

Clarification No I dated: 23/04/2025 to the bidding documents of 765kV Transformer Package 7TR-14-BULK for 30x500 MVA, 765/400KV (1-Ph) Transformers under Bulk Procurement of 765kV & 400kV class Transformers & Reactors of various Capacities (Lot-5). Spec. No.: CC/NT/W-TR/DOM/A00/25/03650.

sr.N	Clause No	Description	Clarification from Bidder	POWERGRID's REPLY
1	Section Project, Clause. No 1.3, Technical Specification, Volume II of Bidding Documents	Any material and equipment not specifically stated in this specification but which are necessary for satisfactory operation of the equipment shall be deemed to be included unless specifically excluded and shall be supplied without any extra cost.	Our offer shall be with fittings & accessories as per technical specification, which is suitable for satisfactory operation of transformer. Any additional material and equipment if required shall be provided with cost implication.	Bidding document is amply clear. Bidder shall quote meeting the requirement of bidding documents
2	Section Project, Clause. No 2.1, Technical Specification, Volume II of Bidding Documents	The Contractor shall be responsible to select and verify the route, mode of transportation and make all necessary arrangement with the appropriate authorities for the transportation of the equipment. The dimension of the equipment shall be such that when packed for transportation, it will comply with the requirements of loading and clearance restrictions for the selected route. It shall be the responsibility of the contractor to coordinate the arrangement for transportation of the autotransformer for all the stages from the manufacturer's work to site.	Details of route survey i.e. transport weight / dimension limitations are not available. Hence, transport details shall be as per Bidder's technical offer only. Any modification or strengthening work ( substation main gate, approach road, shifting of pole etc.) required for smooth and safe shipment of the transformer upto foundation from main gate shall be in PGCIL scope.	Bidder shall quote meeting requirement of Clause 2.4 of Section Project. Bidder shall quote meeting the requirement of bidding documents
3	Section Project, Clause. No 2.5, Technical Specification, Volume II of Bidding Documents	The Contractor shall despatch the transformer filled with dry air at positive pressure. The necessary arrangement shall be ensured by the contractor to take care of pressure drop of dry air during transit and storage till completion of oil filling during erection. A dry air pressure testing valve with necessary pressure gauge and adaptor valve shall be provided. The dry air cylinder(s) provided to maintain positive pressure can be taken back by the contractor after oil filling. In case, turrets are having insulation assembly and is transported separately then the same shall also be filled with dry air.	Transformer can be stored with dry air filled condition upto 6 months after dispatch from factory. For longer storage, transformer need to be filled with oil as per OEM manual.	Bidder shall quote meeting the requirement of bidding documents
4	Section Project, Clause. No 6.1.2, Technical Specification, Volume II of Bidding Documents	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 <sup>2</sup> and hence not come to Pressure vessel category. Hence, Not applicable.	Bidder shall quote meeting the requirement of bidding documents

5	Section Project, Clause. No 6.1.6, Technical Specification, Volume II of Bidding Documents	<p>The base of each tank shall be so designed that it shall be possible to move the complete transformer unit by skidding in any direction without damage when using plates or rails and the base plate shall have following minimum thickness:</p> <table><tr><th>Length of tank (m)</th><th>Minimum plate thickness (mm)</th></tr><tr><td>Flat bases</td><td></td></tr><tr><td>over 2.5m but less than 5m</td><td>20</td></tr><tr><td>over 5m but less than 7.5m</td><td>26</td></tr><tr><td>exceed 7.5m</td><td>32</td></tr></table>	Length of tank (m)	Minimum plate thickness (mm)	Flat bases		over 2.5m but less than 5m	20	over 5m but less than 7.5m	26	exceed 7.5m	32	MS Plate IS 2062:2011 refer IS 1730:1989 for dimension of steel plate. 26mm thk Plate is not in IS standard, alternate solution is 25mm thk plate. Hence requesting for length of tank over 5m but less than 7.5m plate thickness shall be 25 mm thk. Kindly accept.	Bidder shall quote meeting the requirement of bidding documents
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6	Section Project, Clause. No 6.1.7, Technical Specification, Volume II of Bidding Documents	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, vacuum, seismic conditions and short circuit forces specified.	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.: POWERGRID/STD/TEST PROCEDURE/TR-RT/REV02. Page No. 52 of 69. Kindly confirm.	Bidder shall quote meeting the requirement of bidding documents										
7	Section Project, Clause no. 6.1.8, Technical Specification, Volume II of Bidding Documents	Tank MS plates of thickness >12 mm should undergo Ultrasonic Test (UT) to check lamination defect, internal impurities in line with ASTM 435 & ASTM 577.	This can be done on Raw material(MS Plate) at vendor end. We will provide test certificate for the same. Kindly accept.	Bidder shall quote meeting the requirement of bidding documents										
8	Section Project, Cl. No 6.2.7 Cl. No 13.5.8, Technical Specification, Volume II of Bidding Documents	<p><b>Clause No.6.2.7:</b> The transformer shall be provided with a 150 mm nominal diameter <b>butterfly valve</b> and bolted blanking plate, gasket and shall be fitted at the highest point of the transformer for maintaining vacuum in the tank.</p> <p><b>Clause No.13.5.8:</b> Valve for vacuum application on Tank: <b>Type Gate</b></p>	Since there is contradictory requirement in the specification in two different clauses. Our preference is 100 mm Gate valve. Customer acceptance required.	Gate type valve shall be provided for vaccum application. Bidder shall quote meeting the requirement of bidding documents.										
9	Section Project, Clause no. 6.4, Technical Specification, Volume II of Bidding Documents	The rail track gauge shall be 1676 mm. Four rails shall be provided as per the drawing mentioned in Annexure-C.	Rails shall not be in bidder scope.	Bidder shall refer clause 3 of Section Project. Bidder shall quote meeting the requirement of bidding documents										

10	Section Project, Clause No. 6.8, 6.9, 6.10 & 18(a), Technical Specification, Volume II of Bidding Documents	<p><b>6.8 Pressure Relief Device</b> suitable canopy shall be provided to prevent ingress of rain water.</p> <p><b>6.9 Sudden Pressure Relay</b> suitable canopy shall be provided to prevent ingress of rain water.</p> <p><b>6.10 Buchholz Relay</b> suitable canopy shall be provided to prevent ingress of rain water.</p> <p><b>18 (a) Magnetic oil level gauge</b></p>	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.	Bidder shall quote meeting the requirement of bidding documents
11	Section Project, Clause No. 6.16.16, Technical Specification, Volume II of Bidding Documents	Winding paper moisture shall be less than 0.5%	Noted, However testing shall be done with Karl fischer method. Kindly confirm.	Bidder shall quote meeting the requirement of bidding documents
12	Section Project, Clause. No 13.5.1, Technical Specification, Volume II of Bidding Documents	All valves upto and including 100 mm shall be of gun metal or of cast <b>steel/cast iron</b> . 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.	<p>As all Butterfly valve above 100mm are of Cast Iron bodies and brass fittings.</p> <p>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 valve(i.e cast iron bodies and mild steel fittings).</p> <p>For &gt;100mm Butterfly valve used at Cooler piping we are supplying Cast Iron bodies and brass fitting which is superseding the technical specification requirement of Cast Iron valve(i.e cast iron bodies and gun metal fittings).</p> <p>As we are superseding the technical specification requirement. Customer acceptance required.</p>	Bidder shall quote meeting the requirement of bidding documents
13	Section Project, Clause No. 13.5.6, Technical Specification, Volume II of Bidding Documents	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.	Bidder shall quote meeting the requirement of bidding documents
14	Section Project, Clause No. 13.5.9, Technical Specification, Volume II of Bidding Documents	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. Customer acceptance required.	Bidder shall quote meeting the requirement of bidding documents

15	Section Project, Clause No. 16, Technical Specification, Volume II of Bidding Documents	SCADA Integration and Interconnection	We will provide 4-20mA output for OTI, WTI, however integration and Integration of transformer with existing power system / SCADA system shall not be in bidder's scope.	Bidder shall quote meeting the requirement of bidding documents
16	Section Project, Clause No. 26.3, Technical Specification, Volume II of Bidding Documents	Type Tests on fittings: 1) Bushing Type Test as per IS/ IEC:60137 for all voltage class (Seismic test on 400kV and 800kV Bushings)	Only one bushing manufacturer has conducted seismic test for Zone V. Dependancy on single vendor may impact on transformer delivery as per your requirement. Hence we request you to accept the transformer along with seismic calculations of the bushing	Seismic test for Zone-V is applicable for above Bushing. As per CEA letter dated 22.04.2024, Seismic Calculations shall be acceptable. Further seismic calculation shall be certified by NABL Labs as per TS requirement.  It is further mentioned that contractor should submit type test report of Seismic test (successfully passed) on the above Zone-V bushing to POWERGRID for review & approval within one year from the date 22.04.2024.
17	Technical Specification, Volume II of Bidding Documents	Short Circuit test	We have neither envisaged carrying Short circuit test on the offered transformer nor any similarity with short circuit tested transformer.	Bidder shall quote meeting the requirement of bidding documents
18	Section Project CI No. 2.1, Volume II of Bidding Document	The Transformers under this package may be utilized for substations located in Seismic Zone-V near costal area also. In Bid price schedule two (2) types of each 765kV & 400kV bushings are available. i) Seismic zone-III (Minimum requirement ) ii) Seismic Zone V	We futher wish to inform you that we will first supply Transformers with bushings suitable to seismic zone - III & Transformer with bushing suitable for seismic zone - V then after.	Bidder shall quote meeting the requirement of bidding documents
19	Section Project CI No. 3(viii), Volume II of Bidding Document	Online Dissolved Gas (Multi-gas) and Moisture Measuring Equipment and Nitrogen Injection type Fire Prevention & Extinguishing System. However, Provisions of valves (for future use) for Online Dissolved Gas (Multi-gas) and Moisture Measuring Equipment and Nitrogen Injection type Fire Prevention & Extinguishing System shall be considered included in the scope & shall be deemed to be included in the price of each Transformer.	For Provisions, Make of Equipment to be provided.	Provisions of valves (for future use) for Online Dissolved Gas (Multi-gas) and Moisture Measuring Equipment and Nitrogen Injection type Fire Prevention & Extinguishing System shall be considered included in the scope & shall be deemed to be included in the price of each Transformer. Bidder shall quote meeting the requirement of bidding documents

20	S. No. 8 to 12, Schedule 1 of Price Schedule, Volume I of Bidding Documents	Cables 1.1 kV GRADE 4Cx16 SQMM (PVC) POWER CABLE : 8kM 4 PAIR, 0.5SQMM SCREENED CABLE : 16 kM 1.1 kV GRADE 19Cx1.5 SQMM CONTROL CABLE : 16 kM 1.1 kV GRADE 3Cx2.5 SQMM CONTROL CABLE : 8 kM 1.1 kV GRADE 5Cx2.5 SQMM CONTROL CABLE : 8 kM	If cables required more than specified length shall be provided with cost implication. Kindly confirm	Bidder shall quote meeting the requirement of Clause 2.2 e of Section Project. Any variation in cable length shall be dealt as per provision of bidding documents.
21	S. No. 1&2, Schedule 1 of Price Schedule, Volume I of Bidding Documents	500 MVA transformer and Insulating Oil	Request PGCIL to split supply NOA between two part. One for the Main job (500 MVA ICT and Insulating oil) and the second part for the the spares requirement (line item other than main job)	Bidder shall quote meeting the requirement of bidding documents
22	ITB 11.3, Bid Data Sheet, Volume I of Bidding Documents	# Bidders are not required to quote the Local Transportation, In-transit insurance, loading and unloading charges (hereinafter referred to as F&I charges) in their bid. Prices regarding F&I charges shall be finalized with the Contractor based on actual destination decided by Employer prior to scheduled dispatch of the equipment in the following manner: 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.	As site is not known to us at bidding stage, we are considering all 30 Transformers are required for one site. If there are multiple site, PGCIL to provide additional charges for site ETC activities. Or request PGCIL to inform how many sites to be considered in this tender.  We request to provide all sites within 6 months from NOA to start procurement of long lead items like bushings	Provisions of Bidding Documents are amply clear.
23	ITB 24.1(c), Bid Data Sheet, Volume I of Bidding Documents	The Time for Completion shall be as under:	We further wish to inform you that we will first supply Transformers with bushings suitable to seismic zone - III & Transformer with bushing suitable for seismic zone - V then after.	Bidder shall quote meeting the requirement of bidding documents

24	GCC 21.2, Special Conditions of Contract, Volume I of Bidding Documents	If the Contractor fails to comply with the Time for Completion in accordance with Clause GCC 21 for the whole of the facilities, (or a part for which a separate time for completion is agreed) then the Contractor shall pay to the Employer a sum equivalent to 0.05% (zero point zero five percent) of the Contract Price for the whole of the facilities, (or a part for which a separate time for completion is agreed) as liquidated damages for such default and not as a penalty, without prejudice to the Employer's other remedies under the Contract, for each day which shall elapse between the relevant Time for Completion and the date stated in Taking Over Certificate of the whole of the Works (or a part for which a separate time for completion is agreed) subject to the limit of five percent (5%) of Contract Price for the whole of the facilities, (or a part for which a separate time for completion is agreed).	Only one bushing manufacturer has conducted seismic test for Zone V. Dependency on single vendor may impact on Transformer delivery as per the requirement. Hence we request you to do not charge LD on us because of the delay in supply of Zone - V bushing.	The provisions of the Bidding Documents shall remain unchanged.
25	Appendix - 1, Terms and Procedures of Payment, Sample Forms, Volume I of Bidding Documents	Interest Bearing Advance	Request PGCIL to provide Interest Free advance.	The provisions of the Bidding Documents shall remain unchanged.