Tender No : TPSODL/OT/22-23/125				
Package Name: Rate Contract for Supply of Different Rating of Distribution Transformer.				
Reply to Techno Commercial Pre Bid Queries				
Sr. No.	**Detailed Reference to TPSODL Tender 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	As per Clause no. 2.1. Price Variation Clause, page no. 8 of 27	2.2 Price Variation Clause for Al Wound Transformers (16 kVA, 25 kVA) Price variation shall be applicable as per PV formulae as below: P =P0/100 * (10 + 19*(AL/AL0) + 30*(ES/ES0) + 13*(IS/IS0) + 4*(IM/IM0) + 11*(TO/TO0) + 13*(W/W0))	Against this clause we bring to your kind notice that, this tender calls for 25kVA, 63kVA & 100kVA Distribution Tranformers with Aluminium winding. The PV formulae is same for all the ratings of Al wound Distribution Transformers upto 2500kVA. But, in the PV clause no. 2.2 it is mentioned only for 16kVA. Further, we request you to please note, recently M/s IEEMA has issued a revised price variation formula, vide their circular No. IEEMA/PVC/DIST_AL_upto 2.5 MVA/DE/2021 and recommended for implementation with effect from 1st September - 2021. $P = \frac{P_o}{100}(8 + 22\frac{AL}{AL_o} + 36\frac{ES}{ES_o} + 12\frac{IS}{IS_o} + 5\frac{IM}{IM_o} + 10\frac{TO}{TO_o} + 7\frac{W}{W_o})$ The copy of the circular is enclosed as an .annexure-1 and also revised formula mentioned below for your easy reference: Please review and confirm.	**May Please refer the corrigendum in this regards.**
2	As per Clause no. 2.1. Price Variation Clause, page no. 8 of 27	2.3 Price Variation Clause for Cu Wound Distribution Transformers (315 kVA) Price variation shall be applicable as per PV formulae as below: P =P0/100 * (10 + 33*(C/C0) + 24*(ES/ES0) + 9*(IS/IS0) + 4*(IM/IM0) + 5*(TO/TO0) + 15*(W/W0))	Against this clause we bring to your kind notice that, this tender calls for 250kVA & 500kVA Distribution Tranformers with Copper winding. The PV formulae is same for all the ratings of Cu. wound Distribution Transformers upto 2500kVA. But, in the PV clause no. 2.2 it is mentioned only for 16kVA. Further, we request you to please note, recently M/s IEEMA has issued a revised price variation formula, vide their circular No. IEEMA/PVC/DIST_CU_upto 2.5 MVA/DE/2021 and recommended for implementation with effect from 1st September - 2021. The copy of the circular is enclosed as annexure-2 and also revised formula mentioned below for your easy reference: $P = \frac{P_o}{100}(7 + 41\frac{C}{C_o} + 23\frac{ES}{ES_o} + 10\frac{IS}{IS_o} + 5\frac{IM}{IM_o} + 8\frac{TO}{TO_o} + 6\frac{W}{W_o})$ Please review and confirm.	**May Please refer the corrigendum in this regards.**
3	As per Clause no. 8.0 SECURITY CUM PERFORMANCE DEPOSIT in GENERAL CONDITIONS OF CONTRACT FOR SUPPLY ORDERS/Page no. 210	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. This shall remain valid till the end of the Guarantee Period of contract, plus one month. c) 5% of the RC value in case of Rate Contract. This shall remain valid till the Guarantee period plus one month.	We bring to your kind notice that, The Government of India vide office memorandum No. F/9/4/2020-PPD, Dt: 12.11.2020 & No.3/7/2017-Trans-Pt(6), Dt:23.03.2021 issued guidelines to reduce the Performance security from existing 5%-10% to 3% of total value of contract. The copies of the same are enclosed herewith for your kind perusal. In this context, we request your esteemed office to amend the Performance Security Clause with 3% of the Total Contract Value. The copy of the circular is enclosed as an annexure-3	**Tender clause prevails**

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4	ENG-HV-2001	**As Per Document title** SPECIFICATION FOR 11/0.4KV DTR(ALUMINIUM) 25-100KVA **&** **1. SCOPE:** This Specification covers the technical requirements of design, manufacture, testing at manufacturer's works, packing forwarding, supply and unloading at site/store and performance of Oil immersed, non-sealed, naturally cooled, three Phase 11/0.433 kV, 50Hz, outdoor conventional type, aluminium winding, Distribution Transformer of 25kVA to 100 KVA ratings.	We wish to bring to your kind notice that these two clauses are contradicting to each other. Kindly confirm the voltage class.	**Voltage Class is 11/0.433 kV for Distribution Transfomer**
5	ENG-HV-2001	"As per Clause No.4.0 General Technical Requirements: Normal flux density (at rated voltageand frequency) – 1.6T 21.Maximum flux density (Increase of +12.5% combined voltage and frequency variation from rated voltage and frequency) - 1.9T"	We request you to kindly allow the Normal flux density (at rated voltage and frequency) up to 1.69T which is in limits, as the Max flux density(Increase of +12.5% combined voltage and frequency variation form the rated voltage and frequency) is 1.9T (i.e-1.9 Tesla Max/1.125%=1.6888 Tesla)	**Noted**
6	ENG-HV-2001	**Clause No.:5.1(I): CORE** **I** Transformer core shall be stack type, constructed from high grade cold rolled, non-ageing, grain oriented, silicon steel lamination which shall be properly annealed (under inert atmosphere, if required) to relieve stresses.	The tender specification calls for CRGO core only. In this regard, we wish to bring to your kind notice that, many power utilities/ State Electricity Boards in India are procuring the transformers with Amorphous core under equal opportunity basis. Hence, please review and give option for Amorphous core material	**Specification to be complied**
7	ENG-HV-2001	**Clause 5.2 (I)Winding** Primary and secondary windings shall be constructed from high- conductivity(aluminium conductors), Double Paper Covered (DPC) aluminium conductor of grade 2(Al 99.6%) as per IS 5484 with min. 25% overlap per layer of paper. Epoxy diamond dotted Kraft paper to be used for DPC conductor all rating.	We wish to bring to your kind notice that, Option for Super enamel covering is also mentioned in the guidelines for energy efficient distribution transformers, issued by Central Electricity Authority(CEA). Kindly allow us for both super enamel/paper covering.	**Specification to be complied**
8	ENG-HV-2001	**Clause 5.2 (I)Winding** Primary and secondary windings shall be constructed from high- conductivity(aluminium conductors), Double Paper Covered (DPC) aluminium conductor of grade 2(Al 99.6%) as per IS 5484 with min. 25% overlap per layer of paper. Epoxy diamond dotted Kraft paper to be used for DPC conductor all rating.	Plain Kraft paper shall be used for DPC covering on Conductor and is sufficient for Class-A insulation. If EDD paper is used for covering of strip, paper shall break during winding stage and not possible for round condutors with EDD covering. Kindly confirm.	**Specification to be complied**
9	ENG-HV-2001	**Clause no.5.7** For Pole mounted transformers: For Plinth mounted transformers:	Kindly confirm requirment of transformers i.e. plinth mounted or pole mounted	**Transformer shall be Pole Mounted.**
10	ENG-HV-2001	**Clause no.5.12** EXPLOSION VENT	We wish to bring to your kind notice that As per IS:1180(Part-I) latest amendment clause No.20 .. Explosion vent or Pressure relief device (for sealed type transformers (for all ratings) and non sealed type transformers (for ratings above 200kVA). Hence for ratings below 200kVA Explosion vent is not required .Kindly Confirm	**Specification to be complied**
11	ENG-HV-2001	**Clause No.5.17(II)- Conservator** II.The connecting pipe of the conservator shall be so fitted to transformer tank that the pipe can be detached from the tank.	We wish to bring to your kind notice that, Detachable conservator is mostly provided for power transformer .We will provide the welded type conservator. Kindly confirm	**Specification to be complied**

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12	ENG-HV-2001	**Clause no. 5.20** DRAIN VALVE AND FILTER VALVE	We wish to bring to your kind notice that As per IS:1180(Part-I) latest amendment clause No.20 . Fittings,filter valve (for ratings above 200kVA).and drain cum sampling valve shall be provided for ratings above 500kVA. Hence for ratings below 200kVA filter valve and drain valve is not required .Kindly Confirm	**Specification to be complied**
Technical Specification for 11/0.4kV 250kVA to 2000kVA Distribution Transformer (Cu)				
13	ENG-HV-2001	**As Per Document title** SPECIFICATION FOR 11/0.4KV DTR(ALUMINIUM) 25-100KVA **&** **1. SCOPE:** This Specification covers the technical requirements of design, manufacture, testing at manufacturer's works, packing forwarding, supply and unloading at site/store and performance of Oil immersed, non-sealed, naturally cooled, three Phase 11/0.433 kV, 50Hz, outdoor conventional type, copper winding, Distribution Transformer of 250kVA to 2MVA ratings.	We wish to bring to your kind notice that these two clauses are contradicting to each other. Kindly confirm the voltage class.	**Voltage Class is 11/0.433 kV for Distribution Transfomer**
14	ENG-HV-2001	**As per Clause No.4.0 General Technical Requirements:** 22.0 Normal flux density (at rated voltage and frequency) – 1.6T 26.Maximum flux density (Increase of +12.5% combined voltage and frequency variation from rated voltage and frequency) - 1.9T	We request you to kindly allow the Normal flux density (at rated voltage and frequency) up to 1.69T which is in limits, as the Max flux density(Increase of +12.5% combined voltage and frequency variation form the rated voltage and frequency) is 1.9T (i.e-1.9 Tesla Max/1.125%=1.6888 Tesla)	**Noted**
15	ENG-HV-2001	**As per clause No.5.1 -Core** 1. Transformer core shall be stack type, 2D, constructed from high grade cold rolled, non-ageing, grain oriented, silicon steel lamination which shall be properly annealed (under inert atmosphere, if required) to relieve stresses..	The tender specification calls for CRGO core only. In this regard, we wish to bring to your kind notice that, many power utilities/ State Electricity Boards in India are procuring the transformers with Amorphous core under equal opportunity basis. Hence, please review and give option for Amorphous core material	**Specification to be complied**
16	ENG-HV-2001	**As per Clause no.5.17(7),** VII. For DT up to 1600kVA, the conservator to be fitted with float switches such that it shall operate/open contact when the oil level in conservator goes below -5 degree C /Minimum mark. The float switch shall be with normally closed type. This contact shall be wired up in auxiliary terminal box. **As per Clause no.5.28(24)** XXIV. Magnetic Oil level Gauge (>1600kVA),	We wish to bring to your kind notice that, these two clauses are contradicting to each other .Kindly confirm requirement of MOG rating wise.	**Magnetic Oil Level Gauge requirement for 1600KVA & above rating transformer.**
17	ENG-HV-2001	**5.2 WINDING CONNECTIONS** I. Primary and secondary windings shall be constructed from high- conductivity (copper conductors), Double Paper Covered (DPC) copper conductor with min. 25% overlap per layer of paper. **5.3 INSULATING PAPER AND INSULATING PRESSBOARD** II. Primary and secondary windings shall be constructed from high- conductivity (copper conductors), Double Paper Covered (DPC) copper conductor with min. 25% overlap per layer of paper.	We wish to bring to your kind notice that, transformers with foil winding has low axial forces during short circuit resulting into better short circuit withstand capability when compared to strip windings. And also there will be no shearing stress between turns. Kindly allow to use Foil winding.	**Specification to be complied**
18	ENG-HV-2001	**5.16 OIL** Note: Default Oil shall be Mineral oil only if not specified / asked for other oil.	No special note was found. Hence it is presumed that the oil is mineral oil. All parameters as per clause no. 5.16 – Mineral Oil.	**Noted**

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19	ENG-HV-2001	**4. GENERAL TECHNICAL REQUIREMENTS:** 28. Metering CT for LV side **5.12 METERING CURRENT TRANSFORMERS (This shall be decided during tender by user group.)**	Kindly confirm the requirement of Metering CT's	**Requirement of metering CT in LV side as specification already uploaded in Tender**
20	ENG-HV-2001	**5.2 WINDING CONNECTIONS** I. Primary and secondary windings shall be constructed from high- conductivity (copper conductors), Double Paper Covered (DPC) copper conductor with min. 25% overlap per layer of paper. **5.3 INSULATING PAPER AND INSULATING PRESSBOARD** II. Primary and secondary windings shall be constructed from high- conductivity (copper conductors), Double Paper Covered (DPC) copper conductor with min. 25% overlap per layer of paper.	We wish to bring to your kind notice that, Option for Super enamel covering is also mentioned in the guidelines for energy efficient distribution transformers, issued by Central Electricity Authority(CEA). So kindly provide the provision for Super enamel covered aluminium conductor also. Kindly confirm	**Specification to be complied**
21	ENG-HV-2001	**5.1 CORE:** III. Core should be coated with hot oil proof, with insulation coating, an inorganic coating equivalent to C-5 type as ASTM A976 or IS 3024, like Carlite -3.	We wish to bring to your kind notice that, CRGO manufacturers are providing insulation coating on CRGO as per IS: 3024, C-5 over C-2. Kindly confirm shall we proceed with C-5 over C-2 instead of C-5.	**Specification to be complied**
22	ENG-HV-2001	**5.9 BUSHINGS AND TERMINAL CONNECTORS** Option 1: Outdoor Bushing on Top with Bird Guard Option 2: Side bushing with Cable box VII. In some situation Plinth mounted transformer may require outdoor bushing arrangement. This shall be decided during tender by user group. **5.10 CABLE BOXES** HV CABLE BOX (option 2, ref: 5.9.A): XIV. The HV box shall be designed and fixed on transformer such way that only opening of cover shall facilitate for working on cable termination with ease of accessibility of terminal.	Kindly confirm the requirement of cable box on HV side.	**HV side should be outdoor type bushing on top with bird guard provision.**
23	As per Clause no. 3.9 Type Tests (if applicable) page no. 12 of 27	The type tests specified in TPSODL specifications should have been carried out within five years prior to the date of opening of technical bids and test reports are to be submitted along with the bids. If type tests carried out are not within the five years prior to the date of bidding, the bidder will arrange to carry out type tests specified, at his cost. The decision to accept/ reject such bids rests with TPSODL	Against these clauses, we wish to participate the tender by submitting type test reports of similar / higher rating & similar / higher voltage class along with an undertaking letter. We shall conduct & submit the complete type test reports for the offered design after award of contract, at our cost without affecting the delivery schedule. We request to review our request and confirm your acceptance.	**Noted**
24	Specification No. ENG-HV-2001, clause no. 8 Type tests certifificates Technical Specification for 11/0.4kV 25kVA to 100kVA Distribution Transformer (Al)	The Bidder shall furnish the type test certificates of the Transformer for the tests as mentioned above as per the corresponding standards. All the tests shall be conducted at CPRI / ERDA or as defined in 7.1 as per the relevant standards. Type tests should have been conducted 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 TPCODL/TPNODL/TPWODL/TPSODL		**Noted**

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25	Specification No. ENG-HV-2002, clause no. 8 Type tests certifificates Technical Specification for 11/0.4kV 250kVA to 2000kVA Distribution Transformer (Cu)	1. The Bidder shall furnish the type test certificates of the offered rating and design of transformer for the tests as mentioned above as per the corresponding standards. 2. All the tests shall be conducted at CPRI / ERDA or as defined in 7.1 as per the relevant standards. 3. 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 TPCODL/TPNODL/TPSODL/TPWODL. 4. Type tests should have been conducted in CPRI/ERDA during the period not exceeding 5 years from the date of opening the bid.		**Noted**