

**FORMAT B.1****Format for Technical Pre-Bid Queries**Tender No **TPSODL/OT/2023-24/035**Package Name **Rate Contract for SITC of Capacitor Bank of various ratings at PAN TPSODL**Bidder : **M/s -----****Note :** The said format to be used only for Technical Pre-Bid Query. Any Commercial Query has to be strictly in Format B2 Format for Commercial Pre-Bid Query and sent separately

Format to be used for query regarding Technical Pre-Qualification Requirement, Safety Pre-Qualification Requirement, Technical Set of Document

**Pre-Bid Query has to be sent in editable Excel file format only****Pre-Bid Query has to be sent through e-mail in TPSODL E-Tender System**

Sr. No.	Detailed Reference to TPSODL Technical Document. Please specify Document No / Clause No / Page No	Description as per Bid Document	Remarks - Query / Clarification	TPSODL Response
1	2	3	4	5
1	Tehnicl Bid Point I,Wind Velocity	Service area has heavy saline conditions along the coast and high cyclonic Intensity winds with speed up to 300 Kmph. Environmentally, some of the regions, where the work will take place include coastal areas, subject to high relative humidity, which can give rise to condensation. Onshore winds will frequently be salt laden. Some places are in heavily industrial polluted areas. The design of equipment and accessories shall be suitable to withstand seismic forces corresponding to an acceleration of 0.15 g.	It indicates that the construction of the Structure/Mechanical arrangement of the Capacitor Bank should have sufficient strength to withstand the cyclones and saline water effects. However, it should clarify the actual technical design requirement in details before submission of the commercial bid - so that all the bidder can offer the same.	Max Climatic Condition of installation already provided. Please comply the Technical Specification.
2	Step Configuration:	Step Configuration: 2 steps for 500 KVAR, 3 steps for 1.0 MVAR, 4 steps for 1.5MVAR, 6 steps for 2.5 MVAR	Please confirm the following steps 500kvar =300+200,1MVAR,200+300+500,1500Mvar-200+300+500+500,2.5Mvar 200+300+500*4	Yes, Noted
3	GTP	Type of Installation ( Inoodr/Out Door)	If you consider Panel mounted auto switched Capacitor bank, it will be easy to consider indoor /outdoor. So, please confirm the requirement - Panel or Structure mounted bank?	ACU panel to be installed in Control Room rest the items installed in outdoor type structure mounted.
4	GTP		We have nnot consider any Civil Work	Scope covers Supply, Installation, Testing and Commission part. Hence Civil work is included in bidder's scope.
5	GTP	Basic Insulation level: for 11kV Cap Banks - 28/95	It shall be 28/75	Specification to be complied as per Tender document
6		Series Reactor - 0.2% for Current limiting purpose	Please confirm the winding material - AL/ Cu	Winding material - Copper
7		Mounting & Elevating Structure for Cap Bank	For Fixed type Capacitor Banks, structure may be fixed from the tender by confirming the Size of structure to be used (as mostly it will be outdoor only). However, for Auto-switched cap-banks, please confirm if it will be plinth mounted or not. Please also specify the height of plinth requirement considering the weathercyclone and water logging effects.	For fixed type Capacitor Bank it should be pole mounted and for Auto-switched Capacitor Bank it should be structure mounted
8		Routine Tests / Acceptance Test:	It will be difficult to organize Routine Tests for structure mounted Auto-switched Cap bank. We can provide components-wise RTC from the OEM. However, if the same is Panel mounted, we can conduct the same at our works.	Noted
9		Commissioning Activities: ...ensuring end-to-end Integration of the protection system and seamless Integration with existing SCADA network.	Please clarify the requirement with more details	ACU should be compatible with IEC 61850 and communicate port RJ 45.Integration with SCADA system for monitoring and control of Capacitor Bank need to be provided.
10		330kVAr, 12.65kV 1Step-Pole Mounted cap-bank shall have 3nos 44kVAr, 7.3kV grade , 1Ph, Capacitor units.....	Technically it is not correct. It should be - 3nos, 110kVAr, 7.3kV, 1Ph, Capacitor unit externally connected in Single STAR to get an output of 330kVAr at 12.65kV (250kVAr at 11kV).	Noted
11	ENG-ELV-23-01 (B) 6	DESIGN & CONSTRUCTION REQUIREMENTS:	kVAr requirement is very low. Maximum 500 kvar. Hence inrush will not be much at the time of Switching. Hence zero crossing switch is also not required. Normal VC with capacitor duty is sufficient.	Normal VC with capacitor switching is sufficient, zero crossing switch is not required.

Sr. No.	Detailed Reference to TPSODL Technical Document. Please specify Document No / Clause No / Page No	Description as per Bid Document	Remarks - Query / Clarification	TPSODL Response
12	ENG-ELV-23-01 (B) 7	Control Parameters	Please do clarify whether both CT & PT is part of vacuum switch being supplied or it should be connected seperately on poles	CT & PT can be outside of vacuum switch but need to be mounted on same structure. Please note that suitable power factor controller unit with manual switching on/off facility need to be provided by the bidder for pole mounted fixed capacitor bank.
13	General	Voltage Transformer	This VT is to be used to both power the controller, which sends the Close/Open signal/power to operate the switch, as well as to provide an input to the controller to measure the voltage. This VT will be part of Vacuum Switch only. Please confirm	VT can be outside of vacuum switch but need to be mounted on same structure.
14	General		Supply of RCC pole shall not be in our scope.	Supply of 11mtr WPB pole is in TPSODL Scope. Bidder to collect from nearby TPSODL Store.
15	General		RCC pole height shall be minimum 12 meter.	Supply of 11mtr WPB pole is in TPSODL Scope. Bidder to collect from nearby TPSODL Store.
16	General		RCC Poles will be erected by TPSODL and hand over to the bidder. Please clarify	Installation, erection and commissioning of 11mtr WPB Pole is in bidder scope.
17	General	Automatic Control Unit with APFC Relay	<p>ACU Panel :</p> <p>The automatic control unit shall be provided inside the control room. It shall continuously monitor the total kVAr requirement and automatically switch ON/OFF the individual capacitor banks. Panel shall be free standing floor mounted with IP42 protection class. It consists of min following equipment for the smooth operation of Auto switched capacitor banks.</p> <p>a. Microprocessor based Touch screen type Automatic Power Factor Controller as per the detailed technical specification.</p> <p>b. ON/OFF indications for each step vacuum contactors and Isolator.</p> <p>c. Delay timer shall be provided to maintain a minimum interval of 10 minutes between the operation of each capacitor bank.</p> <p>d. Multifunction meter with Modbus communication protocol</p> <p>e. Numerical relay with O/c, E/F protections with Modbus protocol for each outgoing step</p> <p>f. Current based unbalance protection relay shall be provided for each step to detect the unbalance in the Capacitor steps.</p> <p>g. Fuse failure indications for each step</p>	Specification to be complied as per Tender document
18	ENG-ELV-23-02 (A) 15	TYPE TEST	<p>The capacitor is non-standard product and shall vary reactive power requirement depends on the load condition. Hence as per IS/IEC guideline it is suggested that type test report of similar or higher rating having similar design characteristics shall be accepted.</p> <p>Also there is a guideline from CEA circular dated May 2020 stating that validity period of type test conducted on the equipment shall remain valid for 10 years and acceptable to end user/utility.</p> <p>We would request your good self to accept our proposal and allow us to bid the tender with the similar/higher rated type test reports available.</p>	Specification to be complied as per Tender document

