

**ANNEXURE-A**

**Pre-bid queries in respect of e-Tender no SP/T-0502/0322 (RFx:5000000993)**

**Project Details: 2x 125MVAR 420kV 3-Φ Bus Reactor alongwith Surge Arrestor and Insulating Oil**

Sr No	Date	Document	Clause no.	Clause Extract	Bidder's Comments/Clarification	MSETCL comment/clarifications
1	11.04.2022	Technical Specification for 125MVAR Reactor & 80MVAR Reactor	1.1	This specification covers design manufacture, assembly, inspection and testing at manufacturer's works, supply, delivery including loading, transportation & unloading at site of 420 kV, 125MVAR Bus Reactor & Surge Arrestor and accessories required for the safe, efficient, satisfactory and trouble free operation of the equipment. The manufacturer shall also undertake supervision of erection, testing and commissioning of the equipment included in his scope of supply.	With reference to the clause, it may be noted that required shunt Reactor of 125MVAR & 80MVAR to be used as Bus Reactor. Further, neutral is solidly grounded, as per Bidder understanding Surge Arrestor is used in the Line Reactor grounded through NGR, therefore Surge Arrestor is not applicable, and any clause related to surge arrester in the specification shall not be applicable. <b>Kindly Confirm</b>	It is to be noted that Bidder has to offer Bus Reactor as well as Surge Arrestor as per the scope/requirement of T.S.
			2	System Particulars 2.5 Neutral: Solidly earthed		
2	11.04.2022	Technical Specification for 125MVAR Reactor & 80MVAR Reactor	4	Principle Technical Particulars of the equipment: 4.1 Bus Reactor: x) Maximum admissible temperature rise over an ambient temperature of 50deg cel and at highest voltage: a) of winding by resistance 40°C b) of top oil by thermometer 35°C c) The temperature of the hottest spot as per relevant standard	With reference to the clause, it may be noted that required temperature rise for oil/winding is 35 Deg C/40 Deg C over and above the ambient temperature of 50 Deg C, Required rise is too stringent and Indian major Power Utilities do not ask for such lower rise, viz. NTPC requirement is 50 Deg C/55 Deg C, Powergrid requirement is 40Deg C/55 Deg C, generally other state Power Utilities rise requirement is 40/45 Deg C for oil/winding in line with the Powergrid. <b>In view of the above MSETCL is requested to kindly review the requirement and accept 40/45Deg C rise for oil/winding.</b>	It is to be noted that the required temperature rise should be as per Technical Specifications only i.e. 40°C/35°C for winding/top oil
3	11.04.2022	Technical Specification for 125MVAR Reactor & 80MVAR Reactor	4.2	Bushing Current Transformers	This is with reference to the referred clause of Bushing CT, followings may be noted down 1.1 Requirement of accuracy class of core 4 for line side CT class 1 required is stringent and difficult to design the CT with class 1. Generally 0.5 class is required for bushing this type of bushing CTs by major Power Utilities like Powergrid, NTPC etc. even for other projects of MSETCL requirement was 0.5. Therefore, we propose for the 0.5 class for core 4, <b>Kindly review your requirement and accept</b> 1.2 Required knee point voltage for core 2&3 for neutral side is >200 V, in this reference customer may note that knee point voltage of core 2 & 3 for neutral side CT should be >1000-500-250V instead of >200V, <b>Kindly review your requirement and accept.</b> 1.3 Required exciting current of core 1,2&3 for line side≤CT 30mA at Vk/4 is very stringent and it is difficult o design with this CT value. Generally exciting current ≤40mA at Vk/4 is required for bushing CTs of this type by major Power Utilities like Powergrid, NTPC etc. even for other projects of MSETCL requirement was ≤40mA at Vk/4. Therefore, we propose for exciting current ≤40mA at Vk/4 for core 1, 2 & 3, <b>Kindly review your requirement and accept</b>	1.1 No Change 1.2 No Change 1.3 No Change

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4	11.04.2022	Technical Specification for 125MVAR Reactor & 80MVAR Reactor	24.1	<p>Routine Tests on Bus Reactors xxi) Measurement of Zero sequence</p> <p>Following tests shall be conducted on Bus Reactor of each Rating:</p> <p>ii) Measurement of Zero-sequence reactance clause 16.10 of IS 2026 (Part-I) for 3-ph Reactor only.</p>	<p>With reference to the clause Zero sequence test is called in the routine test, but as per IEC Zero sequence test is a type test, same is mentioned in the clause under</p> <p>"Following tests shall be conducted on Bus Reactor of each Rating: "therefore Zero sequence test shall be carried out on one shunt reactor of each Rating.</p> <p><b>Kindly confirm</b></p>	Ok Accepted
5	11.04.2022	Technical Specification for 125MVAR Reactor & 80MVAR Reactor	22	<p>Fire Protection System: d).....</p> <p>The operational logic of the system shall be generally as shown in Drawing No. D&amp;E-S/421A. Any modification shall be subject to approval of the purchaser.</p> <p>-----General Comments for the vendor list</p>	<p>With reference to the clause, it may be noted that, the operational logic of the system in the referred drawing is specific to some vendors that limits the nos. of vendors to participate for the supply of NIFPES, consequently it may affect the getting the competitive offers for the equipment, therefore logic of the operation of NIFPS may be finalized during detail eng.</p> <p><b>Kindly confirm</b></p> <p>Nitrogen Injection Type Fire Prevention &amp; Extinguishing System for SRs from one of the following vendors/reputed vendors may be supplied.</p> <p>1) M/s CTR 2) M/s Vendere 3) M/s Easun MR 4) Tri Parulex Fire Protection System 5) M/s Tactonicus services ltd 6) M/s Vimal Fire</p> <p><b>Kindly confirm</b></p>	It is to be noted that bidder should supply the NIFP system from approved vendors of MSETCL only.
6	11.04.2022	Technical Specification for 125MVAR Reactor & 80MVAR Reactor	8.5	<p>Oil Preservation Equipment: b) Condition Controlled (Maintenance Free) Regenerating Silica Gel Breather</p> <p>Mounting &amp; Installation: The main Reactor tank conservator shall be fitted with a silica gel breather of the maintenance free type at a height of 1400mm from rail top level. Each silica gel breather shall be equipped with a humidity sensor and suitable heating element</p>	<p>With reference to the clause, it may be noted that, the operational technology i.e "<b><u>with a humidity sensor</u></b>" is specific to some vendors that limits the nos of vendors to participate for supply of NIFPES, consequently it may affect the getting the competitive offers for the equipment, therefore operational technology shall be finalized during detail engg.</p> <p><b>Kindly accept and confirm</b></p>	It is to be noted that Humidity sensor is part of silica gel breather. No change
7	11.04.2022	General	.....	General Comment	<p>Since there is no requirement given in the technical specification to match with the existing site condition/foundation/replacement of existing transformer therefore offer shall meeting technical specification requirement and supply shall be solely meeting technical specification requirement.</p> <p><b>Kindly confirm.</b></p>	Ok Accepted
8	11.04.2022	Technical Specification for 420KV Class Bus Reactor with Surge arrester 29	29	<p><b>PERFORMANCE GUARANTEE:</b> The Reactor offered shall be guaranteed for satisfactory performance for a period of 60 months from the date of receipt of complete equipment at destination store/site in good condition, or 54....</p>	<p><b>PERFORMANCE GUARANTEE:</b> The guarantee period will be of 12 months from date of commissioning or 18 months from the date of Ex-works dispatch, whichever is earlier.</p> <p><b>Kindly accept.</b></p>	No change

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9	11.04.2022	ANNEXURE 'A' (Contd...) (SECTION-III)	4	DELIVERY PRIOD Commencement : 1 No. within Seven (7) Months from the date of LOA Competition: @ 1 No. per Month thereafter	<b>4.0 DELIVERY PERIOD</b> Commencement: 1 No. within Twelve (12) Months from the Date of LOA Completion: @ 1 No. per Moths thereafter  <b>Kindly accept</b>	No change
10	11.04.2022	ANNEXURE 'A' (Contd...) (SECTION-III)	2	PRICES & PRICE VARIATION  The Rate of Recommended Spares shall not be considered for Bid Evaluation. However, Lowest Rate offered by the Techno-commercially acceptable Tenderer shall be applicable to all successful Tenderers for the respective Item(s).	As the price shall be firm, rate of spare quoted in Bidder's bid shall be applicable for ordering. <b>Kindly accept.</b>	No change
11	11.04.2022	ANNEXURE 'A' (Contd...) (SECTION-III)	3	SUPERVISORY ERECTION & COMMISSIONING CHARGES The Tenderer shall quote per Day Rates for the Services of Testing & Commissioning Engineer. The Tenderers are requested to quote Lump Sum charges inclusive of Lodging, Boarding, T.A., D.A., other incidental charges etc. on per Unit Basis for Supervision of Erection,Testing & Commissioning as prescribed in ANNEXURE-'B2'. These Prices sahll not be considered for Bid Evaluation. The Charges will be on Firm Price Basis and valid for Five(5) Years.  However, Lowest Rate offered by the Techno Commercially Acceptable Tenderer shall be applicable to all successful Tenderers	As the price shall be firm, rate of services quoted in Bidder's bid shall be applicable for ordering. <b>Kindly accept.</b>	No change