

**SCOPE OF WORK FOR REPAIRING &
RECONDITIONING OF
DISTRIBUTION TRANSFORMER'**

**Transformer Repair Workshop
CENTRAL STORE BERHAMPUR**

**Scope of Work and Service Level Agreement
(Repairing & Reconditioning of the DTR at Central
Store Berhampur)**

**Title: Contract For Providing Manpower Services for Repairing & Reconditioning of
Distribution Transformer at DTR Workshop at Berhampur of TPSODL ODISHA For a
Period of 02 years.**

SCOPE OF WORK FOR DT WORKSHOP MANPOWER

In-house Distribution Transformers repairing services will be comprehensive in nature and would include all such activities such as loading/ unloading /dismantling /tanking/ de-tanking/ rewinding / cannibalization /core Coil Assembly of spare parts/Testing of DTRs and accessories of DTR / overhauling/ welding / painting/ oil filtration and all other works related to Repairing and Reconditioning of Distribution Transformer at DT Workshop.

A. Nature of Works

- a. Dismantling of DT and associated Accessories.
- b. De-tanking of Assembly.
- c. Dismantling of Core Coil Assembly and Core Assembly.
- d. Rewinding of New Coil (HT/LT/Both) as per design.
- e. Core Assembly.
- f. Replacement/re-assembly of Windings (Both HT and LT Winding).
- g. Connection of Internal Winding of HT/LT Side.
- h. Connection of Tap Winding.
- i. Brazing/de-brazing of connection.
- j. Tanking of CCA (Core Coil Assembly) after drying/oven.
- k. Loading /Unloading/stacking of DTRs.
- l. Operation of EOT Crane.
- m. Various typing of Testing as per TPSODL/IS Standard.
- n. Segregation of Oil and filling and Refilling in DTRs.
- o. Operation of HT & LT winding Machine / Paper Wrapping Machine and Oil filtration machine, to keep out and keep the DTs jobs in oven with proper precaution.
- p. Various type of Welding Operation (both Arc & Gas Welding/Gas Cutting).
- q. BA shall be responsible for implementation of 5S Activity in DT Workshop as per TPSODL Guidelines and Execution of various type of activity related to repairing and reconditioning of DTRs.

B. Details of Major Activities -

Provided Manpower should be competent enough to handle all type of repairing, and reconditioning works of distribution transformers, including but not limited to the Nature of Work mentioned in this Tender. The major details activities are mentioned below for repairing of various type of DTRs at DT Workshop.

I. Dismantling/ Tanking or De- Tanking

BA shall dismantle, tanking and De-tanking of the DTs and also do the job fitting of the various size and make of DTs in workshop with proper safety precaution. To keep up and keep out the DT Job in Oven with proper precaution.

II. Rewinding/ Winding of Both HV And LV Coils:

BA shall be responsible for execution of Work for Paper wrapping, Rewinding, Winding, Design of the HV & LV coils with spiral/cross-over/layer and disc type winding/ etc. of distribution transformer as per Specific design / drawing /Specification of distribution transformer of various type of construction (CRGO/ Shell Type & Amorphous Type etc.) and various type and capacity of DTRs. For Execution of work on Winding machines of HV/LV Coils as per provided design, including preparing/operating/ setting up of the machine for winding. The Operation of both HV and LV Winding Machine shall be executed.

III. Core Coil Assembly:

BA shall be responsible for the core coil assembly of the job of various size and capacity of DTs with proper workmanship without no defects during assembly of DTs Job (like assembly of coils, inserting insulation papers, usage of various type insulation paper / stacking & assembling of the cores etc.) during repairing Core Coil Assembly process.

IV. Overhauling:

BA shall be responsible for overhauling of the various Size of DTs as per EIC/ DOS requirements.

V. Welding:

BA shall be Responsible for carrying out the various type of welding job on damage tank, cooling fins, and other damage parts of DTRs, brazing/Gas Cutting (both ARC & Gas Welding) with proper safety Precaution.

For this type of activity, One Welder Will be provided by the BA as per TPSODL requirement. The welder shall be engaged in other DT repairing and reconditioning activities as per the requirement of the EIC/DOS.

VI. Painting:

BA shall be Responsible for the Painting of the Various type and make of DTR after the repairing work including primer and gray / spray paints.

VII. Testing:

All type of Testing as per TPSODL Standard (as defined by TPSODL EIC/DOS) of the Distribution transformer to be done by the BA in presence / guidance of TPSODL officials.

VIII. On Site DT Repair:

BA shall also ensure repairing of DTs at site with proper following JSA, which shall provide by TPSODL.

IX. Quality Control:

Each & every type of repair/cannibalization/rewinding/Winding/Paper Wrapping/Core Coil assembly/ Tanking and De-Tanking/Welding/Painting/ To keep up and keep out the DT Job in Oven with proper precaution.etc. work shall be done in supervision of TPSODL officials as and when required. These repaired transformers shall be tested at DT Workshop for losses measurement and other routine test as per TPSODL Standard. Mandatory reporting of discrepancies observed in transformers to be done on fortnightly basis with pictures. Periodically checking, cleaning of transformer etc. Cleaning & tightening of HT & LT bushings and other parts of the transformers to keep it clean & healthy. There should be no leakage of oil from the transformer body. LT/HT bushing level of oil should be checked regularly of the repaired DTR. Preventive action should be taken. All the LT/ HT termination to be kept tight. To replace the silica gel in the breather of all the repaired transformers wherever required.

X. Raw Material, Tools, and Tackles:

Raw material such as Aluminium and copper conductor, insulation, machinery & other necessary tools, and tackles shall be provided by TPSODL. Availability of stated material for said services shall be ensured by Transformer Workshop of TPSODL.

XI. Machinery and PPEs:

The deputed manpower shall maintain equipment in a condition that does not compromise safety. They shall be responsible to report damages on machines and equipment and comply with TPSODL safety norms. All necessary PPEs and consumable such as Safety Shoes, Safety Helmet, Hand Gloves, Reflective Jacket shall be provided by TPSODL.

XII. Implementation 5S Activity in DT Workshop:

BA shall be responsible for implementation of 5S Activity in DT Workshop as per TPSODL Guidelines. All consumable item shall be provided by TPSODL.

XIII. Dress Code:

BA shall provide the Boiler Suit (Dangri) for Workers for DT Workshop. Before purchasing sample to be get vetted by Safety Group/ DOS/EIC.

XIV. Documentation Work:

BA shall be responsible for updating the record and Work execution documentation part as per TPSODL EIC guidelines. The relevant stationary to be provided by TPSODL.

XV. JSA:

JSA should be filled by Skilled person in prescribed format provided by EIC TPSODL.

XVI. Any other associated work like oil filtration process etc. regarding Repairing & Reconditioning of DTRs in DT workshop BA shall ensure to carry out as per Instruction of EIC DT Workshop. The manpower shall take cautions to avoid the spilling of the Oil on the floor.

XVII. Any other work pertaining to repairing and reconditioning of the DT as instructed by EIC to be executed by the engaged manpower.

XVIII. Scrap Management & Segregation:

The BA shall be responsible for the systematic segregation of all scrap items. This process is to be carried out as per the instructions provided by the Engineer-in-Charge (EIC).

Specials Term & Conditions

- a. Under the Guidance of TPSODL Officials, Business Associate (BA) shall undertake regular repairing & reconditioning of Distribution transformers, along with the usage of Associated equipment's and the testing of DTRs in DTR Workshop of TPSODL to the satisfaction of TPSODL. BA shall conduct the repairing work of highest quality and ensuring safety standards.
- b. **The contract shall be valid for a period of 2 years. However initially the orders shall be placed for a period of one year only. At the end of first year, performance review of the BA shall be done by respective EIC/DOS and based on their recommendations, the contract shall be renewed for 2nd Year as per the terms and conditions already agreed upon with the BA.**
- c. BA will follow Contractor Safety Management/GCC as per TPSODL Standard. BA shall carry out work connected with or incidental to any of the works as aforesaid pertaining to repairing & reconditioning of the DTR as communicated from time to time as per EIC Instruction.
- d. BA has to issue the ID cards to the engaged employees in co-ordination with the TPSODL BA cell, the cost of the same shall be borne by the BA.
- e. On-call manpower (Skilled/Un-Skilled), as & when required shall be called for 8 Hrs. Shift Duty with advance intimation (prior notice to mobilize) of 03 days. However, the maximum limit for on call resources will be 12No. /Day for each category.

-The manpower if required will have to work in the shifts other than the General Shift timing as per the requirement of EIC/ DOS.
- f. In absence of any worker at workplace, BA shall ensure the availability of same manpower to avoid failure of operation of work in DT Workshop. If BA Could not arrange the same then TPSODL shall made the deductions as mentioned below:

In case of absenteeism of BA employee, proportionate deduction from the Monthly Gross Wages (Wages including Basic, VDA, Statutory Bonus, Leave Encashment and any other allowances except for reimbursements) shall be affected. For the purpose of this calculation, standard month is to be taken as 26 days.

MINIMUM RESOURCE DEPLOYMENT REQUIREMENT

To achieve the desired repairing & reconditioning tasks of DTR, BA shall ensure the below mentioned minimum requirement for the manpower engaged by the BA.

Minimum Manpower Requirement and Qualification of Manpower

Table -I (Minimum manpower requirement)

S. No.	Category of Manpower	Minimum Manpower Required
1.	Skilled	11
2.	Skilled (Welder)	1
3.	Unskilled	7

Table -II (Qualification & Experience of the Manpower)

Designation	Minimum Qualification	Work Experience
Skilled	ITI (Electrical/Electrician Trade) Or Qualification shall be as per CEA Regulation 2023, clause 7.3 Or Minimum 10 years of experience in DT repairing workshop.	Minimum 2 Years of relevant experience after completion of ITI, preferably having hands on experience in DT Workshop and robust knowledge of safety parameters. Or Minimum 10 years of experience in DT repairing workshop.
Skilled (Welder)	ITI (Welder)	Minimum 2 Years of relevant experience after completion of ITI, preferably having hands on experience in DT Workshop and robust knowledge of safety parameters
Unskilled		Having basic knowledge of DT repairing operations and ability to understand Odia language and knowledge of safety parameters.

***Note:**

- The above for mentioned Manpower shall be engaged in different works of DT Workshop as per the EIC, TPSODL.
- The manpower if required will have to work in the shifts other than the General Shift timing as per the requirement of EIC/ DOS.
- The possession of valid ELBO license is however desirable.

PERFORMANCE MEASUREMENT (EVALUATION) /SLA (SERVICE LEVEL AGREEMENT) CRITERIA

Deliverable	Performance Indicator	Weightage	No. of defects/Non-compliance per month	Marks Deduction
Quality	Non - Compliance (Defects) related to Rewinding/Winding of Both HV & LV Coils of various size and make of DTRs	10	0	0
			1 to 5	5
			>5	10
	Non - Compliance (Defects) related to CCA (Core Coil assembly) of DTRs of various size and make of DTRs	10	0	0
			1 to 5	5
			>5	10
	Non - Compliance (Defects) related to Maintaining Zero Repeat Defective DT within 3-month time span (attributable to BA)	10	0	0
			1 to 5	5
			>5	10
	Non - Compliance (Defects) related to Cleaning, washing, painting, welding of DTRs.	10	0	0
			1 to 2	5
			>2	10
	Non - Compliance (Defects) related to Supervision/Upkeep of various tools & tackles and assets (Machinery and testing equipment etc.) in good conditions, which are associated with repairing of DTRs.	10	0	0
			1 to 3	5
			>3	10
Quantity	Non-Compliance related to Achieving the DT Repairing Target As per TPSODL Guidelines.	30	0% to 5 %	0
			6% to 10 %	10
			>10%	30
safety	Non-Compliance related to Testing of DTRs to be conducted as per TPSODL Guidelines with Proper PPEs with Zero tolerance in safety.	10	0	0
			1 to 5	5
			>5	10
	Non-Compliance related to Handling, Filling and Refilling of Transformer oil in DTRs as per TPSODL SOP Without falling on DT Floor area to avoid environmental Hazards	10	0	0
			1 to 2	5
			>2	10
	Grand Total	100		100

***Note:**

- The performance of BA will be evaluated & validated by EIC/DOS on the basis of MIS/evidence submitted by the BA. Payment of the balance 10% monthly fixed charge invoice amount will be made as per the marks scored against total of 100 marks under various performance criteria in the month. (For example, if the BA has secured 90 marks in the performance measurement, the BA will be paid 90% of the balance 10% monthly fixed charges invoice amount).

- In case there is any further applicable deduction owing to CSM violations, same will also be deducted from 10% of the monthly invoice of same month and excess amount, if any, will be deducted from the next month's invoice.
- EIC will be the deciding authority whether DT Failure reason is attributable to BA or Not.
- Monthly Target of DT Repairing will be decided by EIC/DOS.

EIC:

- The EIC will oversee the affairs of the Service Provider and will maintain check and balances. He/she shall certify works towards satisfactory performance of the Service Provider as per the Scope of Work, SLA (Performance Measurement /evaluation) and forward the invoice/certified document & overall performance of the Service Provider regarding the work and report it regularly to the Head-DOS for record and reference. He shall oversee smooth execution of the contract. He shall ensure to resolve grievance(s) if any arising during the contract period. He/ She shall process the bill as per the terms & conditions of the payment.

***Note -**

“BA shall bear cost like (ID Card, Medical test, etc.) for On Call manpower requirement. The cost incurred for the same shall be borne by BA”.

Safety Aspects:

Any safety violation will be governed as per Contractor Safety Management (CSM) & Contractor Safety Code and GCC of TPSODL separately.

All workmen must undergo Pre-Deployment Medical Test from certified medicinal practitioner and this activity must repeat once in a year and report to be submitted to TPSODL. Cost of Medical test will be borne by respective BA. Workmen who have completed the age above 45 Years need to submit medical certificate twice in a year.

Payment Terms: -

- a. BA shall submit monthly error-free invoice (s) by the 3rd of every month for the previous month's work along with supported documents in the Sigitek with soft copy to EIC & DOS team.
- b. DOS team will create SES (Service Entry Sheet) upon receipt of the Invoice.
- c. Finance will release 100% payment for On-Call manpower invoices. Finance will release 90% of the full payment of fixed charges invoices within 7 days of SES creation.
- d. EIC will get the invoices verified from concerned officers with reference to SLA.
- e. EIC shall check every month with safety department for CSM violations by BA and also check the monthly performance of the BA with respect to performance measurement parameters in SLA. Based on the data & information available, EIC shall prepare performance scorecard indicating deduction of marks for non-compliance and shall forward the same to DOS team.
- f. Based on EIC feedback on SLA & Statutory Compliances, EIC/DOS team will intimate finance about SLA score & statutory compliances for the release of balance 10% payment of fixed charges invoice.
- g. Finance will release the balance 10% payment of fixed charges invoice.

Note: -

1. The performance of BA will be evaluated & validated by EIC/DOS on the basis of MIS/evidence submitted by the BA. Payment of the balance 10% monthly fixed charge invoice amount will be made as per the marks scored against total of 100 marks under various performance criteria in the month. (For example, if the BA has secured 90 marks in the performance measurement, the BA will be paid 90% of the balance 10% monthly fixed charges invoice amount).
2. In absence of any worker at workplace, BA shall ensure the availability of same manpower to avoid failure of operation of work in DT Workshop. If BA Could not arrange the same then TPSODL shall made the deductions as mentioned below:

In case of absenteeism of BA employee, proportionate deduction from the **Monthly Gross Wages** (Wages including Basic, VDA, Statutory Bonus, Leave Encashment and any other allowances except for reimbursements) shall be affected. For the purpose of this calculation, standard month is to be taken as **26 days**.

3. In case there is any further applicable deduction owing to CSM violations, the same will also be deducted from 10% of the monthly fixed charges invoice of same month, and the excess amount, if any, will be deducted from the next month's invoice.

ANNEXURE I**Schedule of Items – BOQ****Monthly Fixed Charges**

Sr. No	Description	UOM	QTY	Net Price without Tax / Month (in Rs.)	GST in Rs.	All Incl. Unit Prices / Month (in Rs.)	Total All Incl. Value/ One year (In Rs.)
		A	B	C	D	E = C + D	F = B * E
1	Fixed Cost (charges per month) Skilled Manpower: 12 Nos Un Skilled manpower: 7 Nos	MON	12				
Total Price for 01 Years in Rs. All-inclusive							

On-Call Charges

Sr. No	Description	UOM	QTY	Net Price without Tax (in Rs.)	GST in Rs.	All Incl. Unit Prices (in Rs.)	Total All Incl. Value for One year (In Rs.)
		A	B	C	D	E = C + D	F= (B * E)
1	Skilled manpower	Man Days	4380				
2	Un Skilled manpower	Man Days	4380				
Total Price for 01 Years in Rs. All-inclusive Sr. No 1 to 2							

NOTE:

- The bids will be evaluated commercially on the overall lowest BOQ.
- The monthly fixed charges for total of 19 manpower as per the scope of work.

Skilled manpower:12 No. which includes 01 welder

Unskilled manpower:7 No.

- All necessary PPEs and consumables such as Safety Shoes, Safety helmets, Hand Gloves, and Reflective Jackets shall be provided by TPSODL.
- The On-Call manpower as mentioned above is indicative.
- On-call manpower (Skilled/Un-Skilled), as & when required shall be called for 8 Hrs. Shift Duty with advance intimation (prior notice to mobilize) of 3 Days. However, the maximum limit for on call resources will be 12No. / Day for each category.