

Docum Rate Contract for Supply of 5MVA and 8 MVA 33/11kV with OLTC Power Transformer at TPSODL.				
Sr. No.	Detailed Reference to Tata Power 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	ENG-EHV-001 / Clause.No:4.1(9)	<b>As Per Clause No.4.1</b> 4.1.9: Maximum Flux Density - 1.6 Tesla.	We wish to bring to your kind notice that, all other boards of tata power i.e TPWODL,TPNODL&TPCODL are following the flux density in any part of the cores and yoke at normal voltage and frequency shall not be more than 1.69 Tesla and flux density at 112.5% of combined voltage and frequency variation condition should be 1.9 Tesla.  So Kindly Confirm?	Specification to be complied
2	ENG-EHV-001 / Clause.No:4.1(30)&Clause.No:5.3(v)	Maximum current density for HV and LV winding for rated current given as -2.4 Amps/Sq.mm <b>Clause.No:5.3(v)</b> The current density of coil shall not exceed 2.4 Amps/ sq mm at min tap of respective PTR's higher rating	Against this we will follow the Max. current density at normal tap 2.4Amps/Sq.mm as per Clause No 4.1(30).  Kindly Confirm?	Maximum current density for HV and LV winding for rated current given as -2.6 Amps/Sq.mm Max. current density at min tap 2.4Amps/Sq.mm
3	ENG-EHV-001 / Clause.No:4.1(34)	<b>Clause.No:4.1(34)</b> <b>For 5MVA</b> No Load losses : 3.6kW Max Load Losses : 20kW Max. <b>For 8MVA</b> No Load losses : 4.2kW Max Load Losses : 32kW Max.	We wish to bring to your kind notice that, all other boards of tata power i.e TPWODL,TPNODL & TPCODL and all other Electricity Boards procure with the below Losses for 5MVA and 8MVA. So Kindly Amend this as below. <b>For 5MVA</b> No Load losses : 4kW Max Load Losses : 23kW Max. <b>For 8MVA</b> No Load losses : 5.5kW Max Load Losses : 40kW Max. Kindly Confirm.	Specification to be complied
4	ENG-ELC-001 / Clause.No:4.1(40(b))/ Page.No: 7	<b>Clause.No:4.1(40(b))</b> Tap range given as : + 4.686% to -20.606% in steps of 1.56%	Against this we will provide the tap range +4.686% to -20.28% in step of 1.56% to achieve 16 steps/17 position as rated voltage with step percentage of 1.56%.  Kindly confirm?	Noted
5	ENG-EHV-001 / Clause.No:4.2(VII)&5.15(XI)(XIII)	<b>Clause.No:4.2(VII)</b> Transformer shall be compatible for Operation along with Tap Changer Control panel or Transformer Monitoring Unit (TMU). Supply of TMU is not in scope of Bidder. <b>Clause.No:5.15(XI)</b> <b>Automatic / Parallel Operation with OLTC</b> OLTC shall be able to do automatic / parallel operations through Transformer Monitoring Unit(TMU). <b>Clause.No:5.15(XIII)</b> Tap Changer Control panel or Transformer Monitoring Unit (TMU):This equipment is not required to be supplied by the bidder of the transformer.	Against this we are providing the OLTC with RTCC and AVR suitable to SCADA compatible.TMU is not in SSE scope of Supply. Kindly confirm?	TMU, RTCC and AVR are not in scope of bidder
6	ENG-EHV-001 / Clause.No:5.6,5.7 & 5.26	<b>As per Painting:5.6</b> vi. The paint shade used shall be shade 631 as per IS: 5. <b>As per Painting:5.6</b> ii. Before shipment all steel work not under oil shall be painted with a primary coat of anti-corrosive paint of durable nature and two coats of battleship grey paint (Shade 631 of IS: 5). <b>As per Surface preparation and painting: 5.7</b> iii.The two coats shall be of oil and weather-resistant nature with final coat as flossy and non-fading paint of shade 631 as per IS 5 or RAL 7032. <b>As Per Clause No.5.26: Anti Rusting Corrosion Treatment</b> vii. The Paint shade used shall be shade 631 as per IS 5.	We wish to bring to your kind notice that, these clauses are contradicting to each other. Please confirm the Paint shade for Transformer.	Paint Shade be 631 as per IS 5
7	ENG-EHV-001 / Clause.No: 5.2(xiii)	<b>As per Clause No:5.2(xiii).</b> a) The grounding lead from the core shall be brought out of the tank through a 11 kV class bushing and grounded externally.	We wish to bring to your kind notice that, the grounding shall be with 1.1 KV class bushing. Kindly confirm?	Specification to be complied.
8	ENG-EHV-001 / Clause.No:Special Test	<b>As per clause no: Special Test</b> e) Long duration induced AC voltage test (ACLD) transformer winding 72.5<Ums170kV.	We wish to bring to your kind notice that, HV and LV voltage doesn't fall in this category. So it is not applicable.	Noted

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9	ENG-EHV-001 / Clause.No:5.24	<b>As per Clause No.5.24:</b> NITROGEN INJECTION DRAIN AND STIR SYSTEM	We presume that supply of NIFPS is not in our scope. Kindly confirm the same.	NITROGEN INJECTION DRAIN AND STIR SYSTEM is not in scope of bidder
10	ENG-EHV-001 / As per clause: 10	<b>As per Clause.No:10: Inspection in Store:</b> b)In case the transformers proposed for supply against the order are not exactly as per the tested design, the Bidder shall be required to carry out the short circuit test and impulse voltage withstand test at its own cost in the presence of the representative of the TPCODL/TPNODL/TPWODL/TPSODL.	Against this clause we will submit the type test reports of similar or higher rating, if type test reports in line with the specification are required, same will be provided before commencement of supply.	Type Test Reports for Relevant specification and test to be provided. The Type tests should have been conducted in during the period not exceeding 5 years from the date of opening the bid.
11	ENG-EHV-001 / As per clause:5.9.vi.g	<b>As Per Clause No.5.9.V.g</b> Top Oil Filling Pump	Type of cooling is given as ONAN, it means that heat dissipation will be done by Oil Natural and Air Natural. So oil filling pump is not required. Please confirm?	Noted
12	ENG-EHV-001 / As per clause:3	As per Clause No.3: Type test certificates: The Bidder shall furnish the type test certificates of the Two Winding Power Transformer for the tests as mentioned above as per the corresponding standards. All the tests shall be conducted at CPRI / ERDA as per the relevant standards. Type tests should have been conducted in during the period not exceeding 5 years from the date of opening the bid. In the event of any discrepancy in the test reports, i.e. any test report not acceptable or any/all type tests (including additional type tests, if any) not carried out, same shall be carried out without any cost implication to the TPCODL/TPNODL/TPWODL/TPSODL.	We wish to bring to your kind notice that, we will provide similar type test reports at the time of bidding and offered design type test reports will be provided before commencement of supplies.  Kindly accept.	Noted, Type Test Reports for Relevant specification and tests to be provided. The Type tests should have been conducted in during the period not exceeding 5 years from the date of opening the bid.
13	1.7 Qualification Criteria	Bidder must be a BIS Certified OEM of Power Transformer of same or Higher Ratings with manufacturing facility in India. The bidder should have vacuum oil filling machine. The bidder has to furnish the Self undertaking in this regard	BIS is not applicable for Power Transformers	Noted
14	5.24 Nitrogen Injection Drain & Stir System	Fire prevention and extinguishing system shall work on the oil drain, nitrogen injection and stir method. The system shall operate during internal fault in transformer or external fire on transformer, which includes fire due to bursting of transformer	Please confirm NIDS required or not.	Not Required
15	3. TYPE TEST CERTIFICATES: 7.2 TYPE TEST SPECIAL TEST	The type tests to be carried out by the Bidder shall include but not limited to the following:1) Measurement of winding resistance. 2) Measurement of voltage ratio and check of voltage vector relationship. 3) Measurement of impedance voltage / short-circuit impedance (Principal tapping) and load loss. 4) Measurement of no load loss and current. 5) Measurement of insulation resistance. 6) Dielectric Test. 7) Temperature rise for determining the maximum temperature rise after continuous full load run. The ambient temperature and time should be stated in the test certificate. 8) Tests on on-load tap-changer. 9) Short Circuit withstand test. 10) Test to verify IP55 of Marshalling and cable boxes(if applicable) 11) Lightning Impulse voltage test with chopped wave.	We shall submit the type test reports conducted on similar/Higher rating. Hencer we shall not conduct the same on offered transformer	Type Test Reports for Relevant specification and test to be provided from CPRI/ERDA only. The Type tests should have been conducted in during the period not exceeding 5 years from the date of opening the bid.
16		Following type tests shall be carried out on one transformer of each rating, at the works of the bidder, in presence of TPCODL/ TPNODL/TPWODL/TPSODL representative. a. Temperature rise test including DGA (DGA shall be done before & after the heat run test) b. Impulse Test (Including chopped wave on all the three limbs of HV & LV)		Type Test Reports for Relevant specification and test to be provided. The Type tests should have been conducted in during the period not exceeding 5 years from the date of opening the bid.
17	SPECIAL TEST: Page No. 69	e. Long duration induced AC voltage test (ACLD) transformer winding 72.5 <math>U_m \leq 170kV</math>	Test not applicable.	Noted

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18	17. SPARES, ACCESSORIES AND TOOLS	<p>The bidder shall also provide the following mandatory spares along with the transformer.</p> <p>a. HT Bushing (1no.)  b. LT Bushing (1no.)  c. Neutral Bushing (1 no.)  d. Bucholtz Relay (1 no.)  e. Valves ( 1Set)  f. OTI, WTI ( 1 each)  g. PRV (1 no); OSR (1 no); MOG (1 no)  h. Transducers for OTI, WTI, PTI  i. Air cell (1 no.)  j. Fan contactor with overload relay (1 no.).....</p>	<p>One set of spare common for all transformers or one set of spare with each transformer required. Kindly confirm</p>	<p>a. HT Bushing (1no.) – One per OEM  b. LT Bushing (1no.) – One per OEM  c. Neutral Bushing (1 no.) – One per OEM  d. Bucholtz Relay (1 no.) – One per OEM  e. Valves ( 1Set) – One per OEM  f. OTI, WTI ( 1 each) – 2 OTI+ 2 WTI per OEM  g. PRV (1 no); OSR (1 no); MOG (1 no) – One per OEM  h. Transducers for OTI, WTI, PTI – One per OEM  i. Air cell (1 no.) – One per OEM  j. Fan contactor with overload relay (1 no.) – not required  k. Cooling fan (1 no.) – not required  l. Set of gaskets (1 no.) – Two per OEM ( all types)  m. Set of mandatory spares for tap changer (1 no.) – One per OEM  n. Oil – 10% extra – With all PTRs  o. Radiator tube plug – 5 No - With all PTRs  p. Radiator tube valves – 2 No With all PTRs  q. Radiator tube plug oil seals – 12 No – With all PTRs  r. MCCB (1 no.) – With all PTRs  s. MCB (1 no.) – With all PTRs  t. L/R switch (1 no.) – not required  u. R/L switch (1 no.) – not required  v. OLTC counter (1 no.) – With all PTRs  w. Space heater &amp; thermostat (1 no.) – With all PTRs  x. Bushing CT for HV (1 no.) – One per OEM  y. Bushing CT for Neutral (1 no.) – One per OEM  z. Bushing CT for LV (1 no.) – One per OEM</p> <p>One per OEM applicable if order placed for less than equal to 5 No. Two per OEM if order placed for more than 5 No.</p>
19	Doc. No.ENG-EHV-1001/ Clause no.11. Guarantee/ page no.73 of 211	In the event any defect is found by the TPCODL/ TPNODL/TPWODL/TPSODL up to a period of 48 months from the date of commissioning or 60 months from the date of last supplies made under the contract, whichever is earlier.	<p>We bring to your kind notice that many of power utilities procuring the Power transformers with Guarantee period of 24 months from the date of supply or 18 months from the date of Commissioning whichever is earlier.</p> <p>We request you to please review and amend the Guarantee clause as mentioned above.</p>	Specification to be complied
20	16. Warranty: Page 54	2 years from the date of purchase of Transformer. In case any defects are found, the vendor shall replace the product free of cost.	Please confirm warranty period	Warranty period shall be 48 months from the date of commissioning or 60 months from the date of last supplies made under the contract, whichever is earlier.
21	11. GUARANTEE: Page No. 73	In the event any defect is found by the TPCODL/ TPNODL/TPWODL/TPSODL up to a period of 48 months from the date of commissioning or 60 months from the date of last supplies made under the contract, whichever is earlier.		
22	As per specification clause 5.2,XIII	<p>Core Grounding:  a) The grounding lead from the core shall be brought out of the tank through a 11kV class bushing and grounded externally.</p>	Can we use CT Terminal board in place of 11kV class bushing. Hence very less voltage in ground	Specification to be complied
23	As per specification clause 5.4, II	Inter layer insulation both for HV and LV windings shall be DPC and compressed pressboard of reputed make	The Double paper covering will be applicable for conductor covering purpose only and not for inter layer insulation. For higher ratings of voltage class 33/11kV, the winding will be of Disc winding and EDD is not applicable. However, compressed press board of reputed make will be used. Please confirm the same.	For inter layer insulation compressed pressboard of reputed make is applicable.
24	As per specification clause 5.7,III	Mentioned zinc chromate shall be applied as primary coat	Against this clause, as Zinc chromate is banned we will use zinc phosphate, please confirm.	Noted
25	As per specification clause 5.24 Nitrogen Injection Drain & Stir System	Mentioned NIDS(nitrogen injection drain system) specification	Against this clause, presume that NIDS is not in our scope of supply.Please review & confirm the provision is required or not.	Not Required

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26	As per specification clause 17	Spare items a. HT Bushing (1no.) b. LT Bushing (1no.).....	Huge list of spares are mentioned to supply. these many spares are not economical and difficult to store at sites, which are in remote places. Please review and confirm.	a. HT Bushing (1no.) – One per OEM b. LT Bushing (1no.) – One per OEM c. Neutral Bushing (1 no.) – One per OEM d. Bucholtz Relay (1 no.) – One per OEM e. Valves ( 1Set) – One per OEM f. OTI, WTI ( 1 each) – 2 OTI+ 2 WTI per OEM g. PRV (1 no); OSR (1 no); MOG (1 no) – One per OEM h. Transducers for OTI, WTI, PTI – One per OEM i. Air cell (1 no.) – One per OEM j. Fan contactor with overload relay (1 no.) – not required k. Cooling fan (1 no.) – not required l. Set of gaskets (1 no.) – Two per OEM ( all types) m. Set of mandatory spares for tap changer (1 no.) – One per OEM n. Oil – 10% extra – With all PTRs o. Radiator tube plug – 5 No - With all PTRs p. Radiator tube valves – 2 No With all PTRs q. Radiator tube plug oil seals – 12 No – With all PTRs r. MCCB (1 no.) – With all PTRs s. MCB (1 no.) – With all PTRs t. L/R switch (1 no.) – not required u. R/L switch (1 no.) – not required v. OLTC counter (1 no.) – With all PTRs w. Space heater & thermostat (1 no.) – With all PTRs x. Bushing CT for HV (1 no.) – One per OEM y. Bushing CT for Neutral (1 no.) – One per OEM z. Bushing CT for LV (1 no.) – One per OEM  One per OEM applicable if order placed for less than equal to 5 Nos. Two per OEM if order placed for more than 5 Nos.
27	As per specification clause 17	Spare items j.) fan contactor with over load relay, k.) cooling fan -1	These items are not used in ONAN Type transformer. So please confirm these are not required.	Not Required
28	As per specification clause 5.8	Hv and LV as cable box and provided cable details	please clarify which option to be consider.	Will be decided in detail engineering
29	As per specification clause 5.11	The oil shall comply in all respects with the provisions of IS 335. Ester Oil.	Please confirm which type of oil to be consider either IS335 oil or ester oil.	Oil shall be in provision of IS 335
30	As per specification clause 5.15,XI As per specification clause 5.15,XIII	OLTC shall be able to do automatic / parallel operations through Transformer Monitoring Unit (TMU). And As per specification clause 5.15,XIII This equipment (TMU) is not required to be supplied by the bidder of the transformer.	We presume TMU, AVR, RTCC panel is not in the scope of bidder	TMU, RTCC and AVR are not in scope of bidder
31	As per specification clause 5.18	Buchholz relays suitable for nominal pipe bore of 80 mm Should be provided	Against this clause, For 8 & 5MVA rating transformers 50mm pipe is sufficient even CBIP standard also recommends 50mm for ratings less than 10MVA. Please confirm the same.	Noted
32	As per specification clause 5.1,VII	the neutral shall be formed at the bottom of the winding and brought to LVN bushing through a separate path.	we presume that LV Neutral shall be mounted on top of tank apart from LV phase bushings which are place in cable box	Will be decided in detail engineering
33	As per specification clause 12	The transformer shall be shipped filled with oil/without oil but with the tank filled with Nitrogen under pressure complete with gas cylinder reducer, connection and pressure gauges.	Transformer shall be shipped with oil filled up to transport oil level gauge as these are smaller rating transformers. So nitrogen cylinders and pressure gauges are not required and same will not be provided, please confirm the same	Specification to be complied
34	As per specification clause 5.23 j	Mentioned SPR (Sudden pressure relay) trip contact to be provided.	sudden pressure relay shall not be applicable for these ratings of transformer, however we will provide PRD(pressure relief device for main tank and OLTC conservator)	Noted but trip contact to be provided
35	As per specification clause 4.1,40	Tap range of OLTC as +4.686% to -20.606% in steps of 1.56% with 16 steps	There may be typographical error against this clause, please recheck and confirm the tap range (+4.68% to 20.68% in steps 1.56%) and no of steps shall be 16.	tap range +4.686% to -20.28% in step of 1.56% to achive 16 steps/17 position as rated voltage with step percentage of 1.56%.

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36	7.2 TYPE TESTS	9) Short Circuit withstand test.  Note: The bidder shall submit the test report from CPRI or ERDA for the tests mentioned above.	We have already conducted type tests for supply of 3.15MVA, 5MVA & 8MVA 33/11kV power Transformers. Accordingly type test reports of short circuit test, Lightning Impulse Withstand voltage test & Temperature rise tests are available with us. We request you to kindly accept the available short circuit test report for waiving off the requirement of conducting short circuit in the event of order. However balance type tests of temp rise & lightning Impulse test can be conducted at our internal NABL accredited labs	Specification to be complied
37	SPECIAL TEST	b. Determination of transient voltage transformer characteristics	These tests are not applicable for the tender item, because LV voltage winding can be subjected to lightning impulse voltage test. However CPRI - Bangalore also confirmed that they doesn't have facility to conduct the test.	Specification to be complied
38		e. Long duration induced AC voltage test (ACLD) transformer winding 72.5 <U <sub>m</sub> ≤ 170kV	HV and LV voltage doesn't fall in this category. So it is not applicable.	Noted
39	As per specification clause 5.12,I	Gaskets of nitrile / rubber shall be used	Against this clause, we will provide gaskets of Neoprene rubberised cork material as per IS:4253-II gr. RC-70C(type-C).	Gaskets shall be NRBC (Nitrile Rubber Bonded Cork)
40	As per specification clause 17 Spare , accessories and tools	Spare list is provided.	As per 5MVA transformer , Below spares will not be applicable. a.Fan contactor with overload relay (1 no.) b. Cooling fan (1 no.) c. Set of mandatory spares for tap changer (1 no.) d. MCCB (1 no.) e. L/R switch (1 no.) f. R/L switch (1 no.) g. OLTC counter (1 no.)	a. HT Bushing (1no.) – One per OEM b. LT Bushing (1no.) – One per OEM c. Neutral Bushing (1 no.) – One per OEM d. Bucholtz Relay (1 no.) – One per OEM e. Valves ( 1Set) – One per OEM f. OTI, WTI ( 1 each) – 2 OTI+ 2 WTI per OEM g. PRV (1 no); OSR (1 no); MOG (1 no) – One per OEM h. Transducers for OTI, WTI, PTI – One per OEM i. Air cell (1 no.) – One per OEM j. Fan contactor with overload relay (1 no.) – not required k. Cooling fan (1 no.) – not required l. Set of gaskets (1 no.) – Two per OEM ( all types) m. Set of mandatory spares for tap changer (1 no.) – One per OEM n. Oil – 10% extra – With all PTRs o. Radiator tube plug – 5 No - With all PTRs p. Radiator tube valves – 2 No With all PTRs q. Radiator tube plug oil seals – 12 No – With all PTRs r. MCCB (1 no.) – With all PTRs s. MCB (1 no.) – With all PTRs t. L/R switch (1 no.) – not required u. R/L switch (1 no.) – not required v. OLTC counter (1 no.) – With all PTRs w. Space heater & thermostat (1 no.) – With all PTRs x. Bushing CT for HV (1 no.) – One per OEM y. Bushing CT for Neutral (1 no.) – One per OEM z. Bushing CT for LV (1 no.) – One per OEM One per OEM applicable if order placed for less than equal to 5 Nos. Two per OEM if order placed for more than 5 Nos.
41	As per specification clause 4.1	Details of LV WTI CT	WTI CT is metering CT where Protection class will not be applicable.please confirm.	WTI CT is metering CT
42	As per specification clause 4.1,35	Transformer shall be provided with flanged bi directional rollers suitable for rail gauges	Against this clause, Transformer is provided with flanged bi directional rollers for mounting on rails. However rails are not in TTDI scope of supply. please confirm the same	Noted, rails are not in scope of bidder
43	As per specification clause 5.1, XVII	Magnetic oil level indicator shall comprise with 2 nos. mercury contact/switch (for High / Low oil level alarm).	We will provide micro switches for MOG as mercury is banned to use.	Noted
44	As per specification clause 5.2,XIII	a) The grounding lead from the core shall be brought out of the tank through a 11kV class bushing and grounded externally.	it is not applicable for smaller rating of transformer.	Specification to be complied
45	As per specification clause 5.10,I	NIDS(nitrogen injection drain system) specification	The revised technical specification is calling for NIDS. In general for this medium rating of power transformers NIDS is not essential & economical. Kindly review and confirm. If provision for NIDS is essential, kindly share the model for providing provision.	NITROGEN INJECTION DRAIN AND STIR SYSTEM is not in scope of bidder
46	As per specification clause 5.11	Ester oil specification.	please confirm the type of insulating oil to be considered in the bid. i.e Mineral oil as per IS 335 will be provided.	Oil shall be in provision of IS 335

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47	As per specification clause 5.20 IV	All digital outputs for remote annunciation/control/DAS shall be provided with two changeover (NO) contacts for alarm condition and two changeover (NO) contacts for trip condition.	Against this clause, 2 NO for alarm and 2 NO for Trip will be provided for WTI, OTI, Buchholz Relay. For PRD ,2NO for tripping and 2 NC for alarm will be provided. For OSR , 1 NO for alarm and 1NO for Trip is provided. For MOG, only 1NO for alarm . Please confirm	Noted
48	As per specification clause 5.27,	Make of major components and raw materials are provided.	We will approach TPSODL for approval of any equivalent makes based on the order execution period as per our plant standard. However we will once again share the vendor list DDE.	Specification to be complied
49	As per specification clause 7.2 TYPE TESTS	a. Short Circuit withstand test. b. Lightning impulse voltage test with chopped wave. c.Temperature rise test including DGA (DGA shall be done before & after the heat run test) Note: The bidder shall submit the test report from CPRI or ERDA for the tests mentioned above.	We have already conducted type tests for supply of 5MVA, 33/11kV power Transformers. Accordingly type test reports of short circuit test, Lightning Impulse Withstand voltage test & Temperature rise tests are available with us. We request you to kindly accept the available type test report.	Type Test Reports for Relevant specification and test to be provided from CPRI/ERDA only. The Type tests should have been conducted in during the period not exceeding 5 years from the date of opening the bid.
50	As per specification clause 7.2 SPECIAL TESTS	a) Determination of transient voltage transformer characteristics b) Lightning impulse test on Neutral terminals c) Long duration induced AC voltage test (ACLD) transformer winding 72.5 <Ums 170kV d) Magnetic circuit (isolation) test	the following test cannot be done due to a) & b) cannot be conducted at bidder works. C) applicable for above 72.5 kvvoltage class. D)it will be applicable for higher rating of power transformer.	Specification to be complied, however SI No.C) is not applicable
51	10. INSPECTION AFTER RECEIPT AT SITE/STORE	a) Measurement of winding resistance b) Measurement of voltage ratio and check of voltage vector relationship c) Measurement of magnetizing current. d) Magnetic balance test on three phase transformer e) Magnetic circuit (isolation) test. f) Measurement of short circuit Impedance at low voltage. g) Insulation resistance measurement h) Dielectric Test on oil i) Determination of Capacitances and dissipation factor winding-to-earth and between windings j) Bushing Capacitance and tan δ k. Test on other Auxiliaries l. No-Load and Excitation current	Not in VMCL scope.	Noted
52	As per specification clause 10. INSPECTION AT STORE	1. Total weight of the transformer. (It should be as per the offer, subjected to tolerance as per approved drawings & GTPs) 2. Oil level in the transformer 3. Verifications of all the fittings 4. Physical verification of all the transformers for any damages, oil leakage, quality of painting etc. f) Test at site: The TPCODL/ TPNODL/TPWODL/TPSODL reserves the right to conduct all tests on Transformer after arrival at site/stores and the manufacturer shall guarantee test certificate figures under actual service conditions.	Not in VMCL scope.	Noted
53	As per specification Clause.No:4.2(VII)&5.15(XI)(XIII)	<b>Clause.No:4.2(VII)</b> Transformer shall be compatible for Operation along with Tap Changer Control panel or Transformer Monitoring Unit (TMU). Supply of TMU is not in scope of Bidder. <b>Clause.No:5.15(XI)</b> Automatic / Parallel Operation with OLTC OLTC shall be able to do automatic / parallel operations through Transformer Monitoring Unit(TMU). <b>Clause.No:5.15(XIII)</b> Tap Changer Control panel or Transformer Monitoring Unit (TMU):This equipment is not required to be supplied by the bidder of the transformer.	Against this we are providing the OLTC with RTCC and AVR suitable to SCADA compatible.TMU is not in SSE scope of Supply. Kindly confirm?	TMU, RTCC and AVR are not in scope of bidder
54	As per specification clause No 12 (iii)	The transformer shall be shipped filled with oil/without oil but with the tank filled with Nitrogen under pressure complete with gas cylinder reducer, connection and pressure gauges.	Transformer will be dispatched along with oil. So Nitrogen filling is not required & applicable for above 50 MVA Transformer due to loading capacity of weight. Kindly confirm?	Specification to be complied.
55	As per clause 4, s.no40 b)	OLTC on HV sidewith Range + 4.686% to -20.606 % in steps of 1.56%	Against this clause we are considering OLTC range as 4.686% to 20.306% in steps of 1.562%,Please Confirm.	tap range +4.686% to -20.28% in step of 1.56% to achive 16 steps/17 position as rated voltage with step percentage of 1.56%.
56	As per clause 4,  As per clause 4.2 VII.	s.no40 h) All contacts should be SCADA compatible and suitable for connection to TMU s.no40 p) SCADA and TMU compatibility  Transformer shall be compatible for Operation along with Tap Changer Control panel or Transformer Monitoring Unit (TMU).	We presume TMU, AVR, RTCC panel is not in the scope of bidder	Noted, however provision to be provided in OLTC

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57	As Per Clause No.4.1(15)	Percentage impedance voltage on normal tap at Base MVA given as For 5MVA - 7.15% For 8 MVA - 8.35% (Tolerance shall be as per IS 2026 Part-1,Clause 9, Table No.1)	We wish to bring to your kind notice that, currently we are supplying to TPCODL and the impedance is as under: 5MVA: 7% (+/- 10 % tolerance) 8MVA: 8% (+/- 10 % tolerance) Please review and confirm	Specification to be complied
58	As Per Clause No.5.1 vi)	the neutral shall be formed at the bottom of the winding and brought to LVN bushing through a separate path.	We presume that LV Neutral shall be mounted on top of tank apart from LV phase bushings which are placed in cable box.	Will be decided in detail engineering
59	As Per Clause No.5.1 xxvi)	Mentioned SPR (Sudden pressure relay shall be provided)	Against this clause, sudden pressure relay shall not be applicable for these ratings of transformer, however we will provide PRD(pressure relief device for main tank and OLTC conservator)	Noted but trip contact to be provided
60	As Per Clause No.5.3(v): As Per Clause No.4(v), S.no30 :	The current density of coil shall not exceed 2.4 Amps/ sq mm at min tap of respective PTR's higher rating  Maximum current density for HV and LV winding for rated current at normal Tap shall be - 2.4 A/Sq.mm	There is ambiguity in provided clauses Kindly confirm the current density & tap condition to follow.	Maximum current density for HV and LV winding for rated current given as -2.6 Amps/Sq.mm Max. current density at min tap 2.4Amps/Sq.mm
61	As per clause no: 5.3(xv)	Primary and secondary windings shall be Double Paper Covered (DPC copper conductor" & 5.4(iii) " For Winding insulation, only Double Paper Covered insulation is acceptable with laying in opposite direction to each other and each paper must have overlapping more than 25% of its width.	Against these clauses for these power rating transformer insulation covering on conductor should be on higher side. DPC will not be sufficient. So, we are using multi paper covering on copper conductor with specified overlapping in outer layer.	Noted
62	As per clause no. 5.4(ii)	Inter layer insulation both for HV and LV windings shall be DPC and compressed pressboard of reputed make (subject to approval of TPCODL/ TPNODL/TPWODL/TPSODL ).	As required transformers voltage class is of 33/11kV, windings will be Disc winding, so this clause is not applicable.	Specification to be complied
63	As per clause no. 5.5 i)	The tank shall be welded Type .Top cover shall be Flanged type . All seams shall be welded and where practicable they shall be double welded.	Against this clause transformer tank and cover shall be welded construction, against this clause , tank and top cover of the transformer provided is with bolted type construction.	Specification to be complied
64	As per clause no. 5.5(xvii)	suitable arrangement shall be made for mounting LV & HV lightning arrestors of the transformer".	Against this clause Lighting arrestors & respective provisions are not in our scope of supply.	Noted
65	As per clause no 5.5 (xii).	For the auxiliary lead wiring from individual instrument to marshalling box, the cables shall be provided in the conduits	Against this clause, Cable conduits not required as cables will be running through G.I cable trays.	Noted
66	As per clause no 5.6  As per Painting  As per Surface preparation and painting  As Per Clause No.5.26: Anti Rusting Corrosion Treatment	vi. The paint shade used shall be shade 631 as per IS: 5.  ii. Before shipment all steel work not under oil shall be painted with a primary coat of anti-corrosive paint of durable nature and two coats of battleship grey paint (Shade 631 of IS: 5).  The two coats shall be of oil and weather-resistant nature with final coat as glossy and non-fading paint of shade 631 as per IS 5 or RAL 7032.  vii. The Paint shade used shall be shade 631 as per IS 5.	We wish to bring to your kind notice that, these clauses are contradicting to each other. Please confirm the Paint shade for Transformer.	Paint Shade be 631 as per IS 5
67	As per clause 5.7 (ii)	Mentioned zinc chromate shall be given as primer coat	Zinc chromate primer is not provided in painting system as it is a banned product in Industrial applications.	Noted
68	As per clause no: 5.7(i)	Mentioned Air-less spray shall be applied.	Against this clause we will provide our conventional spray painting method as per our regular manufacturing practic, Please confirm	Specification to be complied
69	As per clause no: 5.8(ix)	The bushings shall have a link type isolating facility for tap for maintenance tests viz. power factor measurement etc. (Terminal shall be provided for the measurement of power factor and tan delta).	Against this clause we are providing bushings with link between winding ends and bottom of bushings for maintenance test. Being 33kV & 11 kV rating bushings taps for terminals is not applicable and Tan delat valve is not applicable for solid procelin bushings,Please confirm.	Specification to be complied
70	As per clause no: 5.8(v)	In case of oil communicating type bushing (33kV & 11kV), venting screw of the hollow stud, shall be provided with suitable gasket as per IS 4253-2 (latest amendment), to avoid oil leakage problem through the same. Angle of inclination to vertical for any bushing shall not exceed 30 deg. All bushings shall have puncture strength greater than the dry flash-over value	against this clause we will provide gaskets of nitrile rubber / nitrile rubber bonded cork to avoid oil leakages	Gaskets shall be NRBC (Nitrile Rubber Bonded Cork)
71	As per clause no:5.8 (xi)	Hv and LV specifies as cable box and cable details provided	Against this clause there is an ambiguity in termination details, please clarify whether HV & LV side is with bare bushings or cable box. Being outdoor power transformer bare bushings are recommendable for site operation. Cable box is not recommended. Kindly review and confirm.  If cable box required on HV side please provide • Cable sizes • Number of runs for Cable box. However Cables, Cable Glands, Cable Lugs and Cable Termination Hardware's are not in TTDI scope of supply	Will be decided in detail engineering

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72	As per clause no:5.8 (xi)	Option - 1 & Option - 2	The extended busbars required at site is not in the scope of bidder. [Bus bar dimensions may vary from site to site, hence keep in TATA scope]	scope will be decide in detail engineering
73	As per clause no:5.9 (d&g)	Top Oil filling Plugs & Top Oil Filling Pump should be provided	Against this clause, Type of cooling is given as ONAN, it means that heat dissipation will be done by Oil Natural and Air Natural. So forced cooling with oil filling pump is not required. Please confirm the same.	Noted
74	As per clause no: 5.12(v)	Mentioned All bolts shall be provided with one spring washer and two numbers of flat washers and with locking bolts.	Against this clause these will be provided wherever it is necessary based on manufacturer's std. practice, Please confirm	Specification to be complied
75	As per clause no: 5.12(v) Gaskets shall be NRBC (Nitrile Rubber Bonded Cork )  As per clause no: 5.15(xi)	Gaskets shall be NRBC (Nitrile Rubber Bonded Cork )  To ensure oil tightness, recessed neoprene or equivalent gaskets shall be used	Against these clause Rubberized bonded cork gaskets as per IS:4253-II gr. RC-70C(type-C) with joints which cannot be over pressed / damaged while tightening are provided wherever applicable.	Gaskets shall be NRBC (Nitrile Rubber Bonded Cork)
76	As per clause no: 5.13(iv)	Prismatic oil level indicators with red color float shall be provided on main tank and OLTC tank Conservator.	Against this clause Plain prismatic oil level gauge without float and with clear visibility of oil level is provided, Please confirm.	Specification to be complied
77	As per clause no: 5.15(v) & 5.16	OSR cable entry in terminal box to be from bottom side.	Against this clause we are providing OSR cable with entry from side of the component as per supplier standard catalogue product, Please confirm.	Specification to be complied
78	As per clause no:5.17&5.22:	PRV & MOG components shall be marked with TPCODL/TPNODL/TPWODL/TPSODL	Against this clause as these are supplier's standard products they will not provide such type of markings. Further for the entire supplier's standard products providing to the transformer this type of markings will not be provided	Noted
79	As per clause no:5.18	Mentioned Nominal Pipe Bore 80mm for Buccholz relay	Against this clause, For 8 & 5MVA rating transformers 50mm pipe is sufficient even CBIP standard also recommends 50mm for ratings less than 10MVA. Please confirm the same.	Noted
80	As per clause no:5.19 OTI	A dial-type indicating thermometer of robust pattern mounted on the side of the transformer at a convenient height to read the temperature in the hottest part of the oil and fitted with alarm and trip contacts and contacts for switching in and switching out the cooling system at predetermined temperatures.		Specification to be complied
81	As per clause no: 5.20 WTI  As per clause no:4 ,S.no33	In one winding of each phase as described below:  WTI - 1 nos each	Against this clause we are providing one WTI only for LV.	Noted
82	As per clause no:5.20 iv)	All the interconnected wiring between TJB, Marshalling box and OLTC etc	Against this clause TJB and respective wiring is not our scope of supply.	Noted but provision to be provided
83	As per clause no: 5.22	Mentioned MOG should have cable disconnecting facility at top, to facilitate testing of MOG.	Against this clause we are providing MOG and suitable function of this MOG (i.e, NO / NC) can be verified at terminal blocks in Marshalling box where this MOG is terminated, Please confirm.	Specification to be complied (MOG shall be provided with disconnecting TB's)
84	As per clause no: 5.22 sl.no 8)	conservator diameter shall be 500-700 mm	against this clause we are providing approx. 500-700mm diameter aircell type conservator for main transformer and approx. 260mm diameter plain type conservator for OLTC tank which is best suitable for this Power rating transformers.	Noted
85	As per clause no. 5.26(iv) As per clause no 5.9	mentioned radiators shall be metal spray painted. The radiators shall be epoxy/Polyurethane painted.	There is ambiguity in these clauses against these clauses radiators are provided with polyurethane paint only.	Noted
86	As per clause no.5.27	Makes related to some of the Raw material / equipment is as follows: CRGO Core,Copper, Insulation PressBoard, Insulation Paper , Transformer, Gaskets& Corks & MS sheets/Plates.	Against this clause regular standard reputed makes of these material will be provided (in line to our regular supplies to TATA boards).	Specification to be complied
87	As per clause no.5.27	Core	In addition, please also include following CRGO makes who has been reputed manufacturers & approved by BIS, also included in our vendor list:  1. Thyssenkrupp Electrical Steel India Pvt Ltd,Nashik. 2. NLMK, Russia 3. Baoshan Iron & Steel Co Ltd, China 4. Wuhan Iron & Steel Co Ltd, China 5. Shougang Zhixin Qian'an Electromgnetic Material Co. Ltd,China' 6. Stal Produkt,Poland	Specification to be complied



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88	As per specification clause no: 7.1 sl.no9)	Short Circuit withstand test.  Note: The bidder shall submit the test report from CPRI or ERDA for the tests mentioned above.	We have already conducted type tests for supply of 3.15MVA, 5MVCA & 8MVA 33/11kV power Transformers. Accordingly type test reports of short circuit test, Lightning Impulse Withstand voltage test & Temperature rise tests are available with us. We request you to kindly accept the available short circuit test report for waiving off the requirement of conducting short circuit in the event of order. However balance type tests of temp rise & lightning impulse test can be conducted at our internal NABL accredited labs	Specification to be complied
89	As per specification clause no: 7.1 sl.no17)	Measurement of Acoustic Noise Level.	Kindly note that acoustic noise level is the type test and will be conducted on 1 unit against the Rate contract.	Noted
90	As per specification clause no: 7.2:	Special test: c. Measurement of insulation resistance to earth of the windings, and / or measurement of Dissipation factor (tan δ) of the insulation system capacitances. (These are reference values for comparison with later measurement in the field. No limitation for the values are given here.).	Against this clause we are proceeding as follows: Tan delta values of windings shall be limited to 1 % at 20 Deg. C between (i) HV-LV (ii) LV-HV (HV earthed) (iii ) HV-LV(LV earthed).	Specification to be complied
91	As per clause no 1 .ff	Tan delta value of insulating oil and kraft paper of transformer.	Against the clause , Tan delta value of insulating oil & kraft paper to be considered from respective oil supplier's datasheets/test reports. And also with reference to our regular supplies to TATA POWER customers till date these values were not provided in rating plates. Hence for this present order also the same are not provided in rating plate drawing	Specification to be complied
92	As per clause no 17	Spare	Huge list of spares are mentioned to supply. As the OEM is issuing warranty for the 48/60 months these many spares are not economical and difficult to store at sites, which are in remote places. Please review and confirm.	<ul style="list-style-type: none"> <li>a. HT Bushing (1no.) – One per OEM</li> <li>b. LT Bushing (1no.) – One per OEM</li> <li>c. Neutral Bushing (1 no.) – One per OEM</li> <li>d. Bucholtz Relay (1 no.) – One per OEM</li> <li>e. Valves ( 1set) – One per OEM</li> <li>f. OTI, WTI ( 1 each) – 2 OTI+ 2 WTI per OEM</li> <li>g. PRV (1 no); OSR (1 no); MOG (1 no) – One per OEM</li> <li>h. Transducers for OTI, WTI, PTI – One per OEM</li> <li>i. Air cell (1 no.) – One per OEM</li> <li>j. Fan contactor with overload relay (1 no.) – not required</li> <li>k. Cooling fan (1 no.) – not required</li> <li>l. Set of gaskets (1 no.)– Two per OEM ( all types)</li> <li>m. Set of mandatory spares for tap changer (1 no.) – One per OEM</li> <li>n. Oil – 10% extra – With all PTRs</li> <li>o. Radiator tube plug – 5 No - With all PTRs</li> <li>p. Radiator tube valves – 2 No With all PTRs</li> <li>q. Radiator tube plug oil seals – 12 No – With all PTRs</li> <li>r. MCCB (1 no.) – With all PTRs</li> <li>s. MCB (1 no.) – With all PTRs</li> <li>t. L/R switch (1 no.) – not required</li> <li>u. R/L switch (1 no.) – not required</li> <li>v. OLC counter (1 no.) – With all PTRs</li> <li>w. Space heater &amp; thermostat (1 no.) – With all PTRs</li> <li>x. Bushing CT for HV (1 no.) – One per OEM</li> <li>y. Bushing CT for Neutral (1 no.) – One per OEM</li> <li>z. Bushing CT for LV (1 no.) – One per OEM</li> </ul>
93	As per clause no 12.0 iv)	Provisions for monitoring of oil and gas pressure during transport and storage and a make-up Nitrogen cylinder shall be made	against this Transformer shall be shipped with oil filled up to transport oil level gauge as these are smaller rating transformers. So nitrogen cylinders and pressure gauges are not required and same will not be provided, please confirm the same	Specification to be complied
94	As per specification clause 5.2,XIII	Core Grounding: a) The grounding lead from the core shall be brought out of the tank through a 11kV class bushing and grounded externally.	a) The grounding lead from the core shall be brought out of the tank through a 1kV class bushing and grounded externally.	Specification to be complied
95	As per specification clause 4.1,35	The transformer shall be provided with four flanged bi-directional rollers suitable for rail gauges	Against this clause, Transformer is provided with flanged bi directional rollers for mounting on rails. However rails are not in TTDI scope of supply. please confirm the same	Noted, rails are not in scope of bidder
96	As per specification clause 5.9,VI	Top Oil Filling Pump should be provided	Against this clause, Type of cooling is given as ONAN, it means that heat dissipation will be done by Oil Natural and Air Natural. So forced cooling with oil filling pump is not required. Please confirm the same.	Noted
97	7.1 ROUTINE TESTS	17) Measurement of Acoustic Noise Level.	Kindly note that acoustic noise level is the type test and will be conducted on 1 unit against the Rate contract.	Noted

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98	7.2 TYPE TESTS	9) Short Circuit withstand test.  Note: The bidder shall submit the test report from CPRI or ERDA for the tests mentioned above.	We have already conducted type tests for supply of 5MVCA & 8MVA, 33/11kV power Transformers. Accordingly type test reports of short circuit test, Lightning Impulse Withstand voltage test & Temperature rise tests are available with us.  We request you to kindly accept the available short circuit test report for waiving off the requirement of conducting short circuit in the event of order. However balance type tests of temp rise & lightning Impulse test can be conducted at our internal NABL accredited labs. Kindly confirm the same.	Specification to be complied
99	SPECIAL TEST	b. Determination of transient voltage transformer characteristics	These tests are not applicable for the tender item, because LV voltage winding can be subjected to lightning impulse voltage test. However CPRI - Bangalore also confirmed that they doesn't have facility to conduct the test.	Specification to be complied
100	SPECIAL TEST	e. Long duration induced AC voltage test (ACLD) transformer winding 72.5 <U <sub>m</sub> ≤ 170kV	HV and LV voltage doesn't fall in this category. So it is not applicable.	Noted
101	NITROGEN INJECTION DRAIN AND STIR SYSTEM	Scope of NIDS	Please confirm either provision for NIDS or complete supply of NIDS is in bidder scope.  In general for these capacity of Transformers NIDS is not suggestable and as well as not economical. Kindly review.	Not required
102		With reference to your technical specification no. ENG-EHV-1001 i.e technical specification for 33/11 kV 5 MVA and 8MVA PTR of Pg. No. 40 of 59 Ci. No. 7.2 sub clause B impulse test which states that the following type test one transformer of each rating at the works of the bidder in presence of TPCODL/ TPNODL/TPWODL/ TPSODL representative. a. Temperature Rise Test. b. Impulse Test	We have to inform you that due to the above mentioned subclause b i.e Impulse test which is a type test and this testing facility is not available at our works	Noted the mentioned test is to be conducted in CPRI/ERDA lab as a part of Type Test.
103	Clause no.8.0 SECURITY CUM PERFORMANCE DEPOSIT of General conditions of Contract for supply orders/ Page no. 9 of 49	Associates shall submit within 15 days from the effective date of issue of PO/RC, Security Performance Bank Guarantee (SPBG) in the format as per Annexure B of this document from banks acceptable to TPSODL for: (a) 5% of the PO value if purchase order value is more than Rs 5 Crores. (b) 10% of the PO value if purchase order value is less than Rs 5 Crores.	We request you to amend the clause as per the below:  Associates shall submit within 15 days from the effective date of issue of PO/RC, Security cum Performance Bank Guarantee (SPBG) in the format as per Annexure B of this document from banks acceptable to TPSODL for:  (a) 1% of the PO value if purchase order value is more than Rs 5 Crores.  (b) 3% of the PO value if purchase order value is less than Rs 5 Crores. This shall remain valid till the end of the Guarantee Period of contract, plus one month	Tender condition shall prevail
104	7.1. Special Conditions of Contract (SCC):	Post award of rate contract, Business Associate (BA) shall submit applicable Performance Bank Guarantee as per GCC within 15 days. Performance Bank Guarantee amounting to 5% of the Rate Contract Value shall be submitted by the BA as per GCC for a period equivalent to warranty Period plus one month.	We request you to accept CPBG OF 3% percent as per circular issued by Government of India- Ministry of Finance dated 12th Nov 2020.	Tender condition shall prevail
105	7.5 Payment Terms:	On delivery of the materials in good condition and certification of acceptance by certified official, Associate shall submit the Bills/ Invoices in original in the name of TP Southern Odisha Distribution Limited to Invoice Desk. Post submission of an error-free and verified invoice (s) from EIC, payment shall be released within 45 days.	We being MSME Vendor would like to have bill discounted through Treds Platform.	Tender condition shall prevail
106	1.7 Qualification Criteria, Point No.4	The bidder should have performance certificates from at least 2 Discom utilities/Transmission/Generation Organization for similar or higher rating of Power Transformer. The work against these issued certificates should be completed in last Six years from the date of bid submission.	We had supplied higher rating of Power transformer to DHBVN and Developer-BPTP (end user Discom). We had received Purchase order of cumulative 155 MVA from said utility/developer (Order copy shall be furnished if required). Out of them total cumulative MVA Rating of supplied Power transformer is 40 MVA (DI shall be furnished if required). Also we have in-house NABL LAB. It is request to kindly consider above deviation and change in QR accordingly.	Tender condition shall prevail
107	7.1. Special Conditions of Contract (SCC):	Delivery at PAN TPSODL Stores/site shall be within 120 days from the date of issue of Released Order or GTP approval whichever is later.	Being power transformers, considering lead time for procurement and manufacturing kindly amend the delivery schedule to 150 days which avoids supplier to load contingency of penalty amount (Liquidated Damages).	Tender condition shall prevail
108	Cl. No. 12.5 Dispatch and Delivery Instructions: Point No.8	In case of manual unloading, supplier / transporter shall deploy sufficient Labour for unloading the material at TPSODL central store. For heavy item(s), crane will be provided by TPSODL [unloading cost will be recovered from the associate].	As the tendered item is heavy item and unloading is in the scope of bidder, we request you to confirm whether the crane support is provided or not. If providing inform the charges for crane and unloading at site.	Price Basis will be FOR PAN TPSODL Sites/Stores. Complete unloading will be in Bidder Scope. All the necessary equipment to be arranged by the bidder as per requirement. TPSODL will not arrange crane, man power etc. Bidder has to make arrangement to unload at our desired location.