

Clarification No-01 dated 22.04.2025 to the bidding documents of 765kV Reactor Package 7RT-20-BULK for 30x110 MVAR, 765KV (1-Ph) Reactors under Bulk Procurement of 765kV & 400kV class Transformers & Reactors of various Capacities (Lot-5).

Spec No.: CC/NT/W-RT/DOM/A00/25/03731

Sr.No	Clause No.	Description	Clarification from Bidder	POWERGRID's Reply										
1	Cl. No 3.5 of Technical Specification, 765kV Shunt Reactor , C/ENGG/MODEL-SPEC/765kV SR Rev. 08, Volume-II of Bidding Documents	The Contractor shall despatch the Reactor 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.	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										
2	Cl. No 7.1.2 of Technical Specification, 765kV Shunt Reactor , C/ENGG/MODEL-SPEC/765kV SR Rev. 08, 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/cm2 and hence not come to Pressure vessel category. Hence, Not applicable.	Bidder shall quote meeting the requirement of bidding documents										
3	Cl. No 7.1.6 of Technical Specification, 765kV Shunt Reactor , C/ENGG/MODEL-SPEC/765kV SR Rev. 08, Volume-II of Bidding Documents	<div>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:</div> <table><thead><tr><th>Length of tank (m)</th><th>Minimum plate thickness (mm)</th></tr></thead><tbody><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></tbody></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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4	Cl. No. 7.4 of Technical Specification,SECTION-765 KV SHUNT REACTOR, C/ENGG/MODEL-SPEC/765kV SR Rev. 8, Volume-II of Bidding Documents	7.4 Foundation, Roller Assembly & Anti Earthquake Clamping Device The Reactor shall be placed directly on concrete plinth foundation. To facilitate the movement of reactor to its foundation over rail track, bi-directional flanged rollers shall be provided. It shall be suitable for fixing to the under carriage of Reactor. The rail track gauge shall be 1676 mm. Two rails shall be provided as per the drawing mentioned at Annexure-C.	Rails shall not be in bidder scope. Also, drawing referred in Annexure C is not available with the given specification Rev08. Kindly provide the drawing.	Bidder shall refer clause 3 of Section Project. Bidder shall quote meeting the requirement of bidding documents										
5	Cl. No. 7.8, 7.9, 7.10 & 22.1 (i) of Technical Specification,SECTION-765 KV SHUNT REACTOR, C/ENGG/MODEL-SPEC/765kV SR Rev. 8, Volume-II of Bidding Documents	7.8 Pressure Relief Device suitable canopy shall be provided to prevent ingress of rain water. 7.9 Sudden Pressure Relay suitable canopy shall be provided to prevent ingress of rain water. 7.10 Buchholz Relay suitable canopy shall be provided to prevent ingress of rain water. 22.1 (i) Magnetic oil level gauge	Canopy shall be provided as per bidder 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										

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6	Cl. No. 14.1 of Technical Specification, SECTION- 765 KV SHUNT REACTOR, C/ENGG/MODEL-SPEC/765kV SR Rev. 8, Volume-II of Bidding Documents	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 valve(i.e cast iron bodies and mild steel fittings). As we are superseding the technical specification requirement. Customer acceptance required.	Bidder shall quote meeting the requirement of bidding documents
7	Cl. No. 14.6 of Technical Specification, SEC, Volume-II of Bidding Documents TION- 765 KV SHUNT REACTOR, C/ENGG/MODEL-SPEC/765kV SR Rev. 8, 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
8	Cl. No. 23.2 of Technical Specification, SECTION- 765 KV SHUNT REACTOR, C/ENGG/MODEL-SPEC/765kV SR Rev. 8, Volume-II of Bidding Documents	Type Tests on fittings: Type test reports of following Bushing & accessories, shall be furnished by the contractor along with drawings. a) Bushing Type Test as per IS/ IEC:60137 for all Volumetage class (Seismic test on 800kV Bushings) b) Marshalling & Common Marshalling Box and other outdoor cubicle (IP-55)	Only one bushing manufacturer has conducted seismic test for Zone V. Dependancy on single vendor may impact on reactor delivery as per your requirement. Hence we request you to accept the reactor 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.
9	GTR Rev 15, Annexure B, Volume-II of Bidding Documents	SEISMIC WITHSTAND TEST PROCEDURE	Seismic withstand test is not applicable on offered reactors. Kindly confirm.	Confirmed
10	Cl. No 7.1.8 of Technical Specification, 765kV Shunt Reactor , C/ENGG/MODEL-SPEC/765kV SR Rev. 08, 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

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11	Cl. No. 7.2.7 & 14.7.1.7 of Technical Specification, SECTION-765 KV SHUNT REACTOR, C/ENGG/MODEL-SPEC/765kV SR Rev. 8, Volume-II of Bidding Documents	<p>Clause No.7.2.7: The Reactor 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 Reactor for maintaining vacuum in the tank.</p> <p>Clause No.14.7.1.7: Valve for vacuum application on Tank : Type Gate</p>	<p>Since there is contradictory requirement in the specification in two different clauses. Our preference is 100 mm Gate valve.</p> <p>Customer acceptance required.</p>	Gate type valve shall be provided for vacuum application. Bidder shall quote meeting the requirement of bidding documents.
12	Cl. No. 7.19.14 of Technical Specification, SECTION-765 KV SHUNT REACTOR, C/ENGG/MODEL-SPEC/765kV SR Rev. 8, Volume-II of Bidding Documents	Winding paper moisture shall be less than 0.5%	<p>Noted, However testing shall be done with Karl fischer method.</p> <p>Kindly confirm.</p>	Bidder shall quote meeting the requirement of bidding documents
13	Cl. No. 14.7.2 of Technical Specification, SECTION-765 KV SHUNT REACTOR, C/ENGG/MODEL-SPEC/765kV SR Rev. 8, 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.	<p>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.</p> <p>Customer acceptance required.</p>	Bidder shall quote meeting the requirement of bidding documents
14	Clause No. 2.2 b (ii) of Technical Specification, Section-Project-Rev 00, Volume-II of Bidding Documents	Seismic Zone V requirment.	We futher wish to inform you that we will first supply reactors with bushings suitable to seismic zone - III & reactors with bushing suitable for seismic zone - V then after.	Bidder shall quote meeting the requirement of bidding documents
15	Clause No. 2.2 e of Technical Specification, Section-Project-Rev 00, Volume-II of Bidding Documents	One No. CMB shall be supplied for 2 x 1-Ph or 3 x 1-Ph 765KV Class Reactor unit at one location.	Our offer is for 30 Nos. shunt reactor and we are considering only 10 No. CMB against 30 Nos. Shunt reactors. Based on 3 x 1 Phase 765 kV class reactor.	One No. CMB shall be supplied for 2 x 1-Ph or 3 x 1-Ph 765KV Class Reactor unit at one location. LIU & associated Patch cords & One Ethernet switch , as part of each CMB, shall also be provided. Bidder shall quote meeting requirment of Clause 2.2 e of Section Project.
16	S. No. 1,2 of Price Schedule, Schedule 1 of Price Schedule, Volume-III of Bidding documents	110 MVAR Reactor and Insulating Oil	Request PGCIL to split supply NOA between two part. One for the Main job (110 MVAr SR 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

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17	ITB 11.3, Bid Data Sheet, Volume I of Bidding Documents	<p># 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:</p> <p>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.</p>	<p>As site is not known to us at bidding stage, we are considering all 30 reactors are required for one site. If there are multiple site, PGCIL to provide additional charges for site ETC activities.</p> <p>We request to provide all sites within 6 months from the issuance of NOA to start procurement of long lead items like bushings, NGR, LA structure</p>	Bidder shall quote meeting the requirements of bidding documents
18	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 Reactors with bushings suitable to seismic zone - III & Reactor with bushing suitable for seismic zone - V then after.	The Provisions of bidding documents will remain unchanged.
19	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 reactor delivery as per your requirement. Hence we request you to do not charge LD on us because of the delay in Seismic test for Zone -V.	The Provisions of bidding documents will remain unchanged.
20	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 bidding documents will remain unchanged.