycle: 40 deg. C above designed maximum operating temperature of the conductor. ii. Number of cycle: 100 iii. Slip strength test shall also be carried out after heating cycle test. 	<p>Please change procedure as follows,</p> <p>Heating cycle test shall be performed in accordance with IS 2121 (Part-II- 1981) with following modifications: -</p> <ul style="list-style-type: none"> i. Temperature of conductor during each cycle: 40 deg. C above designed maximum operating temperature of the conductor, but not to exceed the maximum use temperature of the conductor. ii. Number of cycle: 100 iii. Slip strength test shall also be carried out after heating cycle test. <p>Remarks / Reason</p> <p>Please amend procedure in line with Technical Specifications of Hardware Fittings and accessories for HTLS conductor (For 400kV and 220kV overhead lines), Annexure A, Clause 1.6.</p> <p>The protocol as written could force conductors to be subjected to temperatures in excess of their emergency temperatures. Please amend this protocol to ensure that the conductor is not subjected to a temperature in excess of the emergency temperature that may cause a failure of the hardware test.</p>	As per NIT.
18	<p>VOLUME-II, SECTION-II Technical Specification HTLS Conductor and Associated H/W Fittings and Accessories,</p> <p>Clause 1.2.1 Current Carrying Capacity / Ampacity Requirements</p> <p>The calculations for Ampacity shall be based on latest edition of IEEE Standard 738. The bidder in his bid shall furnish calculations for the ampacity based on the above Standard for the proposed HTLS conductor.</p>	<p>The calculations for Ampacity shall be based on latest edition of IEEE Standard 738 2023. The bidder in his bid shall furnish calculations for the ampacity based on the above Standard for the proposed HTLS conductor.</p> <p>Remarks / Reason</p> <p>While calculating the current carrying capacity of the conductor the radial thermal gradient to be considered, with a Radia thermal conductivity of 1 W/m°C for HTLS as per latest IEEE standard 728:2023</p>	As per NIT.
19	<p>VOLUME-II, SECTION-II- Technical Specification HTLS Conductor and Associated H/W Fittings and Accessories,</p> <p>2.1.1 Type Tests on Stranded Conductor/ Stranded wire</p> <p>Type tests specified above shall not be required to be carried out if a valid test certificate is available for the offered design with validity of the</p>	<p>Type tests specified above shall not be required to be carried out again if a valid test certificate is available for the offered conductor design with validity of 10 Years.</p> <p>Remarks / Reason</p> <p>We request to consider the validity of the HTLS type test report as per the latest released CEA “Guidelines for the Type Tests for Major Equipment in Power Sector” in which it is mentioned for HTLS conductor the periodicity</p>	Latest CEA guidelines are applicable as per NIT.

S. No	Reference NIT Clause/ Description	Bidders Query	DTL's Reply
	certificate in line with CEA guidelines.	is 10 years. Also, Utilities like GETCO and others are following the same.	
20	VOLUME-II, SECTION-II- Technical Specification HTLS Conductor and Associated H/W Fittings and Accessories, Clause 1.2.1 Current Carrying Capacity /Ampacity Requirements The calculations for Ampacity shall be based on latest edition of IEEE Standard 738. The bidder in his bid shall furnish calculations for the ampacity based on the above Standard for the proposed HTLS conductor.	Changes Requested The calculations for Ampacity shall be based on latest edition of IEEE Standard 738 2023. The bidder in his bid shall furnish calculations for the ampacity based on the above Standard for the proposed HTLS conductor. Remarks / Reason While calculating the current carrying capacity of the conductor the radial thermal gradient to be considered, with a Radia thermal conductivity of 1 W/m°C for HTLS as per latest IEEE standard 728:2023	As per NIT
21	VOLUME-II,SECTION-II Technical Specification HTLS Conductor and Associated H/W Fittings and Accessories, Clause 1.2.2 Further, UTS of conductor achieved at maximum continuous operating temperature (i.e. at the designed maximum steady state conductor temperature corresponding to desired ampacity) shall not be less than 80% of UTS at ambient temperature declared in the GTP.	Changes Requested Further, UTS of conductor achieved at maximum continuous operating temperature (i.e. at the designed maximum steady state conductor temperature corresponding to desired ampacity) shall not be less than 70% of UTS at ambient temperature declared in the GTP. Remarks / Reason When performing this testing at temperatures in excesses of the calculated thermal knee point, the strength of the conductor should take into account two factors: 1) The aluminum will lose potentially up to 60% of its rated strength as the test temperatures approach the maximum use temperature of the conductor. Thus, the aluminum will not carry any load until very high levels of stress when at high temperatures. 2) For the composite cores, the strength can be ~80% of the ambient strength as the test temperatures approach the conductor's maximum use temperature. As a result of these two factors, the strength of the conductor at its maximum use temperature should be rated at 70% of the ambient strength.	As per NIT
22	VOLUME-II, SECTION-II Technical Specification HTLS Conductor and Associated H/W Fittings and Accessories, Clause- 2.1.1 -Type Tests on Stranded Conductor/Stranded wire Type tests specified above shall not be required to be carried out if a valid test certificate is available for the offered design with validity of the certificate in line with CEA	Changes Requested Type tests specified above shall not be required to be carried out if a valid test certificate is available for the offered design with validity of 10 Years. Remarks / Reason We request to consider the validity of the HTLS type test report as per the latest released CEA "Guidelines for the Type Tests for Major Equipment in Power Sector" in which it is	Latest CEA guidelines are applicable as per NIT.

S. No	Reference NIT Clause/ Description	Bidders Query	DTL's Reply
	guidelines.	mentioned for HTLS conductor the periodicity is 10 years. Also Utilities like GETCO also following the same. Attached herewith – 1) Guidelines for the Type Tests for Major Equipment in Power Sector, Jan 2026 2) TECHNICAL SPECIFICATION FOR UPRATING OF EXISTING 220 KV TRANSMISSION LINE BY	
23	VOLUME-II, SECTION-II Technical Specification HTLS Conductor and Associated H/W Fittings and Accessories, Clause 2.2 Acceptance Tests Note: All the above tests except (k) shall be carried out on Aluminum/Aluminum Alloy and core strands after stranding only.	Please add following, For composite core conductors, all acceptance tests shall be carried out before stranding. Remarks / Reason Note: All the above tests except (k) shall be carried out on Aluminum/ Aluminum Alloy and core strands after stranding only.	As per NIT
24	VOLUME-II, Sec-II Technical Specification HTLS Conductor and Associated H/W Fittings and Accessories, ANNEXURE-A, Clause No 1.5 Stress-strain test at elevated temperature Stress-strain test as per IEC-61089 shall be conducted keeping conductor temperature at designed maximum temperature (i.e. at the designed maximum steady state conductor temperature corresponding to desired ampacity). UTS for this test shall be 80% of the UTS guaranteed in the GTP.	Changes Requested Stress-strain test as per IEC-61089 shall be conducted keeping conductor temperature at designed maximum temperature (i.e. at the designed maximum Steady state conductor temperature corresponding to desired ampacity). UTS for this test shall be 70% of the UTS guaranteed in the GTP. Remarks / Reason Evaluating Stress Strain behavior at Elevated Temperature does not provide information on how the conductor will perform when operating above the conductor's thermal knee and as it approaches its maximum operating temperature. When the conductor temperature climbs above the thermal knee point all remaining tensile load on the conductor will be on the core. From this temperature and above, only the core will carry the load. Because of this, the aluminum has no influence on the high temperature sag of the conductor from the thermal knee point temperature and upward. When performing this testing at temperatures in excesses of the calculated thermal knee point, the strength of the conductor should take into account two factors: 1) The aluminum will lose potentially up to 60% of its rated strength as the test temperatures approach the maximum use temperature of the conductor. Thus, the aluminum will not carry any load until very high levels of stress when at high temperatures.	As per NIT.

S. No	Reference NIT Clause/ Description	Bidders Query	DTL's Reply
		2) For the composite cores, the strength can be ~80% of the ambient strength as the test temperatures approach the conductor's maximum use temperature. As a result of these two factors, the strength of the conductor at its maximum use temperature should be rated at 70% of the ambient strength. A better alternative to adjusting the protocol is to remove the test because it does not model a situation that occurs in operation: High temperature and high loads do not occur together.	
25	VOLUME-II, Sec-II Technical Specification HTLS Conductor and Associated H/W Fittings and Accessories, ANNEXURE-A, Clause No 1.6 High Temperature endurance & creep test On other conductor sample, the conductor temperature shall be increased to designed maximum temperature in steps of 20 deg. C and thermal elongation of the conductor sample shall be measured & recorded at each step. The temperature shall be held at each step for sufficient duration for stabilization of temperature. Further, the temperature of the conductor shall be maintained at designed maximum temperature +10 Deg. C for 1000 hours. The elongation/creep strain of the conductor during this period shall be measured and recorded at end of 1 hour, 10 hours, 100 hours and subsequently every 100 hour up to 1000 hours' time period. After completion of the above, the core of the conductor sample shall be subjected to UTS test as mentioned above at clause 1.1. The conductor core shall withstand a load equivalent to 95 % of UTS. In case of polymer composite core conductor, the flexural strength & glass transition temperature of the core shall also be evaluated and the same shall not be degraded by more than 10 % over the initial value. The supplier shall plot the thermal elongation with temperature.	<p>Changes Requested</p> <p>On other conductor sample, the conductor temperature shall be increased to designed maximum temperature in steps of 20 deg. C and thermal elongation of the conductor sample shall be measured & recorded at each step. The temperature shall be held at each step for sufficient duration for stabilization of temperature. Further, the temperature of the conductor shall be maintained at designed maximum temperature ± 2.5 Deg. C for 1000 hours. The elongation/creep strain of the conductor during this period shall be measured and recorded at end of 1 hour, 10 hour, 100 hour and subsequently every 100 hour up to 1000 hours' time period. After completion of the above, the core of the conductor sample shall be subjected to UTS test as mentioned above at clause 1.1. The conductor core shall withstand a load equivalent to 95 % of UTS. In case of polymer composite core conductor, the flexural strength & glass transition temperature of the core shall also be evaluated and the same shall not be degraded by more than 10 % over the GTP mentioned value. The supplier shall plot the thermal elongation with temperature.</p> <p>Remarks / Reason</p> <p>Degradation at high temperature is verified with reference of declared value likewise secondary properties also verified with reference to declared value in GTP instead of initial value.</p>	As per NIT.
26	VOLUME-II, Sec-II Technical Specification HTLS Conductor and	<p>Changes Requested</p> <p>The conductor sample of minimum length of 35</p>	As per NIT

S. No	Reference NIT Clause/ Description	Bidders Query	DTL's Reply
	<p>Associated H/W Fittings and Accessories, ANNEXURE-A, Clause No 1.7 Sheaves Test</p> <p>The conductor sample of minimum length of 35 meter shall be tensioned at 25 % of the UTS and shall be passed through pulleys having diameter of 32 times that of the conductor with angle of 20 deg. between the pulleys. The conductor shall be passed over the pulleys 36 times a speed of 2 m/sec.</p> <p>After this test UTS test on the conductor shall be carried out as mentioned above at clause 1.1. In case of polymer composite core conductors, the core shall be inspected for any sign of damage or cracking through dye penetration test as per ASTM D5117.</p>	<p>meter shall be tensioned at 20 % of the UTS and shall be passed through pulleys having diameter of 32 times that of the conductor with angle of 20 deg. between the pulleys. The conductor shall be passed over the pulleys 36 times a speed of 2 m/sec. After this test UTS test on the conductor shall be carried out as mentioned above at clause 1.1. In case of polymer composite core conductors, the core shall be inspected for any sign of damage or cracking through dye penetration test as per ASTM D5117.</p> <p>Remarks / Reason Please amend test tension as during installation maximum tension applied is half of initial tension.</p>	
27	General	Stamp Paper value to be mentioned by DTL for establishing the EMD BG. Tender document mention "Appropriate Value" which our bank not able to define.	The Value of Stamp Paper required for Bid security/ EMD-BG shall be as defined by issuing bank/ RBI and same is acceptable.
28	<p>Clause No. 23.3(b), Sec-II-ITB, Vol-I. E-payment from the account of the bidder. The detail of DTL's Bank account is as under:</p> <p>Name: - Delhi Transco Ltd. Name of Bank with Address: - SBI, Chandni Chowk Delhi. Current Account No.: - 10820056547 Codes:- RTGS/IFSC No: SBIN0000631 MICR No: 110002018</p>	<p>Bank Details of DTL are as below for sending the SFMS. Kindly confirm</p> <p>Name: - Delhi Transco Ltd. Name of Bank with Address: SBI, Chandni Chowk, Delhi. Current Account No.: 10820056547 Codes: RTGS/IFSC No: SBIN0000631, MICR No: 110002018</p>	As per NIT
29	General	EMD BG Beneficiary is as below. Kindly confirm: DGM (T) Contract Business Plan (CBP), Delhi Transco Limited, Room No. 13, Ground Floor, Maintenance Block, Old Indraprastha Power House, Near 220kV Indraprastha Substation, New Delhi-110002 (India),	As per NIT BG should be in favour of Delhi Transco Limited.
30	General	Please provide HTLS conductor datasheet for single and twin line bundle configuration.	Please refer Technical

S. No	Reference NIT Clause/ Description	Bidders Query	DTL's Reply
			Specification, Volume II.
31	General	Please that twin line is for substation or transmission requirement, because there is no specific requirement given for Rigid spacer and Spacer damper.	The Single conductor configuration is for Transmission Line and Twin Conductor configuration is considered for substation.
32	Sl. No. C) 3) Annexure – 1, Vol-II Tension at 32°C, full wind (kg/m ²)	We request you to kindly provide wind pressure in kg/m ² .	Shall be finalized during detail engineering as per IS-802 and National Building Code of India.
33	Annexure-1 (c) of Sec-II- TS HTLS Conductor, Vol-II Sag Tension Requirements for HTLS Conductor for Compatibility with Lattice Towers.	We observe that the wind pressure at 32°C with full wind (.....kg/m ²) has not been specified. Further, in the section covering: a. Sag Details of Narrow Based Towers with span length of 225 m, and b. Sag Details of broad based Towers with span length of 320m Remark Wind pressure value to be considered for sag-tension calculation is not mentioned. We request you to kindly provide applicable wind pressure (kg/m ²).	Shall be finalized during detail engineering as per IS-802 and National Building Code of India.
34	Clause No. 1.9, Section – IFB - Invitation for Bid, Vol-I Bidders are permitted to quote for one or all package(s). Multi-package rebate(s) offered if any, shall be considered in evaluation. Based on such evaluation, award of contracts would be made to one or more bidder(s) for one or all package(s) on the basis of least evaluated cost to the Purchaser.	Bidders are permitted to quote for one or more package(s). Multi-package rebate(s) offered if any, shall be considered in evaluation. Based on such evaluation, award of contracts would be made to one or more bidder(s) for one or more package(s) on the basis of least evaluated cost to the Purchaser.	The clause No. 1.9, Section – IFB - Invitation For Bid, Vol-I Amended as under. Bidders are permitted to quote for one or more package(s). Multi-package rebate(s) offered if any, shall be considered in

S. No	Reference NIT Clause/ Description	Bidders Query	DTL's Reply
			evaluation. Based on such evaluation, award of contracts would be made to one or more bidder(s) for one or more package(s) on the basis of least evaluated cost to the Purchaser.
35	<p>Clause No. 35B.1, Section -II Instructions To Bidders (ITB), Vol-I</p> <p>The Owner will carry out a detailed evaluation of the Price Bids Part (Part-II) of the bidders found techno-commercially successful. The Bid evaluation of Package I, II, III & IV shall be carried out package-wise. Multi-package rebate(s) offered, if any, shall also be considered in evaluation. Based on such evaluation, Award of Contract(s) would be made to one or more bidder(s) for one or all the package(s) on the basis of least evaluated cost to the Employer.</p> <p>.....</p>	<p>The Owner will carry out a detailed evaluation of the Price Bids Part (Part-II) of the bidders found techno-commercially successful. The Bid evaluation of Package I, II, III & IV shall be carried out package-wise. Multi-package rebate(s) offered, if any, shall also be considered in evaluation. Based on such evaluation, Award of Contract(s) would be made to one or more bidder(s) for one or more package(s) on the basis of least evaluated cost to the Employer.</p> <p>.....</p>	<p>The Clause No. 35B.1, Section -II Instructions To Bidders (ITB), Vol-I Amended as</p> <p>The Owner will carry out a detailed evaluation of the Price Bids Part (Part-II) of the bidders found techno-commercially successful. The Bid evaluation of Package I, II, III & IV shall be carried out package-wise. Multi-package rebate(s) offered, if any, shall also be considered in evaluation. Based on such evaluation, Award of Contract(s) would be made to one or more bidder(s) for</p>

S. No	Reference NIT Clause/ Description	Bidders Query	DTL's Reply
			one or more package(s) on the basis of least evaluated cost to the Employer.
36	<p>2.0 Technical Experience</p> <p>2.1 Experience of Manufacturer</p> <p>2.1 (iii) In case, the Bidder is an Indian Entity meeting the requirement stipulated in above clause at 2.1 (ii) except HTLS Conductor, but has established manufacturing and testing facilities in India and manufactured HTLS conductor having minimum thirty three (33)-number of strands or minimum 150 sq. mm Aluminum cross section area shall also be considered, provided the bidder meets the following requirements.</p>	<p>In case, the Bidder is an Indian Entity meeting the requirement stipulated in above clause at 2.1 (ii) except HTLS Conductor <u>or supplied at least 33% of the estimated quantity (i.e. length of conductor in kms) of High Temperature Low Sag (except GAP type).</u> but has established manufacturing and testing facilities in India and manufactured HTLS conductor having minimum thirty three (33) number of strands or minimum 150 sq. mm Aluminum cross section area shall also be considered, provided the bidder meets the following requirements.</p>	As per NIT
37	<p>Clause No. 1.9, Section – IFB - Invitation For Bid, Vol-I</p> <p>Bidders are permitted to quote for one or all package(s). Multi-package rebate(s) offered if any, shall be considered in evaluation. Based on such evaluation, award of contracts would be made to one or more bidder(s) for one or all package(s) on the basis of least evaluated cost to the Purchaser.</p>	<p>Bidders are permitted to quote for one or all <u>more</u> package(s). Multi-package rebate(s) offered if any, shall be considered in evaluation. Based on such evaluation, award of contracts would be made to one or more bidder(s) for one or all <u>more</u> package(s) on the basis of least evaluated cost to the Purchaser.</p>	<p>The clause No. 1.9, Section – IFB - Invitation For Bid, Vol-I Amended as under.</p> <p>Bidders are permitted to quote for one or more package(s). Multi-package rebate(s) offered if any, shall be considered in evaluation. Based on such evaluation, award of contracts would be made to one or more bidder(s) for one or more package(s) on the basis of least evaluated cost to the Purchaser.</p>

S. No	Reference NIT Clause/ Description	Bidders Query	DTL's Reply
38	<p>Clause No. 35B.1, Section -II Instructions to Bidders (ITB), Vol-I</p> <p>The Owner will carry out a detailed evaluation of the Price Bids Part (Part-II) of the bidders found techno-commercially successful. The Bid evaluation of Package I, II, III & IV shall be carried out package-wise. Multi-package rebate(s) offered, if any, shall also be considered in evaluation. Based on such evaluation, Award of Contract(s) would be made to one or more bidder(s) for one or all package(s) on the basis of least evaluated cost to the Employer.</p>	<p>The Owner will carry out a detailed evaluation of the Price Bids Part (Part-II) of the bidders found techno-commercially successful. The Bid evaluation of Package I, II, III & IV shall be carried out package-wise. Multi-package rebate(s) offered, if any, shall also be considered in evaluation. Based on such evaluation, Award of Contract(s) would be made to one or more bidder(s) for one or all <u>more</u> package(s) on the basis of least evaluated cost to the Employer.</p>	<p>The Clause No. 35B.1, Section -II Instructions To Bidders (ITB), Vol-I Amended as</p> <p>The Owner will carry out a detailed evaluation of the Price Bids Part (Part-II) of the bidders found techno-commercially successful. The Bid evaluation of Package I, II, III & IV shall be carried out package-wise. Multi-package rebate(s) offered, if any, shall also be considered in evaluation. Based on such evaluation, Award of Contract(s) would be made to one or more bidder(s) for one or more package(s) on the basis of least evaluated cost to the Employer.</p>
39	<p>Clause No. 2.0: Technical Experience, Sub Clause No. 2.1- Experience of Manufacturer:</p> <p>2.1(ii) Indian Conductor manufacturer not meeting the requirement as stipulated above at clause 2.1(i), it can also participate provided such manufacturers have manufactured,</p>	<p>Request for Amendment:</p> <p>Indian Conductor manufacturer not meeting the requirement as stipulated above at clause 2.1(i), it can also participate provided such manufacturers have manufactured, tested and supplied at least one thousand (1000) km of ACSR/AAAC/ ACAR/ AACSR conductor and ten (10) km of High Temperature Low Sag</p>	<p>As per NIT.</p>

S. No	Reference NIT Clause/ Description	Bidders Query	DTL's Reply
	tested and supplied at least one thousand (1000) km of ACSR/ AAAC/ ACAR/ AACSR conductor and ten (10) km of High Temperature Low Sag (HTLS except GAP type) conductor of same technology as that of conductor being offered and having a minimum thirty three (33)-number of strands or minimum 150 sq. mm Aluminum cross section area during last seven (7) years and the same should have been in satisfactory operation for a period of at least 01(one) year as on the originally scheduled date of bid opening.	(HTLS except GAP type) conductor of same technology as that of conductor being offered and having a minimum thirty three (33)-number of strands or minimum 150 sq. mm Aluminum cross section area during last seven (7) years and the same should have been in satisfactory operation for a period of at least 01(one) year as on the originally scheduled date of bid opening. Remarks This will allow Indian Conductor manufacturer like us to participate enabling DTL to get best techno-commercial bid.	
40	Clause No. 2.0: Technical Experience, Sub Clause No. 2.1- Experience of Manufacturer: 2.1(iii) Note: 1: If Principal/collaborator /sister concern conductor manufacturer company is a foreign entity then it should submit performance certificate from an end user located in a country other than the country where the product has been manufactured during last seven (7**) years and must be in satisfactory operation# for at least two (2) years as on the originally scheduled date of bid opening.	Request for Amendment: Note: 1 Principal/collaborator/sister If concern conductor/ core manufacturer company is a foreign entity then it should submit performance certificate from an end user located in a country other than the country where the product has been manufactured during last seven (7**) years and must be in satisfactory operation # for at least two (2) years as on the originally scheduled date of bid opening. Remarks This will allow Indian Conductor manufacturer like us who will qualify considering Principal/Collaborator as Carbon Core Technology owner. This will further help DTL to receive best techno-commercial bid enabling enhanced competition	As per NIT.
41	Clause No. 2.0: Technical Experience Clause No. 2.1 (Experience of Manufacturer:) of Annexure-A (Qualifying Requirements of bidders), Sec-III: Bid Data Sheet. (ii) Indian Conductor manufacturer not meeting the requirement as stipulated above at clause 2.1(i), it can also participate provided such manufacturers have manufactured, tested and supplied at least one thousand (1000) km of ACSR/ AAAC/ ACAR/ AACSR conductor and ten (10) km of High Temperature Low Sag (HTLS except GAP type) conductor of same technology as that of conductor being offered and having a minimum thirty three (33)-number of strands or	Request for amendment 2.0 Technical Experience; 2.1 Experience of Manufacturer: - The bidder shall be a manufacturer of conductor for the last seven years. The Manufacturer's experience should include the following: (ii) Indian Conductor manufacturer not meeting the requirement as stipulated above at clause 4.1(i), it can also participate provided such manufacturers have manufactured, tested and supplied at least one thousand (1000) km of ACSR/ AAAC/ ACAR/ AACSR conductor and ten (10) Fifty (50) km of High Temperature Low Sag (HTLS except GAP type) conductor of same technology as that of conductor being offered and having a minimum thirty three (33) number of strands or minimum 150 sq. mm	As per NIT.

S. No	Reference NIT Clause/ Description	Bidders Query	DTL's Reply
	<p>minimum 150 sq. mm Aluminum cross section area during last seven (7) years and the same should have been in satisfactory operation for a period of at least 01(one) year as on the originally scheduled date of bid opening. OR</p> <p>(iii) In case, the Bidder is an Indian Entity meeting the requirement stipulated in above clause at 2.1 (ii) except HTLS Conductor, but has established manufacturing and testing facilities in India and manufactured HTLS conductor having minimum thirty-three (33)-number of strands or minimum 150 sq. mm Aluminum cross section area shall also be considered, provided the bidder meets the following requirements. The bidder must have manufactured HTLS conductor based on the technological support of the Principal/Parent/Subsidiary/Sister concern##company or Collaborator (s) and the bidder should have conducted following type tests on HTLS conductor manufactured in Indian facility as on the originally scheduled date of bid opening.</p> <p>A) On complete Conductor</p> <p>i) DC resistance test on stranded conductor</p> <p>ii) UTS test on stranded conductor at ambient & at designed elevated temperature (minimum 150 Deg C design temperature).</p> <p>B) On Conductor Strand/ Core</p> <p>i) Heat resistance test on Aluminum Alloy strands (not applicable for annealed aluminum).</p> <p>ii) Torsion and Elongation tests on core strands/ composite core.</p> <p>iii) Breaking load test on core strands/composite core and Aluminum/ Aluminum Alloy strands</p> <p>iv) Conductivity test on thermal resistant Aluminum / Aluminum Alloy strands.</p> <p>v) Glass transition temperature test (For composite core only).</p> <p>vi) Flexural Strength test (For composite core only).</p> <p>Note: The tests indicated at B) above</p>	<p>Aluminum cross section area during last seven (7) years and the same should have been in satisfactory operation for a period of at least 01(one) year as on the originally scheduled date of bid opening.</p> <p>OR</p> <p>(iii) In case, the Bidder is an Indian Entity meeting the requirement stipulated in above clause at 2.1 (ii) except HTLS Conductor, but has established manufacturing and testing facilities in India and manufactured HTLS conductor using indigenously manufactured composite core having minimum thirty-three (33)-number of strands or minimum 150 sq. mm Aluminum cross section area shall also be considered, provided the bidder meets the following requirements.</p> <p>The bidder must have manufactured HTLS conductor based on the technological support of the Principal/Parent/Subsidiary/Sister concern##company or Collaborator (s) using indigenously manufactured composite core and the bidder should have conducted following type tests on HTLS conductor manufactured in Indian facility as on the originally scheduled date of bid opening.</p> <p>A) On complete Conductor</p> <p>i) DC resistance test on stranded conductor</p> <p>ii) UTS test on stranded conductor at ambient & at designed elevated temperature (minimum 150 Deg C design temperature).</p> <p>B) On Conductor Strand/ Core</p> <p>i) Heat resistance test on Aluminum Alloy strands (not applicable for annealed aluminum).</p> <p>ii) Torsion and Elongation tests on core strands/ composite core.</p> <p>iii) Breaking load test on core strands/composite core and Aluminum/ Aluminum Alloy strands</p> <p>iv) Conductivity test on thermal resistant Aluminum / Aluminum Alloy strands.</p> <p>v) Glass transition temperature test (For composite core only).</p> <p>vi) Flexural Strength test (For composite core only).</p> <p>Note: The tests indicated at B) above should have been carried out by the Bidder/Licensee on their own or by their supplier of Aluminum alloy strands, core/core strands. Provided further, that the Principal/Collaborator(s)</p>	

S. No	Reference NIT Clause/ Description	Bidders Query	DTL's Reply
	<p>should have been carried out by the Bidder/Licensee on their own or by their supplier of aluminum alloy strands, core/core strands. Provided further, that the Principal/ Collaborator(s) Parent/ Subsidiary/ Sister concern company of the bidder meets the qualifying requirements as per clause 2.1 (i) mentioned above. However, in case of clause 2.1(iii) the warranty obligations for additional period of two (2) years over and above the warranty period as specified in the bidding documents shall be applicable for which an amount of 10% of the Ex-works cost of the HTLS conductor in the form of BG shall be furnished by the bidder. This performance guarantee shall be in addition to the Contract Performance Guarantee to be submitted by the bidder. Further, for 2.1(iii), the bidder shall also submit the following along with the bid: (i) A legally enforceable undertaking (jointly with the Collaborator(s)/ parent /principal/subsidiary/sister concern##company to guarantee quality, timely supply, performance and warranty obligations as specified for the core/conductor.</p> <p>(ii) A confirmation letter from the Collaborator(s)/parent/principal/subsidiary/sister concern##company stating that it shall furnish performance guarantee for an amount of 10 % (Ten percent) of the Ex-works cost of HTLS conductor to be supplied in this package. This performance guarantee shall be in addition to the Contract Performance Guarantee to be submitted by the bidder.</p> <p>(iii) A valid collaboration agreement for technology transfer / license to design, manufacture, test and supply of 220kV or above voltage level HTLS conductor/core of same technology as that of the conductor/core being offered in this package in India.</p> <p>Note: 1: If Principal/collaborator/sister concern conductor manufacturer company is a foreign entity then it should submit performance certificate from an end user located in a country</p>	<p>Parent/Subsidiary/Sister concern company of the bidder meets the qualifying requirements as per clause 2.1 (i) mentioned above.</p> <p>However, in case of clause 2.1(iii) the warranty obligations for additional period of two (2) years over and above the warranty period as specified in the bidding documents shall be applicable for which an amount of 10% of the Ex-works cost of the HTLS conductor in the form of BG shall be furnished by the bidder. This performance guarantee shall be in addition to the Contract Performance Guarantee to be submitted by the bidder.</p> <p>Further, for 2.1(iii), the bidder shall also submit the following along with the bid:</p> <p>(i) A legally enforceable undertaking (jointly with the Collaborator(s)/ parent /principal/subsidiary/sister concern## company to guarantee quality, timely supply, performance and warranty obligations as specified for the core/conductor.</p> <p>(ii) A confirmation letter from the Collaborator(s)/parent/principal/subsidiary/sister concern##company stating that it shall furnish performance guarantee for an amount of 10 % (Ten percent) of the Ex-works cost of HTLS conductor to be supplied in this package. This performance guarantee shall be in addition to the Contract Performance Guarantee to be submitted by the bidder.</p> <p>(iii) A valid collaboration agreement for technology transfer / license to design, manufacture, test and supply of 220kV or above voltage level HTLS conductor/core of same technology as that of the conductor/core being offered in this package in India.</p> <p>Note 1: If Principal/collaborator/sister concern conductor manufacturer company is a foreign entity then it should submit performance certificate from an end user located in a country other than the country where the product has been manufactured during last seven (7 **) years and must be in satisfactory operation# for at least two (2) years as on the originally scheduled date of bid opening.</p> <p>Note 2: In case bidder is a holding company, the technical experience referred to in clause 2.1 above shall be of that holding company only (i.e. excluding its subsidiary/parent/group /sister concern#companies etc.). In case bidder is a</p>	

S. No	Reference NIT Clause/ Description	Bidders Query	DTL's Reply
	<p>other than the country where the product has been manufactured during last seven (7**) years and must be in satisfactory operation# for at least two (2) years as on the originally scheduled date of bid opening.</p> <p>Note2: In case bidder is a holding company, the technical experience referred to in clause 2.1 above shall be of that holding company only (i.e. excluding its subsidiary/parent /group /sister concern##companies etc.). In case bidder is a subsidiary of a holding company, the technical experience referred to in clause 2.1 above shall be of that subsidiary company only (i.e. excluding its holding company).</p>	<p>subsidiary of a holding company, the technical experience referred to in clause 2.1 above shall be of that subsidiary company only (i.e. excluding its holding company).</p> <p>OR</p> <p>(iv) The Bidder should have manufactured, tested and supplied at least one hundred (100) km of High temperature low sag (HTLS) conductor using indigenously manufactured composite core (expect GAP conductor) of same technology as that of the conductor being offered in this package in any Indian State Transmission Utility in India within the last seven (7) years as on the originally scheduled last date of bid submission (soft copy), and the same project should have been in satisfactory operation as on the originally scheduled last date of bid submission.</p>	
42	General	<p>1. Will the type test on the composite core be accepted only if it is conducted on the core manufactured at the same facility from which it will be supplied for the project?</p> <p>For example, if the core is manufactured at a foreign facility and the type test is conducted there, but for this project the core will be supplied from another factory located in a different country, will the earlier type test be considered valid, or will a new type test be required?</p>	Latest CEA Guidelines shall be applicable as per NIT.
43	<p>Clause No. 2.0: Technical Experience</p> <p>Clause No. 2.1 (Experience of Manufacturer:) of Annexure-A (Qualifying Requirements of bidders), Sec-III: Bid Data Sheet.</p> <p>2.0 Technical Experience;</p> <p>2.1 Experience of Manufacturer:-</p> <p>The bidder shall be a manufacturer of conductor for the last seven years. The Manufacturer's experience should include the following:</p> <p>(i) The Indian Conductor Manufacturer should have manufactured, tested and supplied at least 33% of the estimated quantity (i.e. length of conductor in kms) of High Temperature Low Sag (except GAP type) conductor having a minimum thirty three (33) -number of strands or minimum 150 sq. mm</p>	<p>Consider inclusion of an additional clause after Clause (iii) of Clause 2.1, 'Experience of Manufacturer' under Section-III (Bid Data Sheet), as part of the Qualifying Requirements, to enable participation of Made-in-India CFCC Conductor manufacturers, as follows:</p> <p>Option 1:</p> <p>Clause 2.1 (i) – the last line may suitably be amended with “ the same should have been in satisfactory operation for a period of at least 6 months as on the originally scheduled date of bid opening”.</p> <p>OR</p> <p>Option 2:</p> <p>Clause 2.1 (ii) – the forth line - may suitably be amended with “and at least ten (10) km of HTLS Conductor of the same technology as that of conductor being offered and satisfactory operation period may please be amended to (6)six months.</p> <p>OR</p>	As per NIT.

S. No	Reference NIT Clause/ Description	Bidders Query	DTL's Reply
	<p>Aluminum cross section area of same technology as that of conductor being offered during last seven (7) years and the same should have been in satisfactory operation for a period of at least 02 years as on the originally scheduled date of bid opening.</p> <p>OR</p> <p>(ii) Indian Conductor manufacturer not meeting the requirement as stipulated above at clause 2.1(i), it can also participate provided such manufacturers have manufactured, tested and supplied at least one thousand (1000) km of ACSR/ AAAC/ ACAR/ AACSR conductor and ten (10) km of High Temperature Low Sag (HTLS except GAP type) conductor of same technology as that of conductor being offered and having a minimum thirty three (33)-number of strands or minimum 150 sq. mm Aluminum cross section area during last seven (7) years and the same should have been in satisfactory operation for a period of at least 01(one) year as on the originally scheduled date of bid opening.</p> <p>OR</p> <p>(iii) In case, the Bidder is an Indian Entity meeting the requirement stipulated in above clause at 2.1 (ii) except HTLS Conductor, but has established manufacturing and testing facilities in India and manufactured HTLS conductor</p>	<p>Option 3: Clause 2.1 (iii) No change required OR</p> <p>Option 4: - Clause 2.1 (iv)</p> <p>Since Clause 2.1 (iii) requires technological support but for companies with Indian technology who have supplied at least 100km in a single project does not require any technology license, therefore the following clause may be added as 2.1 (iv):</p> <p>“The Bidder should have manufactured, tested, and supplied at least one hundred (100) km of High Temperature Low Sag (HTLS) conductor of the same technology as that of the conductor being offered in this package, in one single transmission line project of any Indian State Transmission Utility in India within the last seven (7) years as on the originally scheduled last date of bid submission (soft copy), and the same project should have been in satisfactory operation as on the originally scheduled last date of bid submission (soft copy).”</p>	
44	<p>Clause No. 2.0: Technical Experience</p> <p>Clause No. 2.1 (Experience of Manufacturer:) of Annexure-A (Qualifying Requirements of bidders), Sec-III: Bid Data Sheet.</p> <p>(iii) In case, the Bidder is an Indian Entity meeting the requirement stipulated in above clause at 2.1 (ii) except HTLS Conductor, but has established manufacturing and testing facilities in India and manufactured HTLS conductor having minimum thirty-three (33)-number of strands or</p>	<p>4.0 Technical Experience;</p> <p>4.1 Experience of Manufacturer</p> <p>4.1 (iii) In case, the Bidder is an Indian Entity meeting the requirement stipulated in above clause at 4.1(ii) except HTLS Conductor, but has established manufacturing and testing facilities in India and manufactured HTLS conductor having minimum thirty-three (33)-number of strands or minimum 150 sq. mm Aluminum cross section area shall also be considered, provided the bidder meets the following requirements. The bidder must have manufactured HTLS conductor based on the</p>	As per NIT.

S. No	Reference NIT Clause/ Description	Bidders Query	DTL's Reply
	<p>minimum 150 sq. mm Aluminum cross section area shall also be considered, provided the bidder meets the following requirements. The bidder must have manufactured HTLS conductor based on the technological support of the Principal/Parent/Subsidiary/Sister concern###company or Collaborator (s) and the bidder should have conducted following type tests on HTLS conductor manufactured in Indian facility as on the originally scheduled date of bid opening.</p> <p>A) On complete Conductor</p> <p>i) DC resistance test on stranded conductor</p> <p>ii) UTS test on stranded conductor at ambient & at designed elevated temperature (minimum 150 Deg C design temperature).</p> <p>B) On Conductor Strand/ Core</p> <p>i) Heat resistance test on Aluminum Alloy strands (not applicable for annealed Aluminum).</p> <p>ii) Torsion and Elongation tests on core strands/ composite core.</p> <p>iii) Breaking load test on core strands/composite core and Aluminum/ Aluminum Alloy strands</p> <p>iv) Conductivity test on thermal resistant Aluminum / Aluminum Alloy strands.</p> <p>v) Glass transition temperature test (For composite core only).</p> <p>vi) Flexural Strength test (For composite core only).</p> <p>Note: The tests indicated at B) above should have been carried out by the Bidder/Licensee on their own or by their supplier of Aluminum alloy strands, core/core strands. Provided further, that the Principal/Collaborator(s) Parent/Subsidiary/Sister concern company of the bidder meets the qualifying requirements as per clause 2.1 (i) mentioned above. However, in case of clause 2.1(iii), the warranty obligations for additional period of two (2) years over and above the warranty period as specified in the bidding documents shall be applicable for</p>	<p>technological support of the Principal/Parent/Subsidiary/Sister concern###company or Collaborator (s) <u>or technology provider (In case of composite core)</u> and the bidder should have conducted following type tests on HTLS conductor manufactured in Indian facility as on the originally scheduled date of bid opening.</p> <p>A) On complete Conductor</p> <p>i) DC resistance test on stranded conductor</p> <p>ii) UTS test on stranded conductor at ambient & at designed elevated temperature (minimum 150 Deg C design temperature).</p> <p>B) On Conductor Strand/ Core</p> <p>i) Heat resistance test on Aluminum Alloy strands (not applicable for annealed Aluminum).</p> <p>ii) Torsion and Elongation tests on core strands/ composite core.</p> <p>iii) Breaking load test on core strands/composite core and Aluminum/ Aluminum Alloy strands</p> <p>iv) Conductivity test on thermal resistant Aluminum / Aluminum Alloy strands.</p> <p>v) Glass transition temperature test (For composite core only).</p> <p>vi) Flexural Strength test (For composite core only).</p> <p>Note: The tests indicated at B) above should have been carried out by the Bidder/Licensee on their own or by their supplier of Aluminum alloy strands, core/core strands. Provided further, that the Principal/Collaborator(s) Parent/Subsidiary/Sister concern company of the bidder meets the qualifying requirements as per clause 4.1 (i) mentioned above <u>or in case bidder is offering nonmetallic core (carbon core) conductor. Then experience of supply of atleast 200 Km core by the principal manufacturer (Licensor) as an alternative to conductor will be acceptable. Subject to following criteria should meet by principal manufacturer (Licensor)</u></p> <p><u>The Qualified Manufacturer shall be a manufacturer of conductor/core for the last five years and type tested.</u></p> <p><u>The Qualified Manufacturer should have manufactured, tested and Supplied at least two hundred (200) km of HTLS with non-metallic core (carbon) conductor/core of same technology as that of the conductor being offered in this package having minimum thirty</u></p>	

S. No	Reference NIT Clause/ Description	Bidders Query	DTL's Reply
	<p>which an amount of 10% of the Ex-works cost of the HTLS conductor in the form of BG shall be furnished by the bidder. This performance guarantee shall be in addition to the Contract Performance Guarantee to be submitted by the bidder. Further, for 2.1(iii), the bidder shall also submit the following along with the bid: (i) A legally enforceable undertaking (jointly with the Collaborator(s)/ parent /principal/subsidiary/sister concern##company to guarantee quality, timely supply, performance and warranty obligations as specified for the core/conductor.</p> <p>(ii) A confirmation letter from the Collaborator(s)/parent/principal/subsidiary/sister concern##company stating that it shall furnish performance guarantee for an amount of 10 % (Ten percent) of the Ex-works cost of HTLS conductor to be supplied in this package. This performance guarantee shall be in addition to the Contract Performance Guarantee to be submitted by the bidder.</p> <p>(iii) A valid collaboration agreement for technology transfer / license to design, manufacture, test and supply of 220kV or above voltage level HTLS conductor/core of same technology as that of the conductor/core being offered in this package in India.</p> <p>Note: 1: If Principal/collaborator/sister concern conductor manufacturer company is a foreign entity then it should submit performance certificate from an end user located in a country other than the country where the product has been manufactured during last seven (7**) years and must be in satisfactory operation# for at least two (2) years as on the originally scheduled date of bid opening.</p>	<p><u>(30) number of conductive strands or 100 sq. mm. Aluminum cross section area/having at least same or more number of conductive strands as that of the conductor being offered in last ten (10) years as on originally scheduled date of bid opening, and the same should have been in satisfactory operation for a period of at least two (2) years in India as on the date of bid opening.</u></p> <p>However, in case of clause 4.1(iii), the warranty obligations for additional period of two (2) years over and above the warranty period as specified in the bidding documents shall be applicable for which an amount of 10% of the Ex-works cost of the HTLS conductor in the form of BG shall be furnished by the bidder. This performance guarantee shall be in addition to the Contract Performance Guarantee to be submitted by the bidder.</p> <p>Further, for 4.1(iii), the bidder shall also submit the following along with the bid:</p> <p>(i) A legally enforceable undertaking (jointly with the Collaborator(s)/ parent /principal/subsidiary/sister concern##company to guarantee quality, timely supply, performance and warranty obligations as specified for the core/conductor.</p> <p>(ii) A confirmation letter from the Collaborator(s)/parent/principal/subsidiary/sister concern##company <u>or or technology provider (In case of composite core)</u> stating that it shall furnish performance guarantee for an amount of 10 % (Ten percent) of the Ex-works cost of HTLS conductor to be supplied in this package. This performance guarantee shall be in addition to the Contract Performance Guarantee to be submitted by the bidder.</p> <p>(iii) A valid collaboration agreement for technology transfer / license to design, manufacture, test and supply of 220kV or above voltage level HTLS conductor/core of same technology as that of the conductor/core being offered in this package in India.</p> <p>Note: 1: If Principal/collaborator/sister concern <u>or technology provider (In case of composite core) / conductor manufacturer company</u> is a foreign entity then it should submit performance certificate from an end user located in a country other than the country where the product has been manufactured during last seven (7**) years</p>	

S. No	Reference NIT Clause/ Description	Bidders Query	DTL's Reply
		and must be in satisfactory operation# for at least two (2) years as on the originally scheduled date of bid opening.	
45	<p>Clause No. 2.0: Technical Experience</p> <p>Clause No. 2.1 (Experience of Manufacturer:) of Annexure-A (Qualifying Requirements of bidders), Sec-III: Bid Data Sheet.</p> <p>(ii) Indian Conductor manufacturer not meeting the requirement as stipulated above at clause 2.1(i), it can also participate provided such manufacturers have manufactured, tested and supplied at least one thousand (1000) km of ACSR/ AAAC/ ACAR/ AACSR conductor and ten (10) km of High Temperature Low Sag (HTLS except GAP type) conductor of same technology as that of conductor being offered and having a minimum thirty three (33)-number of strands or minimum 150 sq. mm Aluminum cross section area during last seven (7) years and the same should have been in satisfactory operation for a period of at least 01(one) year as on the originally scheduled date of bid opening. OR</p> <p>(iii) In case, the Bidder is an Indian Entity meeting the requirement stipulated in above clause at 2.1 (ii) except HTLS Conductor, but has established manufacturing and testing facilities in India and manufactured HTLS conductor having minimum thirty-three (33)-number of strands or minimum 150 sq. mm Aluminum cross section area shall also be considered, provided the bidder meets the following requirements. The bidder must have manufactured HTLS conductor based on the technological support of the Principal/Parent/Subsidiary/Sister concern##company or Collaborator (s) and the bidder should have conducted following type tests on HTLS conductor manufactured in Indian facility as on the originally scheduled date of bid opening.</p>	<p>2.0 Technical Experience;</p> <p>2.1 Experience of Manufacturer: -</p> <p>The bidder shall be a manufacturer of conductor for the last seven years. The Manufacturer's experience should include the following:</p> <p>(ii) Indian Conductor manufacturer not meeting the requirement as stipulated above at clause 4.1(i), it can also participate provided such manufacturers have manufactured, tested and supplied at least one thousand (1000) km of ACSR/ AAAC/ ACAR/ AACSR conductor and ten (10) Fifty (50) km of High Temperature Low Sag (HTLS except GAP type) conductor of same technology as that of conductor being offered and having a minimum thirty-three (33)-number of strands or minimum 150 sq. mm Aluminum cross section area during last seven (7) years and the same should have been in satisfactory operation for a period of at least 01(one) year 5 months as on the originally scheduled date of bid opening.</p> <p>OR</p> <p>(iii) In case, the Bidder is an Indian Entity meeting the requirement stipulated in above clause at 2.1 (ii) except HTLS Conductor, but has established manufacturing and testing facilities in India and manufactured HTLS conductor using indigenously manufactured composite core having minimum thirty-three (33)-number of strands or minimum 150 sq.mm Aluminum cross section area shall also be considered, provided the bidder meets the following requirements.</p> <p>The bidder must have manufactured HTLS conductor based on the technological support of the Principal/Parent/Subsidiary/ Sister concern##company or Collaborator (s) using indigenously manufactured composite core and the bidder should have conducted following type tests on HTLS conductor manufactured in Indian facility as on the originally scheduled date of bid opening.</p> <p>A) On complete Conductor</p> <p>i) DC resistance test on stranded conductor</p> <p>ii) UTS test on stranded conductor at ambient & at designed elevated temperature (minimum 150 Deg C design temperature).</p>	As per NIT.

S. No	Reference NIT Clause/ Description	Bidders Query	DTL's Reply
	<p>A) On complete Conductor i) DC resistance test on stranded conductor ii) UTS test on stranded conductor at ambient & at designed elevated temperature (minimum 150 Deg C design temperature).</p> <p>B) On Conductor Strand/ Core i) Heat resistance test on Aluminum Alloy strands (not applicable for annealed aluminum). ii) Torsion and Elongation tests on core strands/ composite core. iii) Breaking load test on core strands/composite core and Aluminum/ Aluminum Alloy strands iv) Conductivity test on thermal resistant Aluminum / Aluminum Alloy strands. v) Glass transition temperature test (For composite core only). vi) Flexural Strength test (For composite core only).</p> <p>Note: The tests indicated at B) above should have been carried out by the Bidder/Licensee on their own or by their supplier of aluminum alloy strands, core/core strands. Provided further, that the Principal/ Collaborator(s) Parent/ Subsidiary/ Sister concern company of the bidder meets the qualifying requirements as per clause 2.1 (i) mentioned above. However, in case of clause 2.1(iii) the warranty obligations for additional period of two (2) years over and above the warranty period as specified in the bidding documents shall be applicable for which an amount of 10% of the Ex-works cost of the HTLS conductor in the form of BG shall be furnished by the bidder. This performance guarantee shall be in addition to the Contract Performance Guarantee to be submitted by the bidder. Further, for 2.1(iii), the bidder shall also submit the following along with the bid: (i) A legally enforceable undertaking (jointly with the Collaborator(s)/</p>	<p>B) On Conductor Strand/ Core i) Heat resistance test on Aluminum Alloy strands (not applicable for annealed Aluminum). ii) Torsion and Elongation tests on core strands/ composite core. iii) Breaking load test on core strands/composite core and Aluminum/ Aluminum Alloy strands iv) Conductivity test on thermal resistant Aluminum / Aluminum Alloy strands. v) Glass transition temperature test (For composite core only). vi) Flexural Strength test (For composite core only).</p> <p>Note: The tests indicated at B) above should have been carried out by the Bidder/Licensee on their own or by their supplier of Aluminum alloy strands, core/core strands. Provided further, that the Principal/Collaborator(s) Parent/Subsidiary/Sister concern company of the bidder meets the qualifying requirements as per clause 2.1 (i) mentioned above. However, in case of clause 2.1(iii), the warranty obligations for additional period of two (2) years over and above the warranty period as specified in the bidding documents shall be applicable for which an amount of 10% of the Ex-works cost of the HTLS conductor in the form of BG shall be furnished by the bidder. This performance guarantee shall be in addition to the Contract Performance Guarantee to be submitted by the bidder. Further, for 2.1(iii), the bidder shall also submit the following along with the bid: (i) A legally enforceable undertaking (jointly with the Collaborator(s)/ parent /principal/subsidiary/sister concern company to guarantee quality, timely supply, performance and warranty obligations as specified for the core/conductor. (ii) A confirmation letter from the Collaborator(s)/parent/principal/subsidiary/sister concern company stating that it shall furnish performance guarantee for an amount of 10 % (Ten percent) of the Ex-works cost of HTLS conductor to be supplied in this package. This performance guarantee shall be in addition to the Contract Performance Guarantee to be submitted by the bidder.</p>	

S. No	Reference NIT Clause/ Description	Bidders Query	DTL's Reply
	<p>parent /principal/subsidiary/sister concern##company to guarantee quality, timely supply, performance and warranty obligations as specified for the core/conductor.</p> <p>(ii) A confirmation letter from the Collaborator(s)/parent/principal/subsidiary/sister concern##company stating that it shall furnish performance guarantee for an amount of 10 % (Ten percent) of the Ex-works cost of HTLS conductor to be supplied in this package. This performance guarantee shall be in addition to the Contract Performance Guarantee to be submitted by the bidder.</p> <p>(iii) A valid collaboration agreement for technology transfer / license to design, manufacture, test and supply of 220kV or above voltage level HTLS conductor/core of same technology as that of the conductor/core being offered in this package in India.</p> <p>Note: 1: If Principal/collaborator/sister concern conductor manufacturer company is a foreign entity then it should submit performance certificate from an end user located in a country other than the country where the product has been manufactured during last seven (7**) years and must be in satisfactory operation# for at least two (2) years as on the originally scheduled date of bid opening.</p> <p>Note2: In case bidder is a holding company, the technical experience referred to in clause 2.1 above shall be of that holding company only (i.e. excluding its subsidiary/parent /group /sister concern##companies etc.). In case bidder is a subsidiary of a holding company, the technical experience referred to in clause 2.1 above shall be of that subsidiary company only (i.e. excluding its holding company).</p>	<p>(iii) A valid collaboration agreement for technology transfer / license to design, manufacture, test and supply of 220kV or above voltage level HTLS conductor/core of same technology as that of the conductor/core being offered in this package in India.</p> <p>Note: 1: If Principal/collaborator/sister concern conductor manufacturer company is a foreign entity then it should submit performance certificate from an end user located in a country other than the country where the product has been manufactured during last seven (7**) years and must be in satisfactory operation# for at least two (2) years as on the originally scheduled date of bid opening.</p> <p>Note2: In case bidder is a holding company, the technical experience referred to in clause 2.1 above shall be of that holding company only (i.e. excluding its subsidiary/parent/group/sister concern##companies etc.). In case bidder is a subsidiary of a holding company, the technical experience referred to in clause 2.1 above shall be of that subsidiary company only (i.e. excluding its holding company).</p> <p>OR</p> <p>(iv) The Bidder should have manufactured, tested and supplied at least one hundred (100) km of High temperature low sag (HTLS) conductor using indigenously manufactured composite core (expect GAP conductor) of same technology as that of the conductor being offered in this package having minimum thirty (30) number of strands or 150 sq. mm. aluminum cross section area in last Seven(7) years as on the originally scheduled last date of bid submission mentioned above.</p>	
46	Clause No. 2.0: Technical Experience Clause No. 2.1 (Experience of	Request for Relaxation of Qualification Requirements:	As per NIT.

S. No	Reference NIT Clause/ Description	Bidders Query	DTL's Reply
	<p>Manufacturer:) of Annexure-A (Qualifying Requirements of bidders), Sec-III: Bid Data Sheet.</p> <p>2.0 Technical Experience;</p> <p>2.1 Experience of Manufacturer: The bidder shall be a manufacturer of conductor for the last seven years. The Manufacturer's experience should include the following:</p> <p>(i) The Indian Conductor Manufacturer should have manufactured, tested and supplied at least 33% of the estimated quantity (i.e. length of conductor in kms) of High Temperature Low Sag (except GAP type) conductor having a minimum thirty three (33) -number of strands or minimum 150 sq. mm Aluminum cross section area of same technology as that of conductor being offered during last seven (7) years and the same should have been in satisfactory operation for a period of at least 02 years as on the originally scheduled date of bid opening.</p> <p>OR</p> <p>(ii) Indian Conductor manufacturer not meeting the requirement as stipulated above at clause 2.1(i), it can also participate provided such manufacturers have manufactured, tested and supplied at least one thousand (1000) km of ACSR/ AAAC/ ACAR/ AACSR conductor and ten (10) km of High Temperature Low Sag (HTLS except GAP type) conductor of same technology as that of conductor being offered and having a minimum thirty three (33)-number of strands or minimum 150 sq. mm Aluminum cross section area during last seven (7) years and the same should have been in satisfactory operation for a period of at least 01(one) year as on the originally scheduled date of bid opening.</p> <p>OR</p> <p>(iii) In case, the Bidder is an Indian Entity meeting the requirement stipulated in above clause at 2.1 (ii)</p>	<p>We respectfully request the relaxation of the current QR for the procurement of HTLS conductors. Specifically, we propose the following changes to encourage fair competition:</p> <p>1. Relaxation of QR for HTLS Conductor Supply:</p> <p>Option A: A bidder should have supplied a minimum of 200 kilo meters of HTLS conductors and the same should have been in successful operation for at least 2 years from the date of bid opening. OR</p> <p>Option B: (i) A bidder should have manufactured and supplied a minimum of 1,000 kilometers of ACSR/AAC/ACAR/ AACSR having same or more no of strands as that of the conductor being offered in this package during last 5 years.</p> <p>(ii) Bidder have established manufacturing facility & developed high Temperature Low Sag conductor (HTLS) of same technology (irrespective of Solid/stranded in case of Non-metallic core) as that of the conductor being offered in the package having minimum Thirty (30) number of strands or 100 sq.mm Aluminum cross se ion area and should have carried out at least UTS test & DC resistance test on stranded HTLS Conductor.</p> <p>(iii) If the offered HTLS Conductor and / or suitable Hard wares & Accessories are not type tested their offer may be considered subject to the condition that the equipment shall have to be type tested before commencement of supply at no additional cost to the Utility but type test should have been successfully completed before completion schedule and completion schedule should not be affected on this account.</p> <p>iv) The bidder may use core of any special material which shall be supplied from the qualified manufacturer(s) meeting the following requirements: The qualified manufacturer should have manufactured tested and supplied at least two hundred (200) Kms. of the same type of core as used in the HTLS Conductor being offered in the package. Further, HTLS Conductor manufactured from the supplied core of such manufacturers should have been in satisfactory operation for a period of at least two (2) years in</p>	

S. No	Reference NIT Clause/ Description	Bidders Query	DTL's Reply
	except HTLS Conductor, but has established manufacturing and testing facilities in India and manufactured HTLS conductor.....	India within last 10 years. 2. Additional Bank Guarantee: For manufacturers qualifying under Option B, we propose that they submit an additional bank guarantee of 10%, valid up to 5 years from the date of completion of the project, in addition to the standard performance bank guarantee. These relaxations will enable more manufacturers, including those with indigenous technological solutions, to participate in the procurement process. It will also encourage healthy competition, leading to more cost-effective solutions for the utilities and ultimately benefiting the public funds.	
47	Annexure-A (Qualifying Requirements of bidders), Sec-III: Bid Data Sheet.	request you to kindly consider either withdrawing the present tender or issuing a corrigendum by amending the qualifying requirement suitably from the attached QRs of UPPTCL, HVPNL, APTransco, JKPTCL & PGCIL. This will not only ensure healthy competition but also result in substantial savings to DTL thereby promoting cost-effective solutions and safeguarding Public Funds.	As per NIT.
48	Clause 2.2- Experience of Erector of Annexure-A (Qualifying Requirements of bidders), Sec-III: Bid Data Sheet. (ii) The erectors who do not have experience for HTLS conductor stringing shall also be considered if stringing has been completed for any type of conductor of 220kV or higher voltage transmission line for cumulative circuit kilo meters of not less than 100 km as a prime contractor or as a partner in a Joint Venture+ within the last seven (7) years and the same should have been in satisfactory operation for a period of at least 02yearsas on the originally scheduled date of bid opening.	<ul style="list-style-type: none"> • The experience period may be considered as ten (10) years instead of seven (7) years, as most projects between 2020 and 2022 were affected due to the COVID-19 pandemic. Many projects in the completion stage were delayed and not closed on time due to lockdown restrictions • Erectors who do not have experience in HTLS conductor stringing may also be considered if stringing has been completed for any type of conductor of 132kV or higher voltage transmission line as a prime contractor. This will enable more eligible bidders, including us, to participate in the tender. • As the Minimum Average Annual Turnover (MAAT) requirement varies for different packages, we request that the qualification criteria under Clause 2.2 -Experience of Erector may also be considered separately for Package I and IV and Packages II and III, based on the circuit length and value of the tender. 	As per NIT. As per NIT Please refer to Cl. No. 35B.1, Section-II ITB, Volume-1 of NIT "The Bid evaluation of Package I, II III & IV shall be carried out package-wise." Additionally, please refer to

S. No	Reference NIT Clause/ Description	Bidders Query	DTL's Reply
			Cl. No 10.3 (c). Section-II ITB, Volume-I of NIT also "Bidders to qualify for more than one package, their financial position i.e. MAAT & LA shall not be less than the sum of the requirement of MAAT & LA for the packages they propose to qualify for."