

**Clarification No. - 01 dated 04/04/2024 to the Bidding Documents of 765kV Transformer Package 7TR-03-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/A00/24/01504**

Sl. No.	Volume/ Section/ Clause	Description as per Bid Document	Bidder's Query / Clarification	POWERGRID's Reply
<b>Technical Specification, 765kV Auto-transformer C/ENGG/MODEL-SPEC/TRF Rev. 08</b>				
1.	Section Project 2. Scope Cl. No. 2.4	Based on actual destination as decided by Employer prior to scheduled dispatch of the Individual Transformer / Transformer Banks (as applicable), the conditions of roads, capacity of bridges, culverts etc. in the route shall be assessed by the contractor. The scope of any necessary modification/ extension/ improvement to existing road, bridges, culverts etc. shall be included under present scope. The contractor shall carry out the route survey along with the transporter and submit the detail proposal and methodology for transportation of Individual Transformer/Transformer Banks( As applicable), for approval of Purchaser within Three(03) months from the date of finalization of location, as intimated by POWERGRID.	Transformer dispatch is contingent upon the real destination, as determined by the employer upon award. In this regard, we understand that any necessary modification/ extension/ improvement to existing road, bridges, culverts etc are excluded from present scope and the same shall be assessed by contractor post award and necessary report shall be submitted to employer.  Please kindly confirm/clarify.	Bidder may quote as per provision of bidding document.
2.	Section Project Schedule of Quantities	The bill of quantity is indicated in the Bid price Schedules. Bidder should indicate all such items in the bid proposal sheets which are not specifically mentioned but are essential for execution of the contract. Items which explicitly may not appear in various schedules and required for successful commissioning of the Reactors shall be included in the bid price and shall be provided at no extra cost to Employer.	We understand that Erection of Reactors is not in bidder's scope. Please confirm.	For scope of work please refer clause 2.2 of Section Project wherein it is mentioned that erection of Transformers is under present scope.

**Clarification No. - 01 dated 04/04/2024 to the Bidding Documents of 765kV Transformer Package 7TR-03-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/A00/24/01504**

<b>Sl. No.</b>	<b>Volume/ Section/ Clause</b>	<b>Description as per Bid Document</b>	<b>Bidder's Query / Clarification</b>	<b>POWERGRID's Reply</b>
3.	Section Project 2. Scope Cl. No. 2.4	As per circular from Ministry of Road Transport & Highways - Dt: 17.01.2024	'Please find attached circular from MoRTH and request letter from Bidder as Attachment -I	Bidder may quote as per provision of bidding document.
4.	General	Storage at site	We understand that free space based on the employer requirement (Indoor/ Outdoor) at respective site locations within plant boundary shall be arranged by M/s PGCIL. Kindly Confirm.	In case of Foundation of Transformers are not ready, free space for storage of transformers will be provided by Employer within plant boundary. The unloading at storage and loading up to plinth shall be in scope of contractor.
5.	General	Tools and tackles for erection testing and commissioning.	We have considered that tools & Tackles as required for erection, testing and commissioning of Transformers shall be mobilized by bidder and de-mobilize after successful completion of works. Please confirm.	Confirmed in line with clause 14.1 of Section GTR. However as per clause 14.2 of Section GTR, Special Tools and tackles which are specifically required for operation and maintenance the offered equipment and are of proprietary in nature shall be

**Clarification No. - 01 dated 04/04/2024 to the Bidding Documents of 765kV Transformer Package 7TR-03-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/A00/24/01504**

Sl. No.	Volume/ Section/ Clause	Description as per Bid Document	Bidder's Query / Clarification	POWERGRID's Reply
				supplied under present scope.
6.	Clause. No 6.1.2	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 may quote as per bidding document.
7.	Clause. No 6.1.7	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's understanding is correct.
8.	Cl. No 6.2.7 Cl. No 13.5.8	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.	Gate type valve shall be provided for vacuum application on Tank.
9.	Clause No. 6.8, 6.9, 6.10 & 18(a)	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.

**Clarification No. - 01 dated 04/04/2024 to the Bidding Documents of 765kV Transformer Package 7TR-03-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/A00/24/01504**

<b>Sl. No.</b>	<b>Volume/ Section/ Clause</b>	<b>Description as per Bid Document</b>	<b>Bidder's Query / Clarification</b>	<b>POWERGRID's Reply</b>
10.	Clause No. 6.16.16	Winding paper moisture shall be less than 0.5%.	Noted, however testing shall be done with Karl Fischer method. Kindly confirm.	Any method specified in applicable standard, shall be acceptable.
11.	Cl. No 13.5.1	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.	Confirmed.
12.	Cl. No 13.5.6	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.	Confirmed, however, same shall be finalized during detailed engineering
13.	Cl. No 13.5.9	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 may quote as per provisions of bidding documents.

**Clarification No. - 01 dated 04/04/2024 to the Bidding Documents of 765kV Transformer Package 7TR-03-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/A00/24/01504**

Sl. No.	Volume/ Section/ Clause	Description as per Bid Document	Bidder's Query / Clarification	POWERGRID's Reply
14.	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.	Kindly refer clause no 2.2 e) of section project, wherein cable of each 1-phase 765kV Reactor/Transformer required for interconnection of IMB to CMB, shall be supplied as per BPS. Accordingly, cables between CMB1 to CMB2 & Between Spare transformer IMB to CMB1 to CMB2 shall be supplied as per BPS.
15.	Section Project Cl. No. 2.2 (a) (d)	OLTC, 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.	Please refer clause no. 3.0 SPECIFIC EXCLUSION iii) On load Tap changer
16.	Section Project cl no. 2	The Transformers under this package may be utilized for substations located in Seismic Zone-V near costal area also. In Bid price schedule Price of two type of each 765kV & 400kV bushing i) Normal and ii) For Seismic Zone V are mentioned. Bidder must quote price of both type of bushing. During Detailed engineering stage contractor shall be informed quantity of each type (Normal/for zone-V) is to considered.	Seismic test report for seismic zone 5 is not available with any PGCIL approved vendors. PGCIL to review this requirements and allow us to quote normal bushings of seismic zone 3. However, If required, GE shall provide seismic	As per provision of Bidding document type test reports for Seismic test is to be submitted.

**Clarification No. - 01 dated 04/04/2024 to the Bidding Documents of 765kV Transformer Package 7TR-03-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/A00/24/01504**

Sl. No.	Volume/ Section/ Clause	Description as per Bid Document	Bidder's Query / Clarification	POWERGRID's Reply										
		<table border="1"> <tr> <td>Altitude</td> <td>Less than 1000 meter above mean sea level (MSL)</td> </tr> <tr> <td>Snow fall</td> <td>NIL</td> </tr> <tr> <td>Seismic Zone</td> <td>As per IS 1893 (Part 1) – Seismic Zone upto Zone-V</td> </tr> <tr> <td>Wind Zone</td> <td>NBC 2016-47 m/s</td> </tr> <tr> <td>Min.-Max. Ambient Temperature</td> <td>0 / 50 degree centigrade</td> </tr> </table>	Altitude	Less than 1000 meter above mean sea level (MSL)	Snow fall	NIL	Seismic Zone	As per IS 1893 (Part 1) – Seismic Zone upto Zone-V	Wind Zone	NBC 2016-47 m/s	Min.-Max. Ambient Temperature	0 / 50 degree centigrade	calculation for zone 5 from bushing manufacturer. Please confirm	
Altitude	Less than 1000 meter above mean sea level (MSL)													
Snow fall	NIL													
Seismic Zone	As per IS 1893 (Part 1) – Seismic Zone upto Zone-V													
Wind Zone	NBC 2016-47 m/s													
Min.-Max. Ambient Temperature	0 / 50 degree centigrade													
17.		<p>Clause 18.0 of Section Transformer is amended as follow:</p> <p>18. Fittings &amp; accessories</p> <p>m. Fibre optic sensor box</p> <p>v. On line insulating oil drying system On line dissolved gases and moisture monitor (if specified in BPS).</p> <p>x. Fibre optic sensor based temperature measuring system (if applicable).</p>	Ambiguity in following fittings & accessories: Fibre optic sensor is required or not Online insulating oil drying system is required or not	<p>1. Fibre optic sensor is not required.</p> <p>2. Online insulating oil drying system is required.</p>										
<b>Commercial Queries</b>														
18.	SCC Cl No. 33 and BDS 11.3	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 regulation, 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.										
19.		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 finalisation of freight rate.	Bidder to quote as per the provision of bidding documents.										