

	Tender No	NETC/Ghy/OTE/O&M/TLISA/2022-23/15		Amendment-01
	Package Name	Supply, Supervision of Installation & Commissioning of Transmission Line Surge Arrestors (TLISA) for 400 kV D/C Silchar-Byrnihat -Azara - Bongaigaon Transmission Line		
	<u>TECHNICAL</u>			
Sr No.	Clause Description	Specification	As per Existing Bid Document	As Amended
1	Clause 3.0 Sr. No. d) Page 4 of 13	CONSTRUCTIONAL FEATURES	Seals shall be provided in such a way that these are always effectively maintained even when discharging rated lightning current. There shall be no extra holes on the TLISA so as to disallow moisture ingress.	Separate Sealing arrangement shall not be required.
2	Clause 4.0 Sr. No. c) Page 4 of 13	FITTINGS AND ACCESSORIES	Suspension clamp assembly shall be provided with Aluminium clamp, galvanized steel clamp straps. Suspension clamp shall be suitable for conductor (twin moose ACSR conductor 400kV) range from 9.5 to 65 mm diameter. Galvanized steel line palm with M20x55 min full thread shall be provided. M12 connectoin shall be there on galvanized steel palm for shorting copper braid/ cable (of min. 50mm width)	Suspension clamp assembly shall be provided with Aluminium clamp, galvanized steel clamp straps. Suspension clamp shall be suitable for conductor (twin moose ACSR conductor 400kV-horizontal arrangement) range from 9.5 to 65 mm diameter. Galvanized steel line palm shall be provided.The lugs provided should be sutiable for Tower end existing hole of 17.5mm.
3	Clause 5.0 Sr. No. (c) Page 5-6 of 13	Routine Tests	5. Sealing test: water dip test at 1.5m depth from top for 30 minutes during assembly of stacks(followed by other routine test i.e., PD measurement, reference voltage, residual voltage & IR measurement).	5. Sealing test: - As per IEC 60099-4, it is not part of routine test.

4	Page 8 of 13	Drawing	1) Arrester height 4355 +/- 75mm 2) Top height 235 mm 3) Cu braid strip 50mm width approx 450 mm	The attached drawing is only for informative, the height of TLSA shall be suitable for 420kV as per bidders own design, preferably POWERGRID tested and approved.
5	Page 7 of 13 Sr. No. 3	Basic Technical Specification of 400kV	No. of units per arrester - 3 units of 140kV each	No. of units per arrester - units shall depend on bidder's design.
6	Page 7 of 13 Sr. No. 9	Basic Technical Specification of 400kV TLSA	Maximum continuous operating voltage - 330 kV rms	Maximum continuous operating voltage - 336kV rms.
7	Page 7 of 13 Sr. No. 11	Basic Technical Specification of 400kV TLSA	Maximum steep current Impulse Residual Voltage at 10KA of 1 micro sec from Time- 1275 kV _{peak}	Maximum steep current Impulse Residual Voltage at 10KA of 1 micro sec from Time- less than 1275 kV peak.
8	Page 7 of 13 Sr. No. 13	Basic Technical Specification of 400kV TLSA	Minimum energy discharge capability-5kJ/kV (OD)	Minimum energy discharge capability-4.5kJ/kV (OD)
9	Page 7 of 13 Sr. No. 17 i)	Basic Technical Specification of 400kV TLSA	Resistive current- less than 200 microAmp.	Resistive current- less than 800 microAmp.
10	Page 7 of 13 Sr. No. 17 ii)	Basic Technical Specification of 400kV TLSA	Capacitive current- about 1400 microAmp.	Capacitive current- about 1300 microAmp.
11	Page 7 of 13	Disconnectors Details	1) Rated Energy - 4 kJ/kV 2) Rated charge - 1 coulomb 3) Mechanical Strength - 3kN(Pull test) 4) Operating Time - ≤10 ms	1) Rated Energy - 4 kJ/kV 2) Rated charge - 1 coulomb 3) Mechanical Strength - 3kN(Pull test) 4) Operating Time - ≤12 ms

12	Page 10 of 13	Manufacturin Quality Plan	<p>Section-1</p> <ol style="list-style-type: none"> 1) Raw material & brought out components 2) ZnO block 3) Metal fittings 4) Heat Sink 5) FRP rod 6) Fastners/Hardware 7) Machining components 8) Brackets & DD5 Disconnecter 	<p>1) Raw material & brought out components - Many parameters are not performed/tested at RRL. It is verified through supplier TCs.</p> <p>2) ZnO block - Only visual & dimension check and other electrical test are verified through TCs</p> <p>3) Metal fittings - For "Chemical Composition" - verification of supplier TC</p> <p>4) Heat sink - For "Chemical Composition" - verification of supplier TC</p> <p>5)FRP rod - For Tg & glass content - verification of supplier TC</p> <p>6) Hardware/Fasteners - For "chemical composition" - verification of supplier TC</p> <p>7) Machining component - For "chemical composition" - verification of supplier TC.</p> <p>Material test certificates shall be submitted for review and internal report shall also be submitted for review.</p> <p>MTC of raw materials and Test certificate to be submitted.</p>
<u>COMMERCIAL</u>				
12	Request For Proposal		<p>Bid Receipt Time & Date: Upto 15:00 Hrs. on 08.12.2022</p>	<p>Bid Receipt Time & Date: Upto 15:00 Hrs. on 23.12.2022</p> <p>Bid Opening Time & Date: Upto 15:30 Hrs. on 23.12.2022</p>
13	Special Conditions of Contract (SCC), clause no. 2.1, page no.24	Scope of Work	<p>"Design, Manufacture, Assembly, Factory Testing, Packing, Forwarding, Transportation, Transit Insurance, Supply, Delivery, Supervision of Installation and Commissioning of Transmission Line Surge Arrestors (TLSA) for 400 kV D/C Silchar-Byrnihat -Azara -Bongaigaon Transmission Line, including all clamps & connectors, dis-connectors, insulated flexible copper connecting cables of requisite size & length, Surge monitors, all other accessories as required".</p>	<p>"Design, Manufacture, Assembly, Factory Testing, Packing, Forwarding, Transportation, Transit Insurance, Supply, Delivery, Supervision of Installation and Commissioning of Transmission Line Surge Arrestors (TLSA) for 400 kV D/C Silchar-Byrnihat -Azara - Bongaigaon Transmission Line, including all clamps & connectors, dis-connectors, insulated flexible copper connecting cables of requisite size & length, all other accessories as required".</p>

14	Special Conditions of Contract (SCC), clause no. 5.0, page no.27	Completion Schedule	The entire supplies shall have to be made within 4 Months (120 days) from the date of firm order.	The entire supplies shall have to be made within 5 Months (150 days) from the date of firm order.
15	Special Conditions of Contract (SCC), clause no 9.2, page 29	Payment Terms	Balance 30% payment shall be released after successful commissioning of the Transmission line LAs and issuance of TOC (Taking over certificate) by concerned Engineer-In-Charge.	Balance 30% payment shall be released after successful commissioning of the Transmission line LAs and issuance of TOC (Taking over certificate) by concerned Engineer-In-Charge or withinn 240 days from the date of issuance of TOC, whichever is earlier.