

Clarification No. - 02 dated 07/03/2024 to the Bidding Documents of 765kV Transformer Package 7TR-01-BULK for 7x500 MVA, 765/400 KV (1-Ph) Transformers under Bulk Procurement of 765kV & 400kV class Transformers & Reactors of various Capacities (Lot-7).

Spec. No.: CC/NT/W-TR/DOM/A00/24/01885

Sl. No.	Volume/ Section/ Clause	Description as per Bid Document	Bidder's Query / Clarification	POWERGRID's Reply
Volume-I of the Bidding Documents				
1.	ITB Clause No. 11.3 [BDS Sl. No. 23]	i) After decision in respect of Destination has been taken by Employer, Contractor shall be asked to submit F&I charges for the finalized destination along with documentary evidence towards justification of prices such as copy of Rate Contract entered into by Contractor, Quotation etc. This activity shall be started preferably five months prior to the scheduled dispatch of the Equipment.	Due to our companies rules and regulations, we will not be able to share any internal documents like PO of transporter to the customer. We will provide price justification of the transport price.	Bidder to quote as per the provision of bidding documents.
2.	ITB Clause No. 11.3 [BDS Sl. No. 23]	iii) All the activities pertaining to finalization of F&I charges shall be finished preferably three months prior to the scheduled dispatch of the Equipment	We request you to provide site details before the issuance of NOA to smoothen the execution process and timely finalization of freight rate.	Bidder to quote as per the provision of bidding documents.
Technical Specification, 765kV Auto-transformer C/ENGG/MODEL-SPEC/TRF Rev. 08, Volume-II of the Bidding Documents				
3.	Clause. No 6.1.2 Page 8 of 79	The requirement of post weld heat treatment of tank/stress relieving shall be based on recommendation of IS 10801.	IS 10801 is applicable to Pressurize Piping and Pressure vessel. As inside pressure of transformer tank is approx. 1 kg/cm ² and hence not come to Pressure vessel category. Hence, not applicable.	Bidder to quote as per the provision of bidding documents.
4.	Clause. No 6.1.7 Page 9 of 79	Tank, tank cover and associated structure should be adequately designed to withstand, without damage or permanent deflection / deformation, the forces arising out of normal oil pressure, test pressures,	'There is contradiction in the requirement. We understand the permanent deflection will be acceptable up to the values specified in clause no. 17 (ii) of DOC. No.:	Bidder's understanding is correct.

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		vacuum, seismic conditions and short circuit forces specified.	POWERGRID/STD/TEST PROCEDURE/TR-RT/REV02. Page No. 52 of 69. Kindly confirm.	
5.	Cl. No 6.2.7 Cl. No 13.5.8 Page 10 of 79 and page No. 27 of 79	Clause No.6.2.7: The transformer shall be provided with a 150 mm nominal diameter butterfly valve and bolted blanking plate, gasket and shall be fitted at the highest point of the transformer for maintaining vacuum in the tank. Clause No.13.5.8: Valve for vacuum application on Tank: Type Gate	Since there is contradictory requirement in the specification in two different clauses. Our preference is 100 mm Gate valve. Kindly accept the same.	100mm Gate type valve provided for vacuum application on Tank shall also be acceptable.
6.	Clause No. 6.8, 6.9, 6.10 & 18(a) Page 13,14 of 79 & Page 35 of 79	6.8 Pressure Relief Device suitable canopy shall be provided to prevent ingress of rain water. 6.9 Sudden Pressure Relay suitable canopy shall be provided to prevent ingress of rain water. 6.10 Buchholz Relay suitable canopy shall be provided to prevent ingress of rain water. 18 (a) Magnetic oil level gauge	Canopy shall be provided as per bidder's standard practice. If any specify requirement kindly share the drawing of canopy to consider in our scope of supply.	Canopy design shall be finalized during detailed Engg.
7.	Clause No. 6.16.16 Page 18 of 79	Winding paper moisture shall be less than 0.5%.	Noted, however testing shall be done with Karl Fischer method. Kindly confirm.	Any Method as per applicable standard shall be acceptable

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8.	Cl. No 13.5.1 Page 26 of 79	All valves upto and including 100 mm shall be of gun metal or of cast steel/cast iron. Larger valves may be of gun metal or may have cast iron bodies with gun metal fittings. They shall be of full way type with internal screw and shall open when turned counter clock wise when facing the hand wheel.	As all Butterfly valve above 100mm are of Cast Iron bodies and brass fittings. For 100mm and 80mm Butterfly valve used at radiator also need to supply as Cast Iron bodies and brass fitting which is superseding the technical specification requirement of Cast Iron bodies and mild steel fittings. As we are superseding the technical specification requirement, Customer acceptance required.	As per clause no Cl. No 13.5.1 of section- 765kV Transformer rev08, all valves upto and including 100 mm shall be of gun metal or of cast steel/cast iron & Larger valves may be of gun metal or may have cast iron bodies with gun metal fittings. However, 100mm and 80mm Butterfly valve used at radiator of Cast Iron bodies and brass fitting are also acceptable.
9.	Cl. No 13.5.6 Page 27 of 79	Gland packing/gasket material shall be of "O" ring of nitrile rubber for all the valve's flanges. All the flanges shall be machined.	All "O" ring used for Valve mounting flange are as per technical specification and of "NBR" material. Valve Gland Packing is of "PTFE" (Teflon) material suitable to transformer oil and atmospheric air. PTFE required for better Oil sealing purpose compared to NBR as per Approved valve supplier. Customer acceptance required.	Gland packing material shall be finalized during detailed engineering
10.	Cl. No 13.5.9 Page 27 of 79	All valves shall be painted with a shade (preferably red or yellow) distinct and different from of main tank surface and as per the painting system and procedure specified.	There is no such painting system and procedure specified in technical specification and in Annexure- E. Painting specification shall be followed as per PGCIL approved supplier recommendation.	The proposal from the bidder for painting procedure for valves in line with POWERGRID approved vendors shall also be acceptable.

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			Customer acceptance required.		
11.	General	Cable length	Kindly provide the below distance for cable length consideration - Distance between CMB1 to CMB2. - Distance between spare transformer to CMB1 or CMB2.	Power & Control cable a) Transformer accessories (body mounted) to IMB. b) IMB to CMB c) Spare Transformer IMB to CMB	Included in the scope of contractor. Please refer clause no 2.2 e) of section project, wherein cable of each 1-phase 765kV Reactor/Transformer required for interconnection shall be supplied as per BPS. Further, any special cable (IMB to CMB, CMB to CMB and CMB to RTCC and Switchyard panel room as applicable) is included in the scope of contractor.
				Power & Control cable i) CMB to RTCC panel and Switchyard Panel	Not in the scope of contractor

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				Room (as applicable) ii) CMB1 to CMB2
Technical Specification, Section–Project/Rev 00				
12.	Section Project Cl. No. 2.2 (a) (d) Page 3 of 6	Digital RTCC relays and Panel (as applicable).	As per section project it is not clear to provide transformer with OLTC. Pl clarify the requirement of transformer is with OLTC or without OLTC.	Kindly refer clause no 18.m of Section-765kV Auto-transformer rev 08, wherein On load tap changing gear is considered as part of transformer. Bidder to quote accordingly.