

**JODHPUR VIDYUT VITARAN NIGAM LIMITED**  
**MATERIAL MANAGEMENT CIRCLE**  
**NEW POWER HOUSE, INDUSTRIAL AREA, JODHPUR-342003**  
**Phone: (0291)2742223/Fax: (0291) 2746539/E-Mail-semmcjdvvn@gmail.com**

**TENDER SPECIFICATION NO. JdVVNL/SE (MM&C)/XEN/MM-I/CRC-TN-1695**

SPECIFICATION FOR REPAIR OF FAILED/ DAMAGED 5 KVA TO 25 KVA SINGLE PHASE ALUMINIUM WOUND DISTRIBUTION TRANSFORMERS WITH M&P BOX AGAINST TENDER NOTICE NO: TN-1695

<b>A</b>	<b>NIT No.</b>	<b>TN-1695</b>
<b>B</b>	Cost of tender specifications	Rs. 2500.00 + GST@18% = Rs. 2,950.00 <b>(Non-Refundable)</b> (Rs. Two Thousand Nine Hundred & Fifty Only)
	Cost of tender specifications (For MSME UNITS OF RAJASTHAN)	Rs. 1250.00 + GST@18% = Rs. 1,475.00 <b>(Non-Refundable)</b> (Rs. One Thousand Four Hundred & Seventy Five Only)
<b>C</b>	Processing fee of RISL	<b>Rs. 1000.00 (One Thousand Only) (Non -Refundable)</b>
<b>D</b>	<b>Estimated Tender Value</b>	<b>Rs. 3,50,00,000.00 ( Rs. 3.5 Cr.)</b>
<b>E</b>	Bid Security to be deposited with the tender	In lieu of Bid security, bidders are required to furnish Form of Bid Securing Declaration (Appendix-B) on Rajasthan Non-judicial Stamp Paper of Rs. 50/- (excluding surcharge on Stamp Paper, as per rules), <b>duly attested by Notary</b> . Above Declaration should be furnished in favour of SUPERINTENDING ENGINEER (MM&C), JdVVNL, JODHPUR and which should be deposited to the Sr.AO(MM&C), JdVVNL, JODHPUR upto 4.00 p.m. of one WORKING day prior to schedule date of opening of technical bid and receipt of the same should be uploaded by the bidder along with the tender documents. <b>Above arrangement is applicable upto 31.12.2021 in respect of tenders which are due for opening.</b>
<b>F</b>	Validity	<b>120 days from the next date of opening of techno-commercial bid.</b>
<b>G</b>	Base date for price variation	<b>01.03.2021 (Irrespective of tender opening date)</b>

**IMPORTANT DATES**

S.N.	Events	Date & Time	Location
1	Date of downloading of tender specifications	<b>Up to 27.04.2021 (06:00 PM)</b>	<a href="http://www.jdvvn.com">www.jdvvn.com</a> & <a href="http://eproc.rajasthan.gov.in">http://eproc.rajasthan.gov.in</a>
2	Deposit of cost of Tender Specifications, Processing fee & Bid Security.	<b>Up to 27.04.2021 (4:00 PM)</b>	Office of Sr. A.O (Cash & CPC), JdVVNL, New Power House, Industrial Area, Jodhpur
3	Last Date & time of submission of electronic bid	<b>Up to 28.04.2021 (12:00 PM)</b>	<a href="http://eproc.rajasthan.gov.in">http://eproc.rajasthan.gov.in</a>
4	Opening of Technical Bid	<b>28.04.2021 (03:00 PM)</b>	<a href="http://eproc.rajasthan.gov.in">http://eproc.rajasthan.gov.in</a>
5	Opening of Price Bid	To be intimated separately to the qualified bidders	<a href="http://eproc.rajasthan.gov.in">http://eproc.rajasthan.gov.in</a>

In lieu of Bid security, bidders are required to furnish Form of Bid Securing *Declaration (Appendix-B)* on Rajasthan Non-judicial Stamp Paper of Rs. 50/- (excluding surcharge on Stamp Paper, as per rules) duly attested by Notary. Above Declaration should be furnished in favour of SUPERINTENDING ENGINEER (MM&C), JdVVNL, JODHPUR and which should be deposited to the Sr.AO(MM&C), JdVVNL, JODHPUR upto 4.00 p.m. of one WORKING day prior to schedule date of opening of technical bid and receipt of the same should be uploaded by the bidder along with the tender documents.

**Above arrangement is applicable upto 31.12.2021 in respect of tenders which are due for opening.**

At the time of depositing the Form of Bid Securing Declaration (Appendix-B) in the office of the Sr. Accounts Officer (MM&C), JdVVNL, Jodhpur, the bidder shall also furnish self-attested documentary evidence duly attested by Notary of SSI unit of Rajasthan also to submit a letter of quantity offered by

them along with an Affidavit for MSME unit of Rajasthan in the enclosed format as per Schedule XI is to be furnished on non-judicial stamp paper of Rs.100/- duly attested by Notary public, to the office of Sr.

Accounts Officer (MM&C), JDVVNL, Jodhpur. Also furnish the undertaking for the CA certificate in the enclosed format as per Annexure-I on non-judicial stamp paper of Rs.100/- duly attested by Notary public alongwith the original / notarised CA certificate as per requirement of tender specifications.

NOTE:-

- 1.** Wherever EMD and Security Bank Guarantee (SBG), are appearing in the ITB, GCC & other Bidding Documents, same is hereby replaced by BID SECURITY as above.
- 2.** VENDOR REGISTRATION: The relaxation/exemption given to the registered vendors of the Nigam in respect of EMD/SBG, wherever appearing in the ITB, GCC & other Bidding documents, are hereby WITHDRAWN.

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- Tender documents will be made available on e-Tendering portal <http://www.eproc.rajasthan.gov.in/nicgep/app> . The bidders, in their own interest are requested to read very carefully the tender document before submitting the bid only through online on website <http://www.eproc.rajasthan.gov.in/nicgep/app>. The bidders can download bid upto 6.00 p.m. one day prior to schedule date of opening of respective bid mentioned above documents and submit their bids online upto 12.00 p.m. on schedule date of opening of respective bid mentioned above.
- Eligible bidders should submit their bid well in advance instead of waiting till last date. JDVVNL will not be responsible for non-submission of Bid due to any website related problems.
- The cost of Tender specification **Rs. 2,950/- (Non-Refundable)** to be paid by Demand Draft/Banker's Cheque in favour of the Sr. Accounts officer (Cash & CPC), JdVVNL, Jodhpur (payable at Jodhpur) and tender processing fees **Rs. 1000/- (Non- Refundable)** shall be payable by Demand Draft/Banker's Cheque in favour of The Managing Director RISL, Jaipur (payable at Jaipur). The bidders are required to deposit all these payments in the office of the SE(MM&C), JdVVNL, Jodhpur up to 4.00 PM one WORKING day prior to schedule date of opening of respective bid otherwise their bids are liable to be rejected. Further, as per notification SO 165 issued by Fin. Dept. dt. 19.11.2015 on reference to RTPP rules, " clause 8(A)" bidding document shall be provided to MSME at 50% of prescribed cost.
- The Form of Bid Securing Declaration (Appendix-B) on Rajasthan Non-judicial Stamp Paper of Rs. 50/- (excluding surcharge on Stamp Paper, as per rules) duly attested by Notary. Above Declaration should be furnished in favour of SUPERINTENDING ENGINEER (MM&C), JdVVNL, JODHPUR and which should be deposited to the Sr.AO(MM&C), JdVVNL, JODHPUR upto 4.00 p.m. of one WORKING day prior to schedule date of opening of technical bid and receipt of the same should be uploaded by the bidder along with the tender documents.
- Further, while depositing the Form of Bid Securing Declaration (Appendix-B) in the office of the Sr. Accounts Officer (MM&C), JDVVNL, Jodhpur, the bidder shall also furnish self-attested documentary evidence duly attested by Notary of SSI unit of Rajasthan or of sick unit (as applicable) and also to submit a letter of quantity offered by them alongwith an Affidavit for MSME unit of Rajasthan in the enclosed format as per Schedule XI is to be furnished on non-judicial stamp paper of Rs.100/- duly attested by Notary public, to the office of Sr. Accounts Officer (MM&C), JDVVNL, Jodhpur. Also furnish the undertaking for the CA certificate in the enclosed format as per **Annexure-I** on non-judicial stamp paper of Rs.100/- duly attested by Notary public alongwith the original / notarised CA certificate as per requirement of tender specifications.
- The bidders are required to **upload the** receipt of depositing all above payments along with their tender at the relevant place on the scheduled date & time otherwise their bids are liable to be rejected.

**Note :-**

- All eligible interested bidders are required to get enrolled on e-Tendering

portal<http://www.eproc.rajasthan.gov.in/nicgep/app>.

2. If any difficulty arises, in down downloading/ uploading of tender you may contact in the RISL, Jaipur Rajasthan at following Contact/address.

**Address of RISL: -**

Raj COMP Info Services Limited (RISL)

1<sup>st</sup> Floor, Yojana Bhawan, Tilak Marg, C-Scheme, Jaipur (Rajasthan)

Phone: 0141- 5103902, 4031900 Fax: 0141-2228701

Web: <http://risl.rajasthan.gov.in>

Email: [info.risi@rajasthan.gov.in](mailto:info.risi@rajasthan.gov.in)

**TECHNICAL SPECIFICATION**  
**FOR**  
**REPAIR AND TESTING**  
**OF**  
**DAMAGED SINGLE PHASE ALUMINIUM WOUND**  
**DISTRIBUTION TRANSFORMERS**  
**OF**  
**RATING 5KVA TO 25 KVA**  
  
**AGAINST**  
  
**TN-1695**

## SECTION- III

**TECHNICAL SPECIFICATION FOR REPAIR AND TESTING OF DAMAGED DISTRIBUTION TRANSFORMERS OF RATING FROM 5KVA TO 25 KVA ALUMINIUM WOUND= SINGLE PHASE AGAINST TN-1695****1. INTRODUCTION:**

- 1.1 **5 KVA to 25 KVA single phase Aluminium wound  $11\sqrt{3}/0.230$  KV, DAMAGED DISTRIBUTION TRANSFORMERS are to be repaired.**
- 1.2 These transformers shall be made available through various stores/sub-stores of Jodhpur Vidyut Vitran Nigam Ltd. After satisfactory repairs and testing, the transformers may be used anywhere in Rajasthan.

**2. SCOPE OF WORK:**

- 2.1 This specification provides for assessment and estimation of damaged transformers to be repaired at repairing firm's / contractor's works involving opening of transformer, detanking of core and coil assembly, cleaning and washing of dust and dirt from all parts including core , tank & cooling tubes (if applicable) , retanking after assembly of all parts after replacement or repairing of the damaged parts, filling of required quantity of fresh/new filtered transformer oil and painting, marking and testing as per ISS.
- 2.2 This specification also provides for supply and fixing /fitting of parts requiring replacement such as HV/ LV leg coils, bushings & bushing rod, gaskets, breather, oil level gauge, M&P Unit, fresh transformer oil, ICB, cover bolts, screws, other sundry items etc. for all rating of transformers for their complete repairs of transformers.**
- 2.3 After repairs, the transformer shall be subjected to all routine and acceptance tests as per IS-2026/1981 read with latest amendments. Whereas transformer oil used in repair of transformer(s) shall be tested for its dielectric strength in accordance with IS:335/1993 (latest amended). The transformer oil used shall be conforming to the requirements of aforesaid ISS.
- 2.4 Further the NIGAM reserves the right to conduct heat run test on any sample of the transformer(s) selected at random from repaired transformers of different rating in accordance with IS:2026/1981 (latest amended) at contractor's works for which Rs.1000.00 shall be payable extra alongwith service tax if applicable. The Nigam also reserves the right to get the transformer oil tested in any independent Govt. laboratory in accordance with IS:335/1993 (latest amended) at its own cost.
- 2.5 All the acceptance tests as specified in the technical specification shall be carried out in the presence of an authorised engineer/officer of the Nigam in order to ensure that the repairs have been carried out satisfactorily and new transformer oil of proper quality has been filled in and the transformer can be used for efficient performance under the various operating and atmospheric conditions detailed elsewhere in this specification.
- 2.6 After satisfactory repairs and testing, the contractor shall have to deliver the transformers to the concerned store(s), through his own transport.
- 2.7 The facilities for labour & equipments etc. for loading/ unloading and handling of transformer(s) at the contractor's works for assessment of the repair work and at the time of receiving transformers and at the time of dispatching transformers after satisfactory repairs and testing shall be arranged by the contractor at his cost and no extra charges shall be paid for this job. The to and fro transportation of damaged and repaired / tested transformers shall also be on contractor's account.

**3. REPAIR WORK:**

- 3.1 The repair work shall involve opening of transformer's cover, de-tanking core and coil assembly, cleaning, washing of dust and dirt from all parts including core, tank and cooling tubes/radiators (if applicable) etc., replacement of defective parts, assembly, retanking , filling fresh/new filtered transformer oil, marking and painting and testing the repaired transformers for all the routine & acceptance tests as per IS-2026/1981 with latest amendments.

- 3.2 The repair of a damaged distribution transformer shall be carried out only twice after the expiry of original guarantee period irrespective of the fact that the repair of the transformer is economical on the subsequent occasions.
- 3.3 The damaged / failed distribution transformers not having original name plate(s) of the manufacturer will not be repaired in any case.
- 3.4 **The damaged transformer(s) prior to year '2004' make shall not be repaired or as amended time to time in future.**
- 3.5 **5 KVA to 25 KVA single phase 11 $\sqrt{3}$ /0.230 KV Aluminium Wound distribution transformers are to be repaired.**
- 3.6 The damaged transformer(s) whose core is missing/ damaged/ burnt/ rusted or tank/ radiator/conservator(if applicable) is damaged severely shall not be repaired.
- 3.7 The transformers of old and obsolete designs shall also be not repaired.
- 3.8 **The damaged wound core single phase transformer(s) whose L.V. leg coil found damaged / burnt shall be repaired with HT coil**

4. **REPLACEMENT OF PARTS:**

- 4.1 This will involve removal of all parts requiring replacement, thereafter fitting & fixing of new parts such as HV/LV leg coils, M&P Unit, bushings, gaskets, breather, oil level gauge, cover bolts, plug, cap and screws, transformer oil . **Pressure Release Valve, Inbuilt Circuit Breaker** etc. and making connections complete in all respect for satisfactory operations after repairs in normal working conditions.
- 4.2 **All Oil** drain and filter valves in transformers of rating up to 25 KVA wherever found existing shall be removed & tagged with continuously welded steel plate inside the tank. Repairer shall ensure by all means that no oil leakage take place from welded tagged portion. This is to avoid pilferage/ leakage of oil.
- 4.3 The following arrangements shall also be made in each rating of repaired transformer:
- 1) **Tank shall have permanent lugs for the lifting the Transformer body and there shall be facilities for lifting the core coil assembly separately.**
  - 2) **The Transformer shall be provided with two mounting lugs suitable for fixing the transformer to a single pole by means of 2 bolts of 20 mm diameter as per ANSIC 57.12.201988. Both mounting lugs shall be made of steel of min. 6 mm thickness. Jump proof arrangements shall be provided on upper mounting lugs and lips shall be provided on lower mounting lugs for proper mounting of transformer on the pole. Both mounting lugs faces shall be in one plane.**
  - 3) **Minimum & Maximum Oil level mark shall be embossed inside the tank. Nitrite/neoprene rubber gaskets conforming to latest IS:4253 Part-II shall be provided between tank and top cover.**
  - 4) **Continuous welding of one inch length each should be provided at four places on ring (i.e. welding the clamping ring at top cover as well as with tank) and nut bolt of the ring should be tag welded.**
  - 5) **On each transformer stainless steel anti theft fastener of suitable size shall be provided for clamping rim to hold fast tank and tank cover. In case of flange provided on top cover 2 Nos. stainless steel anti theft fastener shall be used and in case of rim type tank top cover 1 No. anti theft fastener shall be used. **Alternatively Dome shaped side clamping type construction of clamping bolts with stopper washer with tack welding for antitheft purpose for top cover.****
  - 6) **HT bushing(s) mounting bolts shall be tag welded.**
  - 7) **The following standard fittings shall be provided with each transformer.**
    - a) **Two earthing terminals.**
    - b) **Two lifting lugs.**
    - c) **Pressure relief device.**
    - d) **HV terminal connectors.**
    - e) **Top cover fixing clamps.**

- f) Bird guard or plasticised cover on live parts.
  - g) LV earthing arrangement.
  - h) Signal Light.
  - i) Any other fitting necessary for satisfactory performance of the manufacturer.
- 8) Mounting Arrangement for 5/10/16/25 KVA single phase transformers with pole will be as per drawing enclosed at Annexure- 'B(1) and B(2) and Base angle arrangement as per Annexure-C for 25 KVA Single Phase Distribution Transformers. The mounting structure/ arrangement (including base angle for mounting 25 KVA single phase distribution transformers) shall be in the scope of supplier

## 5. WINDINGS:

- 5.1 The damaged winding (s) requiring replacement shall be replaced by windings identical to the original one in respect of cross-section of conductor, number of turns, diameter of coils, insulation material etc. and that all coil assemblies of identical voltage rating shall be interchangeable so that field repairs of the windings can be made readily without special equipment. The coils should be odd layers & shall be supported between adjacent sections by insulation spacers and the barriers, bracings and other insulation used in the assembly of the windings and shall be arranged to ensure free circulation of the oil and reduce hot spots in the windings. Insulation of wire/ strip, inter layers between LV & HV winding and windings to earth shall be of class- A, and section as utilized in the original transformers. In case it is found at any stage that proper size and type of material are not used then the contract will be canceled immediately.
- 5.2 Two layers of electrical grade insulation kraft paper 2 mil thickness or one layer of min.4 mil thickness shall be used for inter-layer insulation both for HV & LV coils.
- 5.3 The insulation of the coil shall be treated with suitable insulating varnish or equivalent compound under vacuum impregnation to develop the full electrical strength of the windings. The assembled core and winding assembly shall be vacuum dried in vacuum chamber and suitably impregnated with insulating varnish before removal from the vacuum treating tank. The tenderer will specifically indicate, if he has got facilities and equipment for vacuum impregnation. Alternatively in place of vacuum impregnation, the core and coil assembly shall be fully dried out in 'Air Drying Oven' till the coils are shrunk to designed level and are completely dried, only then they will be impregnated in the transformer oil. All materials used in the insulation and assembly of the windings shall be insoluble, non catalytic and chemically inactive in the hot transformer oil and shall not soften or otherwise be adversely affected under the operating conditions.
- 5.4 The winding(s) shall be compact and symmetrical about the centre line of the core and shall be formed on suitable synthetic resin bonded paper sheet grade-I/type III/ elephantide sheet conforming to the requirement of BSS:1137/1949/IS:1271/58 and any amendment thereof and the size of sheets shall be identical to those used in the original transformers.
- 5.5 The conductor inner layer insulation shall be of suitable material conforming to relevant latest ISS and shall be of such sizes and material as provided in the original transformer. The leg coils shall be provided with oil ducts where-ever required.
- 5.6 **The number of coils**, resistance, number of turns and dimensions of complete leg coils shall be exactly the same as that of the leg coil of the original transformer, so that electrical and mechanical characteristics of the repaired transformer(s) shall remain the same as that of the original transformer.
- 5.7 LT Aluminium / Copper lugs shall be clamped to LV bushing metal part by using nut, lock nut and washer.
- 5.8 The winding shall be clamped securely and placed so that they will not be displaced or deformed during short circuits. The conductors used in the coil structure shall be best suitable to the requirement and all permanent current carrying joints in the windings and the leads shall be brazed preferably and rigidly clamped.
- 5.9 **IDENTIFICATION MARK ON NEW COIL:**

In the process of repairing of transformers, the repairer(s) replace the coils with new material/insulation. There is no visual facility to verify whether he coils are new or old. In order to verify and confirm that the repairer has replaced the old coil(s) by new one, the repairer shall insert a non-tearable polyester strip containing their company's name and month of manufacturing at least at two places in each HV and LV coil. This polyester strip shall not be



removable even on pulling out the same. This will enable the Nigam to check and verify the exact number of coils newly prepared and replaced.

### **5.10 Bushings**

- i) The bushing shall conform to IS: 2099/3347 as amended upto date. Bushings having the creepage distance suitable for highly polluted atmosphere and having type tested as per IS: 3347 and IS:2099 latest version shall only be accepted.
- ii) For HV, 12kV class bushings and for earth/neutral of HV winding 1.1kV class bushing(s) shall be used and for LV, 1.1kV class bushing(s) shall be used.
- iii) The terminal arrangement shall not require a separate oil chamber.
- iv) The HV bushing shall be mounted on top cover and LV bushing(s) shall be mounted on side wall of tank below top cover. The bushing rods and nuts shall be of brass.
- v) The HV bushings shall not have arcing horns.
- vi) HV bushing mounting bolt should be tag welded

For HV, live end should be brought out through 12kV bushing and the other end of HV, which is intended to be earth, shall be brought out on 1.1Kv bushing (HV Neutral bushing). Provision shall be made for connecting the neutral HV terminal to local earth. The secondary (LV) winding shall be connected to LV bushings. The 12 KV HV bushing (live) shall be provided on top cover and the remaining three bushing(s) shall be provided on the sidewall of the tank and below top cover.

### **6.0 CORE LAMINATION ( CRGO/ AMORPHOSE MATERIAL):**

- 6.1. After cleaning dust and dirt from each leaf of laminations , the core shall be rigidly clamped and bolted to ensure adequate mechanical strength and to prevent vibrations during operation. The bolts used in the assembly of the core shall be suitably insulated and clamping structure shall be so constructed that eddy current will be minimum.
- 6.2 The core and the coil assembly shall be so fitted in the tank(s) that shifting may not occur and original clearance is maintained when the transformer is moved/transported or during the short circuit conditions.

### **7.0 FREQUENCY:**

The repaired transformers shall be suitable for continuous operation with a frequency variation of  $\pm 3\%$  from normal frequency of 50 cycles per second without exceeding permissible temperature rise.

### **8.0 PARALLEL OPERATIONS:**

The repaired transformers of the same capacity, type, voltage ratio and vector group shall be suitable for parallel operation.

### **9.0 NO LOAD VOLTAGE:**

The No Load voltage ratio of the repaired transformers shall be same as that of the original transformer ( $11\sqrt{3}/.240KV$ ) with tolerance of  $\pm 1\%$ .

### **10.0 HIGHEST SYSTEM VOLTAGE :**

The highest system voltage shall be as 12 KV on HT side. The repaired transformer shall be suitable for continuous operation with this voltage on the HV side.

### **11.0 TRANSFORMER OIL:**

- 11.1 The transformer oil will be drained out from the transformer before delivery to firm for repair by the concerned ACOS.
- 11.2 Fresh/new EHV Grade transformer oil for filling in the repaired transformer(s) shall be provided by the repairer and the quantity of new transformer oil, as may be required to be filled in, shall be as per the quantity mentioned on the name plate of the transformer(s). The make of EHV grade transformer oil shall be either APAR/SAVITA/RAJ LUBRICANT/ LUBRICHEM, MUMBAI / RAJ PETRO, MUMBAI / PANAMA PETROCHEM, ANKALESHWAR/ TASHKANT OIL, MUMBAI /RTS, Jaipur/ Keshari, New Delhi /Jupiter Chemical Ind., Jaipur / Anamika Oil, Jaipur or any other equivalent make approved by the Nigam. The EHV grade transformer oil shall be duly filtered and tested and shall conform to the various technical parameters specified in IS:335/1993 (latest amended).

11.3 NIGAM can also provide transformer oil for filling in the repaired transformer depending upon the availability of the transformer oil in the store of the NIGAM. The transformer oil as may be supplied by NIGAM shall be filtered and tested before filling in the repair transformers. The filling of the oil in the the transformer shall be done in the presence of Nigam representative.

## 12.0 **METERING CUM PROTECTION (M&P) UNIT:**

The 5KVA to 25 KVA single phase transformers are to be provided with Metering Cum Protection (M&P) Unit without MCCB & relays. The bidders are required to quote the rate of Metering Cum Protection (M&P) Unit in the scheduled price list. As this unit is not a part of the repair, the cost of the unit will not be included during calculation of viability of economic limit.

12.1 The single phase transformer shall have CSP features & Signal Light (LED Indicating Lamp)

## 13.0 **TESTS:**

13.1 All the repaired transformers prior to despatch shall be subjected to all routine & acceptance tests as per IS:2026/1981 & IS:1180 read with latest amendments as detailed below :

- a) Measurement of winding resistance.
- b) Measurement of Impedance voltage, short circuit impedance and load loss.
- c) Measurement of voltage ratio and check of voltage vector relationship.
- d) Measurement of No load loss and no load current at normal voltage.
- e) Measurement of Insulation resistance.
- f) Induced over voltage withstand test.
- g) Separate source voltage withstand test for HV & LV.
- h) Checking of dielectric strength of transformer oil.
- i) Checking of repair work in confirmation to the joint inspection report and approved estimates and this technical specification (Section-III)
- j) Checking of manufacturer's test certificates & Invoices for new transformer oil/**copper**/Aluminium/bushings etc.

The tenderers must have requisite testing facilities and it should be clearly indicated / mentioned in the tender offer.

13.2 The fresh/new transformer oil from offered lot of repaired transformers and also from storage tank from which oil has been used shall also be tested for its dielectric strength in accordance with IS:335/1993 (latest amended upto date). The transformer oil used in repair of transformers shall comply with the requirement of this specification and it should conform to IS:335/1993 (Latest amended). The Nigam reserves the right to seal the samples of such transformer oil and get them tested at an independent laboratory at his own cost to ensure its conformity to the various requirements / tests of IS:335/1993.

13.3 The no load and load loss shall be measured by the three watt-meters method ( i.e. using three watt meters, three ammeters and three voltmeters of accuracy class 0.5 or better)

13.4 Common use of instrument among repairing agencies for repair/testing work is not permitted. However, in exceptional cases with recorded reasons the inspecting officer may allow the other agency's instrument also.

13.5 **The guaranteed no load loss and load loss for repaired distribution transformer(s) shall be as mentioned on the manufacturer's name plate provided on the transformer(s).**

- Tolerance in losses: The tolerance in NO LOAD and LOAD LOSS shall be permissible as
- i) No Load Loss : + 10% of the Losses mentioned in the name plate.
  - ii) Load Loss : + 5% of the Losses mentioned in the name plate.

**13.6 The losses and tolerances at 50% & 100% load in star rated repaired transformers may be considered as per the governing technical specifications of respective tenders.**

13.7 No load current : The No Load current (Magnetising current) **at normal voltage** for various ratings shall be as given hereunder with **+30%** tolerance:

- i) 5 KVA single phase :**
  - a) At 100% rated voltage :- 2% of rated full load current.
- ii) 10/16/25 KVA single phase :**
  - a) At 100% rated voltage :- 1.5% of rated full load current.

13.8 The voltage ratio shall be subject to a tolerance of  $\pm 1.0\%$ .

13.9 If the values of the load loss, no load loss and voltage ratio of the repaired transformer(s) are beyond the limits, the transformer will be declared un-economical and the contractor shall be at his liberty to remove the coils/parts and return the transformer to the respective consignee(s). However, no charges for repair of such transformer will be payable except for the charges fixed for uneconomical transformers. Transformers failed during inspection shall be identified by the contractor and intimated to the concerned ACOS before next joint inspection at their works for early lifting.

13.10 Insulation resistance of repaired transformers shall be measured with 2500 V/ higher voltage megger of standard make and dully calibrated. The minimum insulation resistance in mega ohms shall be as indicated in the table below :

Insulation resistance at deg C in mega ohms			
	20	30	40
11000 volts(HV) to earth	800	400	100
433 volts (LV) to earth	400	200	50
HV to LV	800	400	100

13.11 One transformer at random from the lot offered for inspection will be selected by the Inspecting Officer to verify physically the size of the conductor (refer Cl.34.00 of Section-III), weight of HV & LV leg coils, quantity of oil and quality of material used and workmanship, identification mark in shape of polyester strip carrying repairer's name and month of manufacturing in HV / LV coils, name plate as provided on top channel of core-coil assembly etc. in conformation to joint inspection report/ approved estimates/ Technical Specification (Section-III). In case of finding reduced quantity/ weight of coil/oil, the repair cost of transformers offered in that lot will be reduced accordingly in the same proportion and no extra payment towards loss will be paid to the contractor.

13.12 The Nigam reserves the right to inspect the works of the repairer during the process of repair for checking the repair work in confirmation to the joint inspection report and approved estimate(s) and also for the quality of workmanship and material used in repair.

**14.0 MARKING & PROVIDING BLUE BAND ON REPAIRED TRANSFORMERS:**

14.1 The repairer shall provide a non-detachable steel plate "A" of minimum 2.5mm thickness on the body of the transformer which should be continuously welded. The under mentioned details on this name plate should be deeply engraved by the repairer on the repaired and tested transformer(s). No transformer shall be accepted without proper fixing of repair plate on the transformer.

**"A"**

1. Repaired by M/s -----
2. CRC No.JU/SE/MM/TN-1695 /D.\_\_\_\_\_Dt.\_\_\_\_\_
3. Rating \_\_\_\_\_KVA Make\_\_\_\_\_Trf.S.NO.\_\_\_\_Store S.No.-----
4. Work order No.-----dated-----
5. Date of delivery/despatch -----
6. Delivered at stores \_\_\_\_\_
7. Date of expiry of GP-----

14.2 In order to find out the balance guarantee period of transformer failed under Guarantee period the contractor shall provide another new plate "B" and shall emboss information as under:

- 1) Date of failure of transformer.....
- 2) Date of repair of transformer .....
- 3) Date of expiry of guarantee period after such repair....

The original name plate of transformer shall also be retained on the repaired transformer.

14.3 The repairer shall provide identification of repairer's name and Job No.(S.No.) by non-detachable steel plate/punching on top channel of core coil assembly inside the transformer without any extra cost charges.

14.4 A 75 mm wide blue band of paint all around the transformer on all the transformers repaired first time shall be provided invariably approximately at the 3/4<sup>th</sup> of the height of transformer from bottom of tank for identification of the repaired transformer easily. The shades of this blue paint shall be canary blue colour of ISI No.5 shade No.309. This paint will also be provided after proper treatment of the surface of the transformer. For subsequent (2<sup>nd</sup>) repairs the colour band shall be kept Red. Rest of the procedure shall remain as above.

**On every re-repair on guarantee repair failed transformers, an additional 75mm wide blue band of respective colour paint all around the transformer shall be provided at a distance of 50mm from the first band.**

Concerned ACOS will mention the status of previous repair before dispatch to the firm for repair. The inspecting officer will also verify it.

#### **15.0 PRICES:**

- 15.1 *The tenderers are required to quote **Item Rate** as per price schedule appended hereto for Aluminium wound transformers. The prices for items indicated in price schedule shall include assessment and estimation, labour and all other charges involved in repair, testing, handling, loading, unloading, storage, marking and giving safe delivery of the transformers at Nigam's store(s) after satisfactory repairs, testing and painting of transformers, filtration of transformer oil etc. The total repair charges of each rating of transformer will form the basis of rate contract for repair work. The rate contract shall not be for part of the repair works. However, the rate contract shall be operative for individual items of repair work as may be assessed at the time of estimation.*
- 15.2 *The rates for the items **Labour Charges, HV and LV Aluminium and Transformer Oil of "Schedule of prices"** should be quoted variable as per formula enclosed at Schedule-III-A based on prices of **EC Grade Aluminium wire rods (LME CSP Average of Aluminium) conforming to specifications IS-5484/1978(with latest amendments ) as published in IEEMA circulars (Used for insulated cables i.e. IEEMA(PVC)CABLE) prevailing as on first day of the month one month prior to opening of tender.***
- 15.3 For the rest of items of the price schedule unit rate quoted shall be on firm price basis and no price variation shall be allowed. For claiming payment of labour charges, leg coils, transformer oil, the contractor shall certify that there is no negative price variation on these items I, II-1, II-2 & II-10 .
- 15.4 *The bidders are advised to quote their own individual rates. It may please be noted that if the same rate is quoted by more than one bidder, suggestive of a cartel, then such offers may not be considered by the Nigam. It may please be noted that competitive rate quoted by each bidder may be one of the main criteria for quantity to be ordered on each successful bidder.*
- 15.5 *Item rates are to be filled by bidders to repair the single phase transformers with new mounting arrangements.*
- GST : (i) Goods service tax government levy on spare parts (Components/ oil & other accessories) for the transformers repaired, which if legally applicable shall be paid extra at actual on production of necessary documents .The prices shall be quoted (Levey on the rates to quoted) by the tenderer after accounting for the benefits of GST and any other type of benefits as may be availed by them in future due to any modification/ insertion of new financial rules by the government shall be passed on to the Nigam.*
- (ii) However, tenderers must specify clearly the present rate of GST to be charged by them on the prices mentioned in their quotations. In case it is not applicable at present to the tenderer, a clear mention to this effect should be made in the tender offer. The limit of contract value may also be mentioned to the extend up to which duties will not be charged.*

#### **16.0 DELIVERY:**

The joint inspection for preparation of estimates shall be arranged within a week's time from the delivery of the damaged transformers at the works of the firm and estimate(s) shall be furnished within a week there-after. The transformers shall be repaired and offered for inspection & testing within 30 days from the date of issue of the work order by the concerned Superintending Engineer of (O&M) circle or within ten days from the date of filling transformer oil if oil is supplied by NIGAM, whichever is later. The transformers after repair are to be delivered by the contractor at respective Nigam's store(s) through his own transportation ,hence for the purpose of penalty towards delay in repair shall be worked out with actual date of delivery of repaired transformers.

#### **17.0 DELAY IN DELIVERY:**

- 17.1 The repair work shall be completed within stipulated delivery period. If the contractor fails to repair and deliver the transformers after due repair within the specified delivery dates, the Superintending Engineer (O&M),shall be entitled to recover an amount (for the transformers, the repair of which have been delayed/ not repaired)@Rs.45.00 per week or part thereof of each transformer subject to max. limit of Rs.450.00 per transformer. The Nigam will also have

the right to cancel the order and forfeit the security deposit/safe custody amount and get the repair work done by some other contractor/ repairing firm at the cost, risk and responsibility of the defaulting contractor or to recover maximum penalty levied along with to & fro transportation cost in case of delay in repairs/ non-repairs of the transformers beyond one month.

17.2 The final recovery amount shall be calculated by the concerned ACOS, and be submitted to concerned Superintending Engineer (O&M), who in turn will intimate to Sr. Accounts Officer (Cash/CPC), Jodhpur Vidyut Vitran Nigam Limited, Jodhpur after getting the same checked/vetted by the concerned Circle Accounts Officer.

17.3 The concerned ACOS will also intimate the recoveries of repairing charges of the transformers which failed during its guarantee period, to the Sr. Accounts Officer (Cash/CPC), Jodhpur Vidyut Vitran Nigam Limited, Jodhpur with due approval of concerned Superintending Engineer (O&M) and under information to Superintending Engineer (MM).

**18.0 SECURITY DEPOSIT:**

The successful tenderer shall have to deposit in cash or to furnish a Bank Guarantee(B.G.) **Rs. 25,000.00 for each circle** towards security deposit for faithful execution of rate contract.

**19.0 SECURITY DEPOSIT FOR SAFE CUSTODY OF DISTRIBUTION TRANSFORMERS:**

19.1 The successful tenderers shall be required to furnish Bank guarantee **(BG) for Rs. Two (2.0) lac towards safe custody of every Forty (40) Nos. of damaged transformers of assorted ratings in favour of SE(MM), JDVVNL, Jodhpur.** The BG in prescribed format shall be from any scheduled Bank & shall be furnished on a Rajasthan Govt. Non-Judicial stamp paper (where-ever applicable) amounting to 0.25% of the B.G value or Rs. 25,000/- , whichever is less (It will also applicable on other type of Bank guarantee(s)). At the initial stage, the bank guarantee shall be valid for a period of minimum one year with 6 months grace period. SCBG will be released after repair of all GP failed transformer and issue of NOC "No Objection Certificate" from concerned store/ ACOS.

19.2 The contractor shall not be delivered damaged / failed transformers from NIGAM's stores for repairing till such time the contractor furnishes security towards safe custody of transformers as specified as above in clause 21.0.

**20.0 GUARANTEE (PBG):**

20.1 The repairer shall obtain receipted challans from the concerned ACOS/Stores Superintendent in respect of repaired / un-economical transformers delivered in stores and shall be furnished with the repair bills directly to the Sr. Accounts Officer (Cash/CPC), Jodhpur Vidyut Vitran Nigam Limited, Jodhpur for payment.

21.2 10% amount of repair cost shall be with-held towards performance guarantee of the repaired transformers accordingly 90% payment of repair cost of each lot of transformers shall be made on delivery of repaired transformers. The balance 10% payment shall be released by The Sr. Accounts Officer (Cash/CPC), Jodhpur Vidyut Vitran Nigam Limited, Jodhpur under intimation to the Superintending Engineer(MM), Jodhpur Vidyut Vitran Nigam Limited, Jodhpur and concerned circle Superintending Engineer after receipt of a certificate about satisfactory performance of transformers for each lot delivered in a particular month after expiry of the performance guarantee period (G.P.), from concerned ACOS in the prescribed proforma. The above limit of 90% & 10% will be considered as 95% and 5% respectively for the old & established contractors i.e. who have executed atleast three repair rate contracts in the past 10 years awarded by JVVNL/AVVNL or JDVVNL or executed three orders for supply of transformers successfully.

**21.0 GUARANTEE:**

21.1 While attending repairs of the transformers, the repairer(s) shall ensure that the guaranteed technical particulars and performance of the same are maintained for repaired transformers. Under no circumstances, the value of, losses and efficiency shall be altered from specified in this specification.

21.2 The bidder shall have to furnish guarantee and warranty for the satisfactory performance of repaired transformers for **24 (twenty Four) working months** from the date of despatch, for whole unit ir-respective of parts repaired / replaced during repairing. Subsequent repairing of Guarantee Period failed transformer shall carry further guarantee for **six months** from the date of receipt of transformer, after such repairs or balance guarantee period whichever is

later. Hence during the joint inspection, successful bidder shall thoroughly check up each coil and each part of the unit in presence of Nigam's Engineer(s) while submitting the estimate(s) for repairs to concerned Superintending Engineer. No extra charges will be allowed for transformers failed within guarantee period even though damages are found other than repaired / replaced parts. The defects noticed during the period of guarantee shall be attended on priority and the transformer shall be repaired free of cost within a period of 30 days after receiving the transformer at their works without any liability on the Nigam. Any delay beyond 30 days in repair / rectification of transformer shall be subjected to penalty as applicable for delay in delivery and also further joint inspection of other deposited transformers will not be carried out till the repair of guarantee period failed transformers is completed. Only external physical inspection and acceptance test as detailed above will be carried out for the guarantee period failed transformer(s) and no internal inspection will be carried out by our inspecting office and sealed with numbered seals if cleared for despatch.

**22.0 PRICE FALL CLAUSE:**

- 22.1 The price(s) charged for the works executed and spare parts supplied under the contract by the contractor shall in no event exceed the lowest price at which the contractor execute the works and sells spare parts of identical description to any other person/ firm during the period of contract.
- 22.2 If at any time, during the said period, the contractor reduces the prices for such works or sells such spare parts to any other person at a price lower than the price chargeable under the contract, the contractor shall forthwith notify such reduction of price to the Nigam and the price payable under the contract for the works executed and spare parts supplied after the date of such reduction shall stand correspondingly reduced. The contractor shall furnish certificates in the following form to ensure compliance of provisions of this clause.

"I/We certify that the works executed or spare parts supplied of description identical to the works executed or spares supplied to the Jodhpur Vidyut Vitran Nigam Limited under the rate contract No.JDVVNL/SE/MM/TN-1695 have not been sold by me/us during the period of supply/during the period from ..... to ..... to any other person at the price lower than the price charged from Jodhpur Vidyut Vitran Nigam Limited under rate contract."

**23.0 PARALLEL CONTRACTS :**

- 23.1 The Nigam reserves the right for entering into parallel rate contracts with other firms and to assign and specify the areas of operation of rate contracts.

**24.0 PAYMENTS:**

- 24.1 The payments shall be arranged by the Sr. Accounts Officer (Cash/CPC), Jodhpur Vidyut Vitran Nigam Limited, Jodhpur against presentation of bills for repair of transformers based on the joint inspection report and the estimates approved by the concerned Circle Superintending Engineer(O&M). The repair bill should be supported by receipted challans in token of receipt of repaired distribution transformers / un-economical transformers by the concerned Assistant Controller of Stores/Stores Superintendent and the documents as stated at clause 14. The applicable sales tax alongwith surcharge there upon and any other statutory duties/ taxes at the prevailing rates for the value of the scrap shall be charged at the time of arranging payment by Sr. Accounts Officer (Cash/CPC), Jodhpur Vidyut Vitran Nigam Limited, Jodhpur, and shall be deposited by the later with the Govt. However, the contractor shall not get any payment in absence of completion of contractual formalities such as furnishing of bank guarantees towards security deposit and safe custody of transformer and also execution of contract agreement etc. 10% amount of the repair cost shall be with-held towards performance guarantee of the repaired transformers. Accordingly 90% payment shall be made on delivery of transformer and balance 10% will be released after expiry of total guarantee period of the transformer. The above limit of 90% & 10% will be considered as 95% and 5% respectively for the old and established contractors who have executed at least three contracts successfully in past.
- 24.2 The concerned Asstt. Controller of Stores(ACOS) will furnish the satisfactory performance report to the Sr. Accounts Officer (Cash/CPC), Jodhpur Vidyut Vitran Nigam Limited, Jodhpur under intimation to the S.E.(O&M) / SE(MM) for each lot of the transformers delivered in a particular month, after expiry of guarantee period and will certify that there is no transformer lying failed within guarantee period pending for repair& nothing is recoverable from the firm against this lot of transformers. On the basis of such certificate from ACOS, the balance payment withheld towards performance bank guarantee will be released by the Sr. Accounts Officer (Cash/CPC), Jodhpur Vidyut Vitran Nigam Limited, Jodhpur for that lot.

**25.0 SUBMISSION OF BILLS:**

25.1 The bills for repairs of transformers shall be supported by the following documents for arranging payments:

- a) Copy of joint inspection report duly signed by all concerned including Superintending Engineer (O&M) & Accounts Officer (O&M).
- b) Approved estimate/work order of SE (O&M)
- c) Inspection and despatch clearance report of the Inspecting Officer.
- d) Receipted challans of the consignee for the receipt of repaired transformers. At the time of verification of the challans, the concerned ACOS will record a certificate that all the transformers declared uneconomical during joint inspection & further during final inspection have been deposited by the contractor for the said lot.
- e) Proof of payment of excise duty and sales tax as claimed extra in the bills is required along with the bills for repairs of transformers.
- f) Certificates that material/spares mentioned in the bills have been actually fitted/used on the transformers.

**26.0 TRANSPORTATION/CARRIAGE OF TRANSFORMERS:**

Lifting (Loading and unloading) of failed/ damaged distribution transformers from concerned stores for repair and returned back the same after due repair or after assessment of uneconomical viability based on joint inspection shall be in the scope of the contractor. Similarly the responsibility for to and fro transportation of G.P. failed transformers shall also be on contractor's account.

**27.0 ASSESSMENT/ ESTIMATION OF REPAIRS :**

27.1 The joint inspection of the damaged transformers shall be carried out at the circle stores of JDVVNL by two Asstt. Engineers, nominated by the Circle Superintending Engineer out of the Asst. Engineers available in his circle by rotation, and authorized representative of the contractor to assess and work out the details of damaged parts to be replaced and repairs to be carried out on every individual transformer(s). In the event of any difficulty in arranging the joint inspection in the stores premises of Nigam the Superintending Engineer(O&M) at his discretion can ask the contractor to arrange the joint inspection at their works. However, the Joint inspection facilities for labour and equipments for handling etc. at the circle stores of Nigam shall be provided by the Nigam. Six copies of the estimate for repair and testing for every damaged transformer in prescribed proforma indicating its S.No., make, year of manufacture & rating, purchase order No. & date, TN No. etc. shall be prepared after joint inspection.

27.2 To expedite repair work of distribution transformers & smooth operation of Rate Contract, the transformers declared un-economical at the time of joint inspection/during inspection by Inspecting Officers shall be returned back expeditiously by the contractor's.

27.3 All the six copies of the estimates shall be signed by the contractor's representative and the officers of the Nigam. All the facilities for labour and equipment etc. shall be **provided** by the contractor at their works free of charge.

27.4 The joint inspection reports shall clearly indicate whether particular item being provided is against replacement of defective/ damaged or missing parts.

**27.5 HV LEG COILS:**

**27.5.1 In case of damage of any of the HV leg coil, the contractor must replace the HT leg coils of the damaged distribution transformers by new HV leg coils of similar quality of material, insulation and cross section, number of turns etc. as utilized in damaged transformers.**

**27.6. LV LEG COILS:**

**The damaged single phase transformer(s) whose one L.V. leg coil found damaged / burnt shall be repaired with HT coil.**

27.6.1 The weight of new leg coils ( the new coils shall be identical to the old coils) to be charged in the estimate for repairs shall be same as that of the old healthy leg coils taken out from the damaged transformers. Bills for repair of transformers shall be prepared accordingly for actual weight of new finished coils only. No cost of variation in weight on positive side referred by the contractor will be allowed. A list of actual weights of new leg coils of each transformer shall be furnished by the contractor while offering for inspection.

27.7 After joint inspection for estimation the contractor shall retain one sample of healthy HV/LV leg coils of each damaged transformer , duly tagged with details such as make, type, capacity,S.No. of transformer, weight of leg coil, name of circle etc. duly signed by the joint inspecting officer under their seal, till the time of inspection and testing by inspecting officer of Nigam for purpose of verification of the technical details of fresh leg coils used by the contractor in the repaired transformers.

**28.0 APPROVAL OF ESTIMATE:**

28.1 The joint inspection for preparation of estimate shall be arranged within a week’s time from the date of delivery of the transformers at their works and the gross estimates in respect of the transformers as within the prescribed **economical limit of 50%(Fifty percent) of the fix store issue rate(s)** which are given below shall be prepared and furnished within one week thereafter and shall be approved by the concerned circle S. E. (O&M)within three days, before carrying out repairs by the firm.

Delay in submission of repair estimate beyond one week (7 days) after joint inspection shall be to the account of repairer and the scheduled delivery period for the repair shall be reduced by period of delay beyond 7 days from the date of joint inspection. **If the gross estimate for repairing of a transformer exceeds 50 % of the price of the fixed store issue rate of new transformer** then it has to be declared uneconomical and returned to the concerned stores.

28.2 This limit of **50%** based on work order rate shall be exclusive of **cost and** fixing of M&P Box charges and shall be arrived on the basis of actual value of repair estimate without accounting for credit of the likely sale proceeds of the scrap/ salvage of HV/LV leg coils, metals parts, drain valve, HV / LV Bushing, transformer oil etc.

A) Fixed stores issue rate of transformer:

SL.	TRANSFORMERS RATING IN KVA	ALL ADJUSTED UNIT FOR
A.	<b>SINGLE PHASE DISTRIBUTION TRANSFORMERS</b>	
	<b>ALUMINIUM WOUND</b>	
	a) 5 KVA	Rs. 26,335.00
	b) 10 KVA,	Rs. 32,200.00
	c) 16 KVA,	Rs. 39,100.00
	d) 25 KVA	Rs. 52,900.00

For the item / ratings not covered above, it will be decided by the Dy. Chief Engineer (MM), JDVVNL, Jodhpur.

28.3 **Besides above a few major short-comings enumerated here under shall also make the transformer un-economical and therefore, not to be repaired.**

- i) missing / damage of core.**
- ii) rusting of core**
- iii) major damage of tank, radiator & conservator.**

28.4 A lump sum charges Rs.150/- shall only be payable towards handling of such uneconomical transformers .

28.5 The joint internal inspection of damaged distribution transformers will be carried out by the authorized representative(s) of Nigam, nominated by concerned SE (O&M). Opening of transformer activity shall be commenced only in presence of Nigam's representative(s). If transformer shall be found opened before the arrival of representative of Nigam at the works of repairing agencies, then the estimate(s) shall not be approved for repairs of damaged transformers and further transformers shall not be allotted to the repairing agency. The following points are to be taken care of in preparation/approval of estimates:



- 28.6.1 The estimate(s) be vetted/checked/signed by the Circle Accounts Wing as per rates and other terms & conditions of Rate Contract and a certificate be recorded to that effect.
- 28.6.2 Also a certificate be recorded by representative(s) of the Nigam nominated by concerned SE (O&M) / SE (MM) for joint inspection that :
- i) the transformer found economical for repair as per provisions of the rate contract order.
  - ii) the transformer to be repaired is beyond original guarantee period of supply.
- 28.6.3 Availability of budget provisions.
- 28.7 The estimate(s) of the repairs after getting signed by the committee as above (Clause No.30.6) shall be submitted to the concerned circle SE(O&M) in 6 (six) copies. Three copies of the estimate duly approved shall be forwarded to the contractor by the Superintending Engineer (O&M), to enable repairer to commence the repair work on the transformers thereafter immediately.
- 28.8 Out of the 3 copies of the approved estimates received by the contractor, one copy shall be retained by him for his record and one copy alongwith the inspection clearance report shall be attached alongwith the bill(s) after satisfactory repairs and testing and shall be forwarded to the consingee/ stores officer to facilitate the verification. The remaining spare copies of approved estimate alongwith a copy of joint inspection report shall be handed over to the Inspecting Officer at the time of inspection and testing of the repaired transformers to facilitate checking and to ensure that the repairs have been done strictly in accordance with the approved estimates.

**29.0 SUNDRY ITEMS:**

Miscellaneous items not specified in the price schedule but are required for repairs and satisfactory operation of the transformer after repairs shall be provided by the contractor at the fixed rates given in the schedule of prices under title "SUNDRY ITEMS". These items may include Packing of bushing, rods, cover bolts, caps, screws, washers & insulating materials to be provided between HV & LV leg coils and interchangeable leg coils, minor repairs of tank and all other parts not specifically mentioned in price schedule including denting, welding etc. if required which are necessary for satisfactory operation of the transformer after repairs.

**30.0 DAMAGED PARTS:**

- 30.1 The damaged HV/LV coils will be retained by the repairer after cutting the same at one point i.e. in two pieces in presence of Nigam's representative for which necessary details shall be given in joint inspection report to be signed by the repairer and Nigam's representative. Similarly other salvages viz. like bushing rods, caps, tap changing etc. metal parts are also to be retained by the repairer.
- 30.2 **SALVAGES** All the salvages/scrap of damaged/ replaced parts & burnt leg coils except removed parts such as caps, valves, etc. shall be retained by the repairer and Nigam will make 100% deduction towards cost of scrap along with **GST (As applicable)** thereupon and any other duties/ taxes at the prevailing rate at the time of payment by the Sr. Accounts Officer (Cash & CPC), JdVVNL, Jodhpur from the repair bill and the latter shall arrange to deposit the amount of **GST** with the Govt. from the repair bill. **The cost of aluminum coil scrap** shall be fixed on the basis of rates published in the Economics Times, New Delhi on the date of Joint inspection. In case of **Aluminium coil scrap**, rate of Aluminium utensils less 15% to-wards impurities is to be taken into account for working out cost of aluminium coil scrap. As regards metals parts & other salvages, the rate of these items shall be fixed on the basis of average rate obtained in the Last auctions conducted, to be notified by SE (MM&C/ I&S), JDVVNL, Jodhpur .

**The transformer oil shall be retained by the concerned ACOS before handing over the transformers for repair to the firm.**

**31.0 TESTS AND TEST CERTIFICATES:**

- 31.1 All the transformers after repairs shall be subjected to all the routine & acceptance tests specified in the relevant ISS detailed in clause 14.0 of the technical specification (Section-III) appended herewith.
- 31.2 One transformer at random will be selected by the Inspecting Officer to verify physically the size of the conductor, weight of HV & LV leg coils, quantity of oil and quality of material used and workmanship, identification mark in shape of polyester strip carrying repair's name and month of manufacturing in HV / LV coils, name plate as provided on top channel of core coil assembly etc. In case of finding reduced quantity/ weight of coil/oil, the repair cost of

- transformers offered in that lot will be reduced accordingly in the same proportion and no extra payment toward loss will be paid to the contractor.
- 31.3 The contractor will ensure that the best quality ISI approved material is used as far as possible. The Nigam reserves the right to get conducted any test of reasonable nature at the contractor's premises, or at site in addition to the aforesaid tests and those included in the rate contract at the contractor's expenses to satisfy himself that the spare parts supplied and repairs carried out comply with specification. The contractor shall be required to rectify the defects, if any found in such tests at his own cost.
- 31.4 The contractor shall send copies of inspection reports duly signed by the Inspecting Officer alongwith test results sheet & other relevant certificates to the concerned consignee(s) and to the concerned Superintending Engineer (O&M) for each and every transformer.

**32.0 INSPECTION AND TESTING:**

- 32.1 The contractor shall give atleast 7 days advance intimation to concerned Superintending Engineer (O&M), JDVVNL, for arranging inspection of a lot of minimum 20 Nos.of repaired transformers or the total quantity of lot/work order whichever is less so that Nigam may depute its representative(s) for inspection and testing of the same. The contractor shall furnish the packing list with inspection call of repaired transformer(s) as under :
- a) Job No.
  - b) Work order No.
  - c) Transformer(s) make & serial No.
  - d) Weight of HV / LV coils
  - e) Total weight
  - f) Quantity of transformer oil
- 32.2 No transformer shall be dispatched without inspection and testing clearance by the Inspecting Officer. The transformers inspected & cleared for despatch by Inspecting Officer shall be provided with following type of seals and stickers:
- i) Numbered polycarbonate/ lead punched with sealing plier on diagonally opposite corners on top cover of transformers.
  - ii) One number non-removable, temper proof paper seal/ sticker duly signed by the Inspecting Officer.
- 32.3 In case of failure of repaired transformers in guarantee period the seals are to be opened in the presence of Nigam's representative after external inspection. Again after inspection and testing of G.P. failed / repaired transformer numbered lead seals / stickers shall be provided by the Nigam's inspecting officer.
- 32.4 The contractor shall record the following certificate on the invoice / packing list (challan) of each transformer:-
- "Certified that the consignment (lot) of repaired transformers as inspected by Sh.....designation..... has been got tested sealed and cleared. The test results were found to be within the limits of values specified in the relevant ISS/contract as per copy of test results enclosed." Witnessed by Sh.....designation.....
- 32.5 A team from Nigam shall visit the works of repairing agency at any time and verify the estimate / assessment for transformer repairing, quality of components used, testing instruments, machinery / equipments, test reports of earlier transformers tested, etc. They may also witness some or all tests on the transformers available in the factory / workshop of the repairing agency. Repairing agency shall co-operate this team during its visit and furnish all the details required by them. In case any default is observed during this visit, necessary action shall be taken against defaulting repairing agency including cancellation of the contract and /or black listing the repairing agency.
- 32.6 Contractor will not charge for inspection and assessment of damaged transformers.

**33.0 RANDOM SITE TESTING :**

- 33.1 The Nigam reserves to itself the right of having at its own expenses any test of reasonable nature carried out on the transformers received in the stores / site after repair. For this purpose, the Nigam's authorised representative shall select transformer(s) from the supplied lot(s) at random from the stores / sites as per selection procedure specified below for conducting the following tests at any test house/Nigam premises.
- i) Measurement of No Load loss/ No Load current and load losses.
  - ii) Verification of weight of HV / LV leg coils.
  - iii) Di-electric strength of transformer oil
  - iv) Testing of transformer oil for conformity to the various requirements/ tests of IS:335/1993.

### 33.2 **CRITERIA FOR RANDOM SELECTION & TESTING (RST):**

One transformer will be selected at random out of supply of every 100 Nos. repaired transformers of different ratings.

### 34.0 **MANDATORY CTL TESTING:-**

After pre dispatch inspection of material at Firm's works, The sample(s) will be drawn from the lot (s) received in store (s) and will be subjected to following Tests

- 1) One transformer will be selected out of every lot of 10 Nos. or part thereof for measurement of No load Losses, No Load current, Load Losses, Impedance voltage, and thickness of M&P Box. Further, the losses and tolerance at 50% & 100% load in star rated repaired transformers may be considered as per the governing technical specifications of respective tender. The test result will be applicable to the respective lot of 10 Nos. from which sample was drawn
- 2) Verification of weight of HV / LV leg coils.
- 3) Di-electric strength of transformer oil
- 4) Testing of transformer oil for conformity to the various requirements/ tests of IS:335/1993

**One Transformer will be checked in CTL out of 10 Nos. transformers or part thereof for following:**

- i) **Size of Box**
- ii) **Size of Lugs**
- iii) **Make of ICB**

The percentage impedance voltage at rated current shall not exceed the permissible limit as specified with allowable tolerance failing which the sub lot of transformers represented by the sample shall be rejected. The transformers selected for total Losses shall also be subjected to magnetizing current and in case found beyond the limit, the lot shall stand rejected.

The I.R. values of the sample(s) shall be measured at CTL, Jodhpur and it must be more than 50 MEGA-OHM.

**NOTE - The single phase transformers pertaining to various TNs having provision of mandatory testing at CTL shall be tested at CTL under CRC tender, and if the Single phase Transformer pertains to various TNs not having provision of mandatory testing at CTL shall also be tested at CTL under CRC tender.**

### 35.0 **MATERIALS:**

35.1 All material used in the repairs/ construction of the equipment shall be of the best quality of its kind and except where modified by the specification shall comply in all respect with the standard(s) laid down by ISI.

35.2 The spares/ equipments to be used in the repairs of the damaged transformer(s) should comply with one consistent set of standards.

35.3 In order to avoid inconsistencies in electrical characteristics of HT/LT bushings, the broken/damaged bushings with metal parts shall be replaced by the bushings of the specified/approved makes, or the entire set of HT/LT bushings may be changed by a new set of bushings as per IS specifications, if required. Such bushings should bear manufacturer's trade mark, month & year of manufacture etc. HV/LV Bushings of the following make or other approved makes shall be used for replacement in repair of transformers.

- i) H.V. BUSHING:- BEPCO, Jayshree, WSI, Associated Porcelain (only 11 KV), Seshasayee, Jaipur Glass, Luster Ceramics, BPPL, Bikaner.
- ii) L.V. BUSHING:- The LV coil shall be taken by cut on the top core clamp duly reinforced to compensate for the mechanical strength.

The LV bushings shall be of reputed make such as BEPCO, JAYSHREE, WSI, SESHASAYEE, JAIPUR GLASS, BPPL Bikaner, Agarwal salt Co. Bikaner, Baid Sanitary Works, Bikaner/ Krishna Ceramics, Nasirabad or any other make - approved by the purchaser. The LV bushings shall generally conform to IS: 3347 and IS: 7421".

35.4 The damaged porcelain bushings requiring replacement shall be replaced by such bushings keeping in view that these should have ample margin of safety as regards flash-over in order

to eliminate all troubles due to condensation under sudden varying atmospheric conditions and trouble from dust.

The HV/LV bushing(s) shall be marked with manufacturer's trade mark and month & year of manufacture during firing.

**35.5 METAL PARTS:**

35.5.1 All the aluminum metal parts shall be removed & replaced with new brass metal parts strictly conforming to relevant standards.

35.5.2 The dimensions of HV & LV metal parts shall be strictly conformed to IS:3347(Pt.I & III).

**36.0 EXTRAS:**

When asked in writing by the Superintending Engineer (O&M)/(MM),JDVVNL to perform such extra work and supply such extra material, not covered within the scope of this specification as specified under various clauses of same, such work and material which is of most necessity shall be got complied by the contractor and its charges shall be paid extra at the rate and terms to be mutually agreed upon. This shall however, not exceed the economic limit of repairs.

**37.0 ATMOSPHERIC CONDITIONS:**

The transformers after satisfactory repairs/testing shall be suitable for satisfactory operations in tropical climate and shall be able to withstand a wide range of temperature and climatic erratic variations / conditions experienced in Rajasthan including exposure to direct sun.

- i) Annual rain fall (Max.) : 0-100 cms.
- ii) Max. ambient temp. in shade : 50 Deg. C.
- iii) Max. relative humidity : 90%
- iv) Min. temp. of air in shade : 0 Deg.C
- v) Min. relative humidity. : 10%

**38.0 PAINTING:**

38.1 All metallic surface exposed to the weather and requiring painting shall be given one suitable priming coat after derusting by sand/shot blast or chemical cleaning including phosphating as per IS:3618 and one coat of thermo-setting powder paint or two coats of zinc-chromate followed by two coats of synthetic anamel paint of dark admirally Grey shade confirming to shade No.632 of IS:1961 shall be applied. The rates for one coat spray painting without primer etc. shall also be quoted separately.

38.2 The inside of transformers shall be given suitable priming coat after derusting and two finishing coats of heat resistant (hot oil proof) paint which may not cause any deterioration of properties of the transformer oil by chemical reaction etc.

**39.0 DESPATCH INTIMATION:**

39.1. After satisfactory repairs and testing, the contractor is required to send telegraphic intimation to the consignee/stores officer under intimation to the concerned Superintending Engineer (O&M). The telegraphic intimation will contain information regarding quantity and the amount of the bill.

39.2. In addition to above the contractor shall be required to send the monthly statement to the concerned S.E.(O&M) and S.E(MM) of quantities of the transformers of various makes, types and capacities received from various consignees, repaired and delivered back by 7th of every next month.

**40.0 RESPONSIBILITY FOR SAFE CUSTODY OF TRANSFORMERS DURING THE REPAIR PERIOD:**

The contractor shall be entirely responsible for the safe custody of transformers from the day damaged transformers are received by him from the consignee/stores officer upto the time of delivering back and will be fully responsible for any loss caused due to damage/ theft/ fire/floods etc.

**41.0 STATEMENT OF TRANSFORMERS REPAIRED AND DELIVERED TO CONSIGNEE:**

The contractor will be required to send the following details of the transformers repaired by

him to the concerned Superintending Engineer (O&M) and Superintending Engineer (MM), JDVVNL, Jodhpur :-

- a) A copy of invoice pertaining to the particulars of transformers repaired by him immediately after delivery of the same to the concerned indenting/demanding officer(s).
- b) A statement of transformers received, repaired and delivered in the preceeding month should be furnished in the following proforma,so as to reach by 7th of the following month.

S.No.	Name of Circle Store/ Sub-store.	No.of transformers received for repair during the month. reporting month	Progressive total of No. of transformers recd.for repair Up to	No.of transformers for which joint inspection was carried upto end of month under report and estimates have also been approved.
1.	2.	3.	4.	5.

No. of transformers repaired during the month under report.	Number of repaired transformers for which inspection & testing is pending.	Progressive total of number of transformers delivered after satisfactory repairs and testing up to the month under report
6.	7.	8.

Transformer failed more than once during the guarantee period shall be counted for total number of failure for working out the percentage failure rate. The inadequate failure rate will effect performance adversely for the repairer firms and continuance during contract period. Contract is likely to be cancelled.

To watch the performance of the repairer firm, half yearly position of repaired transformers and failure thereof firmwise shall be compiled at the circle level and sent to be S.E (MM.) for reviewing the same.

- c) Besides above fortnightly information about transformers failed in the GP and sent for repair, shall also be furnished by the repairing firm(s) in the following porforma to the SE(O&M) and SE(MM):

S.NO.	RATING	MAKE	TRNASFORMER SERIAL NO.	WORK ODER NO. & DATE	DATE OF REPAIR
1.	2.	3.	4.	5.	6.

DATE OF FAILURE	DATE OF RECEIPT OF TRANSFORMER	DATE OF RE-REPAIR	PROGRAMME FOR REPAIR	REMARKS
7.	8.	9.	10.	11.

42.0 **RESPONSIBILITY OF CONTRACTOR AND COMPLETENESS:**

- 42.1. The contractor shall be entirely responsible for the satisfactory execution of this contract in accordance with the terms of the rate contract laid down here-in.

42.2. Approval of the contract/sub-contract, test certificates or of tests carried out by the repairer or the representatives of the Nigam shall not relieve him from any of his obligations to meet out all the requirements of this specification or from the responsibilities for the satisfactory repair and working of the transformer(s) for the guarantee period.

**43.0 INTER-CHANGEABILITY:**

All parts shall be made accurately to standard gauge as far as possible so as to facilitate the replacement and repairs. All corresponding parts of similar make, type and capacity of transformers including the spare parts shall be interchangeable.

**44.0 RATE CONTRACT WITHOUT PREJUDICE:**

The rate contract shall be without prejudice to any of the terms of specification or the rate contract order of the Jodhpur Vidyut Vitran Nigam Limited or any rate contract of DGS&D or purchase department of any other Govt./Semi-Govt. Undertaking or of the other rate contract of the Jodhpur Vidyut Vitran Nigam Limited whatsoever it might be .

**45.0 NUMBER/QUANTITY TO BE CONTRACTED FOR:**

45.1 The approximate number of transformers to be got repaired are around 2500 Nos. of various ratings. The orders for the repair of damaged distribution transformers shall depend on their capacity, delivery quoted, performance, workmanship, financial status of the contractor, pending orders in hand, firm's performance in executing pending orders apart from the rates quoted for such items as mentioned under schedule of prices.

45.2 The Nigam reserves the right to place order for any quantity for undertaking the repairs by the rate contracting firm(s) during the period of the contract or extension thereof. It also reserves the right of placing any supply order of articles or repairing the failed/damaged unit(s) provided that is included in the contract. If the total amount of the repairs is expected to exceed more than the estimated amount of the order at the time of taking job on actual repairs, this shall be intimated to the S.E (O&M), in advance who as an exceptional case may convey approval but limited to the economical limit of repair. In case it is found that the contractor is not in a position to supply/execute the specific quantities or number/works within the period in which repairs/ supplies/ works are required to be completed, the job will be got lifted from the firm's premises and shall be got repaired departmentally or through any other firm after imposing the due penalties as per stipulations of Clause No. 19 above. The contractor(s) will make their own arrangements for procurement of raw material in time to deliver repaired transformers within specified time.

**46.0 PARTIES TO THE CONTRACT:**

Jodhpur Vidyut Vitran Nigam Limited represented by the Managing Director which shall include his legal representative, successor or assignees shall constitute the one part of the contract. The Superintending Engineer(MM), JDVVNL, Jodhpur shall award the rate contract to the successful tenderers on behalf of the Jodhpur Vidyut Vitran Nigam Limited.

**47.0 PERIOD OF RATE CONTRACT:**

The rate contract shall be valid initially for a period of two year from the date of award of the Rate Contract and further extension for one year or part thereof shall be considered provided percentage failure of the repaired distribution transformers in guarantee period is found satisfactory and within the prescribed limit. All the orders placed within this period shall be got executed by the contractor even though the delivery of the repaired equipment or spares supply order falls beyond the expiry of the rate contract period.

**Nigam reserves the right to discontinue the repair work of distribution transformers in case the failure rate of repaired distribution transformers is observed more than 15%. The failure rate shall be worked out for minimum failure of two transformers. Subsequent failure of same transformer shall be counted in failure rate.**

**48.0 INSPECTION CHARGES FOR UNECONOMICAL UNITS:**

A sum of rupees one hundred fifty (Rs.150/-) will be paid for handling of uneconomical transformers. However repairer will have to reseal the unit by tack welding at six places in presence of Nigam's representative. The repairer has to assemble the unit again i.e. core /

HV, LV winding etc. In the actual position before tack welding instead of just dumping the parts in the transformer tank.

**49.0 DOCUMENTS TO BE SUBMITTED:**

49.1 The Bidder shall also furnish the following details along with other information as mentioned in the prescribed schedules of the bid documents:

- (i) List of partners /Directors with their permanent as well as present residential address and details such as their relationship, if any with the Nigam's employee(s).
- (ii) List of machineries/testing equipments with makes S.No. And other technical particulars as per Schedule-IX(A) & IX(B).
- (iii) Attested copy of proper valid SSI registration.
- (iv) Details of Rating wise transformers repaired and failed within GP for the period from \_\_\_\_\_or date of award to \_\_\_\_\_ under CRC **TN-1117**.
- (v) Details of factory set-up with blue print.
- (vi) Copy of latest Electric bill.
- (vii) Calibration report of the testing instruments from the Government Approved Lab.

49.2 In case all details as mentioned above are not furnished with the bid offer or proved false, the bidder offer shall be liable to be disqualified.

**50.0 FAILURE TO EXECUTE THE ORDER:**

In case of failure on the part of repairer to cope with the works within the specified period, the same will be got executed through some other agency even at higher rates and the difference in amount if any, will be recovered from the repairer.

50.1 In case of poor progress of repairs of transformers, Nigam reserves the right to curtail the allocation of quantity. If performance/progress of repairing is poor, then rate contract order shall be cancelled without giving any notice and/or assigning the reason by the Nigam.

50.2 The repairer shall have to complete all formalities such as agreement, furnishing of security deposit etc. within 15 days from the date of receipt of contract order, otherwise contract order shall be automatically treated as cancelled.

**51.0 DISPUTES:**

51.1 All disputes, differences or questions whatsoever which may arise between the Nigam and repairer upon or in relation to or in connection with this contract shall be deemed to have arisen at Jodhpur(Rajasthan) and no court other than court at Jodhpur (Rajasthan) shall have the jurisdiction to entertain or try the same.

51.2 In case of any question/disputes, differences whatsoever arise between the Nigam and contractor upon or in relation to the contract, the matter may be referred to the settlement committees constituted by NIGAM depositing requisite reference fee with Sr. Accounts Officer (Cash/CPC), Jodhpur Vidyut Vitran Nigam Limited, Jodhpur.

**52.0 MINIMUM REQUIREMENT FOR VENDOR REGISTRATION OF NEW REPAIRING FIRMS:**

The following are the minimum requirement for new repairing firm(s) besides observing the formalities as prescribed in section-I/II of these tender documents:

1. Independent constructed factory shed.
2. Sufficient open land for storing of failed / repaired transformer(s) with movement of man / material / vehicle.
3. Loading & unloading facility for transformer(s).
4. Permanent electric connection
5. All necessary machinery for repairing of distribution transformers such as winding machine, drill machine, welding machine (electric / arc welding/ gas welding).
6. Oven for storing minimum 10 nos. of job of 11/0.433 KV distribution transformers.
7. Oil filter machine with sufficient capacity.
8. Chain pulley block of 2-ton capacity or electric hoist of similar capacity.
9. Testing equipments suitable to carry out all routine & acceptance tests as per IS: 1180 and IS : 2026 along with calibrated meters.
10. Test bench for conducting acceptance tests with high accuracy class of meters.
11. List of machinery as per Schedule-IX-A.
12. List of testing instruments as per Schedule-IX-B.
13. Proof of ownership deed.

14. List of partner / director(s).

**53.0 CAPACITY ASSESSMENT:-**

The repairer firm should have **Phenumatic Coil Winding Machine** for repair of all types of single phase distribution transformers.

The capacity assessment should be carried out prior to opening of price bid and the price bid will be opened of those firms who will have above mentioned machines for repair of single phase distribution transformers and shall furnish invoice for the same during Capacity Assessment.

**In addition to above provision, the complete capacity Capability Assessment of works to be carried out for all eligible firms prior to opening of Price Bids**



**ANNEXURE-I****PROTECTION:**

The transformer shall have the following additional fittings features as its integral part for HV/ LV protection:

**For ALUMINIUM Wound SPDT, the M&P Box chamber shall not contain MCCB relay**

**17.1** The transformer shall have the following CSP features:

(a) **INTERNAL HV FUSES ON THE HT SIDE OF TRANSFORMER:**

Specification for the HT fuses: Expulsion / any other suitable fuse placed in series with primary winding. This fuse is mounted normally inside of the primary bushing and is connected to the high voltage winding through a terminal block. This has to protect that part of the electrical distribution system which is ahead of the Distribution transformers from faults which occur inside the Distribution transformers i.e., either the windings or some other part of the transformer. It shall be ensured that this fuse does not blow for faults on the secondary side (LT side) of the transformer i.e., the blowing characteristic of the fuse and LT breaker shall be so coordinated that the fuse shall not blow for any faults on the secondary side of the transformer and these faults shall be cleared by the LT breaker only. The fuse shall be make of ERMCO or any make approved by JDVNL.

**FOR AL WOUND DTS-(without MCCB & without Relays)** The 5KVA to 25 KVA single phase transformers are to be provided with Metering Cum Protection (M&P) Unit without MCCB & without relays . The bidders are required to quote the rate of Metering Cum Protection (M&P) Unit in the scheduled price list. As this unit is not a part of the repair, the cost of the unit will not be included during calculation of viability of economic limit

**(a) INTERNALLY MOUNTED OIL IMMERSSED LT BREAKER ON THE LV SIDE OF THE TRANSFORMER as per IS/IEC 60947-2:2003:**

LT circuit breaker: All LT faults after the breaker shall be cleared by this breaker. As such, it shall be designed for the perfect coordination with the HT fuse link. The supplier shall furnish the time/current characteristics of LT circuit breaker and 11 kV fuses for various current multiples. The two characteristics shall be drawn on the same sheet to indicate coordination between the circuit breaker and fuse. This shall be based on the type test carried out on one of the transformers. In addition, the supplier shall carry out coordination test as indicated above, and this forms one of the test for acceptance.

The breaker is to be mounted on the secondary side of the transformer under oil to minimize premature operations from primary surges as would be with undersized line fuses. Two single pole elements is preferred. THE BREAKER SHALL BE COORDINATED TRHEMALLY WITH THE TRANSFORMER RATING TO FOLLOW CLOSELY THE VARIATIONS OF COIL TEMPERATURE DUE TO FLUCTUATIONS IN LOADS AND AMBIENT TEMPERATURES.

This is to be accomplished by connecting the breaker in series between the secondary winding and the load current. The breaker shall be located in the same oil as the core and coil assembly so that the bimetal are sensitive to the temperature of oil as well as the load current.

(c)The circuit breaker may be an electromechanical device with three elements viz..

(i) Temperature sensing (ii) latching and tripping and (iii) current interrupting. The temperature sensing function might be accomplished through the use of bimetallic strips, which would be built into the breaker, such that load current of the transformer flows through them. In addition to this, a magnetic tripping device is to be provided for increasing the opening speed of the breaker under high fault conditions. The circuit breaker shall be mounted inside of the transformer so that these bimetallic strips are within the top oil layer of the transformer. The latching and tripping functions of the circuit breaker may be carried out within assembly similar to those used in industrial type air circuit breaker. The circuit breaker shall also be closed and opened manually standing on ground and with a magnetic trip device also. The current interruption element shall consist of copper current carrying parts plus a set of copper tungsten current interrupting contacts. The magnetic element shall increase the opening speed of the circuit breaker under high fault current conditions. The response of circuit breaker to the activity shall remain unchanged by the addition of the magnetic trip element. The specification to which the breakers conform shall be indicated. The LT circuit breaker shall be make of samrakshna/Transguard/ Vijai Mercantile/ Global/ P&A/ ARDRY/ERMCO or any make approved by JDVNL

**Signal Light (LED Indicating Lamp)**

The MCCB enclosure shall be provided with LED indicating lamp to indicate tripping of MCCB. An auxiliary relay with changeover contacts can be used to connect LED indicating lamp to the transformer secondary terminals. if MCCB is not having auxiliary contacts. In case the MCCB trips or switched OFF, the relay contacts are closed which turns ON the LED indicating lamp. When the MCCB is reset and switched ON, the indicating lamp switches OFF. Signal light shall be arranged to avoid damages while handling the MCCB enclosure at site.

**GENERAL  
AMENDMENT IN ITB AND GCC**

**1. Wherever EMD and Security Bank Guarantee (SBG), are appearing in the ITB, GCC & other Bidding Documents, same is hereby replaced by BID SECURITY as under:-**

**A. FOLLOWING ARRANGEMENT IS APPLICABLE UPTO 31.12.2021 IN RESPECT OF TENDERS WHICH ARE DUE FOR OPENING.**

**BID SECURITY DECLARATION:**

In lieu of Bid security, bidders are required to furnish Form of Bid Securing Declaration (Appendix-B) on Rajasthan Non-judicial Stamp Paper of Rs. 50/- (excluding surcharge on Stamp Paper, as per rules).

**Encls.: Appendix-B**

The bidders are required to pay the bid security amount specified in the Term and Condition of Bid, in the following cases, namely :-

- (a) when they withdraw or modify our bid after opening of bids;
- (b) when they do not execute the agreement, if any, after placement of supply/work order within the specified period;
- (c) when they fail to commence the supply of the goods or service or execute work as per supply/work order within the time specified;
- (d) when they do not deposit the performance security within specified period after the supply/work order is placed; and
- (e) if they breach any provision of code of integrity prescribed for bidding specified in the Act and Chapter VI of these rules.

In addition to above, the State Government shall debar the bidder from participating in any procurement process undertaken for a period not exceeding three years in case where the entire bid security or any part thereof is required to be forfeited by procuring entity.

**B. IF THE BIDDER IS REQUIRED TO PAY THE BID SECURITY AMOUNT AS ABOVE, THEN IT WILL BE AS UNDER:**

Bid security shall be **1%** of the estimated value of subject matter of procurement put to bid. In case of Small Scale Industries of Rajasthan it shall be **0.25%** of **the quantity offered** for supply and in case of sick industries, other than Small Scale Industries, whose cases are pending with Board of Industrial and Financial Reconstruction, it shall be **0.50%** of the value of bid. Every bidder, if not exempted, participating in the procurement process shall be required to furnish the bid security as specified in the notice inviting bids.

**In case SSI units of Rajasthan quote less than the tendered quantity then they are required to furnish Bid Security @ 0.25% of the estimated value of quantity offered on the basis of estimated unit FOR destination price.**

The Bid Security amount (as applicable) to be paid by Demand Draft/Banker's Cheque in favour of Sr. Accounts Officer (Cash & CPC), JdVVNL, Jodhpur (payable at Jodhpur) or Bank Guarantee, in specified format (**Appendix-A**), of a scheduled bank in favour of Superintending Engineer (MM&C), JdVVNL, Jodhpur, be deposited in the office of the Superintending Engineer (MM&C), JdVVNL, Jodhpur, New Power House, Jodhpur.

The Bank Guarantee against Bid Security be issued by Nationalized / Scheduled Bank. The same may be accepted after confirmation by issuing Bank. If any Bid Security Bank Guarantee not is proper format / not confirmed by the issuing Bank the same would not be accepted and the bidder would be immediately shorted out from bid process.

The Micro, Small & Medium Scale Industries of Rajasthan and sick industries, other than Small Scale Industries, whose cases are pending before the Board of Industrial and Financial Reconstruction (BIFR) shall furnish self-attested documentary evidence duly attested by Notary to claim the above.

**2) Wherever Performance Bank Guarantee (PBG) and Composite Bank Guarantee (CBG) are appearing in the ITB, GCC & other Bidding Documents, same are hereby replaced by PERFORMANCE SECURITY as under:-**

**PERFORMANCE SECURITY**

**The Performance security wherever appearing in the tender document may be read as under:-**

- (a) 2.5%, or as may be specified in the bidding documents, of the amount of supply order in case of procurement of goods and services and 3% of the amount of work order, in case of procurement of works;
- (b) 0.5% of the amount of quantity ordered for supply of goods, in case of Small Scale Industries or MSME units of Rajasthan; and
- (c) 1% of the amount of supply order, in case of sick industries, other than Small Scale Industries, whose cases are pending before the Board of Industrial and Financial Reconstruction (BIFR); and

In case of successful bidder, the amount of bid security may be adjusted in arriving at the amount of the performance security, or refunded if the successful bidder furnishes the full amount of performance security.

**3) VENDOR REGISTRATION**

The relaxation/exemption given to the registered vendors of the Nigam in respect of EMD/SBG, wherever appearing in the ITB, GCC & other Bidding documents, are hereby WITHDRAWN.

**4) The indirect taxes i.e. Excise Duty, Service Tax, VAT/CST, Entry Tax etc. mentioned in G.C.C., may now be read as G.S.T.**

**5) The following amendment is hereby made in GCC Clause No. 1.43 (Due Date of Payment):**

Payment shall be due and payable by the purchaser in accordance with the provision of the contract within a reasonable period from the date of receipt of each invoice by the contractor / supplier duly supported by a certificate of the Engineer. The purchaser will take all possible effort to make payment to the contractor / supplier generally on **45<sup>th</sup> day** after receipt of duly verified challans / receipts / bill in the office of paying authority {Sr. Accounts Officer (Cash & CPC) Jodhpur Discom, Jodhpur / Concerned Circle Accounts Officer} and completion of contractual formalities. But in case of delay in payment the purchaser shall not be liable to pay any interest on the outstanding amount to the contractor / supplier.

**6) The GST will be charge extra at the prevailing rate on all the settlement fees as applicable and amended time to time.**

**7) APPEAL:**

i) If any Bidder or prospective bidder is aggrieved that any decision, action or omission of the procuring entity is in contravention to the provisions of this Act or the rules or guidelines issued there under, he may file 1st & 2nd appeal under section 38 of RTTP Act-2012 to the following appeal authorities **within a period of ten days from the date of such decision or action, omission, as the case may be, clearly giving the specific ground or grounds on which he feels aggrieved:**

Sr. No	Type of Appeal	Name & Designation of appellate authority
1	First appeal	Chairman, Discoms
2	Second appeal	Energy Department, Government of Rajasthan

ii) The form of appeal shall be as per Rule 83 of RTTP Rules, 2013 and memorandum of appeal shall be filled as per form-1 as prescribed under RTTP Rules, 2013.

Fee for appeal: - Subject to rule 84 of the RTTP Rule 2013 the fee shall be as under:-

- a. For First Appeal:- Rs. 2,500/- (Rupees Two Thousand Five Hundred Only)+GST.
- b. For Second Appeal:- Rs. 10,000/- (Rupees Ten Thousand Only)+GST.

iii) It is further intimated that the fee shall be paid in the form of Demand Draft of Bankers Cheque of a Scheduled Bank payable in the name of Sr. Accounts Officer (Cash & CPC), JdVVNL, Jodhpur.

iv) Provided that after the declaration of a Bidder as successful the appeal may be filed only by a Bidder who has participated in procurement proceedings:

v) Provided further that in case a Procuring Entity evaluates the Technical Bids before the opening of the Financial Bids, an appeal related to the matter of Financial Bids may be filed only by a Bidder whose Technical Bid is found to be acceptable.

vi) The officer to whom an appeal is filed under para (1) shall deal with the appeal as expeditiously as possible and shall endeavour to dispose it of within thirty days from the date of the appeal.

vii) If the officer designated under para (1) fails to dispose of the appeal filed within the period specified in para (2), or if the Bidder or prospective bidder or the Procuring Entity is aggrieved by the order passed by the First Appellate Authority, the Bidder or prospective bidder or the Procuring Entity, as the case may be, may file a second appeal to Second

Appellate Authority specified in the Bidding Document in this behalf within fifteen days from the expiry of the period specified in para (2) or of the date of receipt of the order passed by the First Appellate Authority, as the case may be.

- 8)** In case the terms & conditions mentioned in PO, ITB & GCC are modified/differ from RTPP Act, then RTPP Act shall supersede.

**ADDENDUM IN ITB**

**Addendum in the provision of Instruction to bidder (ITB) in the clause No. 1.12.2 for quantity allocation as per award criteria of purchase manual in accordance to the clause no. 74 of RTPP rules:**

**1.12.2(A) for quantity allocation****(i) Trial order under Para No. 22.17 (a) & (b) of purchase manual**

(a) Any bidder located within or outside the state of Rajasthan has participated for the first time in a particular Discom & meeting minimum qualification requirement and has supplied the tendered material/or of higher rating in other utility shall be treated as an old supplier. Rajasthan's firms although supplied in past but not meeting minimum quantity supplied criterion including altogether new units which have not supplied any quantity but having adequate & required manufacturing and testing facility and technical know-how of the tendered material shall be considered as new firms and would be eligible for trial order only. In case of supply made to the licensed power utility out side India, the C.A. certificate furnished by firm shall be considered.

**Note:** - The material supplied and accepted for same/higher rating for turnkey project(s) to a licensed power utility/Govt. shall be considered for the purpose of evaluating criteria. The certificate given by C.A. shall indicate above quantity separately.

(b) (i) The trial order for a particular item shall not generally exceed 10 % of the total quantity considered for placement of order. This ceiling may, however, be relaxed by the corporate level purchase committee up to the extent of 30 %, to take the advantage of lower price where situation of differential prices offering is arising.

(ii) The capacity & capability assessment of a bidder located outside state of Rajasthan who otherwise qualifies but is participating for the first time shall not be carried out. Similarly, For the tendered item(s) where the valid BIS license is an essential qualification requirement and the bidder possesses the valid BIS but new to the utility. The capacity/capability assessment of such a bidder shall also not be carried out.

**(iii) Award criteria under Para No. 10.2 (iii) of purchase manual**

(a) In case of distribution transformers of rating 40 KVA and below, LT cables & conductors and fabricated steel items, order quantity may be distributed in the following manner: -

**20% to L1**

**15% to L2**

**10% to L3**

**05% to L4**

50% to be distributed equally among other firms subject to the condition that not more than 5% of the quantity to be purchased will be allotted to any one of such firms. The balance, if any will be distributed in the same proportion as indicated above among the first four firms.

(b) In case of other items except poles, order quantity may be distributed in the following manner:

**40% to L1**

**20% to L2**

**10% to L3**

**06% to L4**

The balance quantity may be equally distributed among other firms subject to the condition that not more than 4% of the quantity to be purchased will be allotted to any such firm. The balance, if any, will be distributed in the same proportion as indicted above the first four firms.

(c) In case of poles, the order may be awarded on the basis of landed cost (material and transportation taken together). The allocation of quantity location/destination wise may be made among the eligible firms in equal proportion as far as possible.

(Appendix-A)

Format of Affidavit for MSME

**(TO BE FURNISHED ON NON-JUDICIAL STAMP WORTH Rs.100/- & DULY NOTARIZED)**

I, \_\_\_\_\_ S/o \_\_\_\_\_ Aged\_\_ Years residing at \_\_\_\_\_  
\_\_\_\_\_ Proprietor/ Partner/ Director of M/s \_\_\_\_\_  
\_\_\_\_\_ do hereby solemnly affirm and declare that:-

(a) My/ our above noted enterprise M/s \_\_\_\_\_ has been issued acknowledgement of Entrepreneurial Memorandum Part-II by the District Industries Center, \_\_\_\_\_. The acknowledgement No. is \_\_\_\_\_ dated \_\_\_\_\_ and has been issued for manufacture of following items:-

- (i)
- (ii)
- (iii)
- (iv)

(b) My/ our above noted acknowledgement of Entrepreneurial Memorandum Part-II has not been cancelled or withdrawn by the Industries Department and that the enterprise is regularly manufacturing the above items.

(c) My/our enterprise is having all the requisite plant and machinery and is fully equipped to manufacture the above noted items.

(d) The present status of the firm is as per acknowledgment of Entrepreneurial Memorandum Part-II issued on the date of District Industries Center, \_\_\_\_\_.

Place  
Director/

Signature of Proprietor/

Authorized Signatory with Stamp and Date

**VERIFICATION**

I, \_\_\_\_\_ S/o \_\_\_\_\_ Aged\_\_ Years residing at \_\_\_\_\_  
\_\_\_\_\_ Proprietor/ Partner/ Director of M/s \_\_\_\_\_  
\_\_\_\_\_ verify and confirm that the contents at (a), (b), (c) & (d) above are true and correct to the best of my knowledge and nothing has been concealed therein. So, help me God.

**DEPONENT**

**Appendix-I**

**Bidders are requested to furnish following details:**

1. Name of Firm :
2. Office Address :
3. Work's Address :
4. Email Address :
5. Phone / Mobile No. :
6. Fax No. :
7. Name of Firm's representative :
8. Contact No. of Firm's representative :



**SCHEDULE-III-A**

**PRICE VARIATION FORMULA (TN-1695)**

Price variation shall only be permissible for HV/ LV Coils (Aluminium), Transformer Oil & Labour Charges for repair of damaged distribution transformers and to be regulated as per formula given below:

**1) FOR ALUMINIUM HV COILS:**

The prices of HV/LV Coils of Aluminium wound transformers shall be on price of EC Grade aluminium wire rods (LME CSP Average of Aluminium) conforming of specification IS:5484/1978 as published in IEEMA circulars (used for insulated cables i.e. IEEMA(PVC)CABLE) prevailing as on first day of the month one month prior to opening of tender. For increase/ decrease of Rs.1.00 per Kg. in base price of EC Grade aluminium wire rods, the prices of HV/LV aluminium coils shall increase/ decrease by Rs.1.20 per Kg. without any ceiling.

**2) FOR TRANSFORMER OIL:**

The prices of transformer oil to be used in repair of distribution transformers shall be based on the prices of transformer oil as published in IEEMA Circulars (used for 'IEEMA/(PVC)/TR/OIL') prevailing as on first day of the month one month prior to opening of tender. The prices of transformer oil shall increase/ decrease correspondingly to the prices as published in the IEEMA Circulars for the relevant month i.e. for any increase/ decrease of Rs.1.00 in base price, the prices of transformer oil shall increase/ decrease by Rs.1.00 without any ceiling.

No variation shall be allowed on account of variation in the prices of steel drums.

**3) FOR LABOUR CHARGES:**

The labour charges quoted for repair of distribution transformers shall be based on the All India Average Consumer Price Index Number for Industrial Workers (Base 2001 = 100) for the month one month prior to opening of tender. The repair charges shall increase/ decrease correspondingly on the basis of percentage increase/ decrease in All India Average Consumer Price Index number for the relevant month.

For calculation of price variation the prices of raw material mentioned above (Aluminium & transformer oil) as published in IEEMA Circulars one month prior and for labour charges, 3 months prior to actual delivery in the stores or of scheduled delivery whichever is less will be considered.

**The base date for price variation shall be 01.03.2021 irrespective date of tender opening.**

## SCHEDULE-III-B

**QUALIFICATION REQUIRMENT****FOR REPAIR OF DAMAGED/ FAILED DISTRIBUTION TRANSFORMERS OF ASSORTED RATINGS**

The bidder should fulfill following qualifying requirements for successful participation in the tender along with relevant documentary evidence supporting each qualifying requirement without which the offer shall be considered non-responsive & rejected.

I) In case of old firms who have been awarded rate contract of repair of distribution transformers in previous TN and have failure rate above 15% of distribution transformers repaired by the firm, such firms shall be considered as non responsive. A certificate from the concerned store shall be attached with the tender.

II) The bidder should possess adequate testing facilities for carrying out routine & acceptance test of items as per relevant standard at their works. The bidder shall furnish documentary evidence in support for conducting routine & acceptance test.

III) The bidder shall clearly indicate the deviations such as Technical Deviation & Commercial Deviations in the prescribed proforma only. The deviations indicated elsewhere in the bid shall not be accepted.

IV) The bidder must furnish performance certificate against the contract awarded in previous TN which will be issued by the concerned ACOS for which the contract was awarded to the firm otherwise he will be responsible for Technical Non-Responsiveness.

**V) CAPACITY ASSESSMENT:-**

The repairer firm should have **Phenumatic Coil Winding Machine** for repair of all types of single phase distribution transformers.

The capacity assessment should be carried out prior to opening of price bid and the price bid will be opened of those firms who will have above mentioned machines for repair of single phase distribution transformers and shall furnish invoice for the same during Capacity Assessment.

**In addition to above provision, the complete capacity Capability Assessment of works to be carried out for all eligible firms prior to opening of Price Bids**

**VI ) (A) Black listing of a firm:-**

After having given Show Cause Notice of 30 days, and having established & cogent reasons for blacklisting of the firm as given below, the firm should immediately be blacklisted for a period of 5 years indicating reasons of doing so, in the letter itself, and a copy of such blacklisting should be given to the firm, with the approval of CLPC:-

- (i) There are sufficient and strong reasons to believe that the supplier or his employee has been guilty of malpractices such as manhandling/misbehavior with Government official by supplier or his partner/employee, bribery, corruption or abatement of such a offence in a position where he could corrupt Nigam's official, fraud, vitiating fair tender process including substitution of or interpolation in tender, mis-representation, pilfer-aging or unauthorized use or disposal of Nigam's material issued for specific work etc.
- (ii) Where a supplier or his partner or his representative has been convicted by a court of Law for offences involving moral turpitude in relation to the business dealing or where security considerations including suspected disloyalty to the Nigam/state so warrant the blacklisting.
- (iii) If the State Bureau of Investigation or any other authorized investigating agency recommends for blacklisting after completing the investigation.

Note: - 1 If a supplier after having tendered for a supply or after negotiations gives application voluntarily vitiating the fair tendering process, it shall also tantamount to malpractice.

Note :-2 A Black listed supplier (i) shall not be entitled for registration in any of the Discom (ii) shall not be awarded any supply order in future in any Discom during the notified period.(iii) his registration if any shall stand cancelled immediately and his registration security /EMD/S.D. shall stand forfeited. (iv) In case of blacklisting of the firm by any one of Discom for the cogent prescribed reason(s) as stipulated above, the same shall be applicable to all the three Discoms and as a consequence of blacklisting, all the pending orders to that firm, will be cancelled in all three (3) Discoms with immediate effect. However in

respect of completed/executed contract G.P. obligations as well as other liabilities shall be fulfilled by the supplier.

**(B) Severment of Business relation:**

(a) After having given Show Cause Notice of 30 days, and having established & cogent reasons for Severment of business relation as given below, the firm should immediately be severed the business relations for a period of 2 to 3 years indicating reasons of doing so, in the letter itself, and a copy of such severment should be given to the firm, with the approval of CLPC:-

- (i) The supplier continuously refuses to pay Nigam dues without showing adequate reasons and where the purchasing authority is satisfied that no reasonable dispute attracting reference to Settlement Committee or Court of Law exists for the supplier's action of non-supply.
- (ii) When vendor does not accept LOI/detailed purchase order awarded on its accepted prices and terms & conditions or does not comply with the contractual formalities.
- (iii) When vendor/supplier who otherwise completed contractual formalities but does not commence supplies on the date of opening of technical bid of the fresh tender/completion of schedule delivery period whichever is later.

Note-1-In case supplier does not deposit outstanding dues towards Nigam, even after completion of severment period, the period of severment will continue.

2. Severment done purely/ mainly on account of non-deposition of dues against the supplier/vendor/contractor could be lifted by CLPC, if the dues are deposited prior to the expiry of such severment period.

3. Severment done by one Discom for non-supply of material and /or corresponding non-recovery of dues will not be effective in other Discoms **except in respect of common purchase cases of three Discom.**

4. On severment of business, the Bid Security/ EMD/SD/vendor registration security will be forfeited.

5. The orders in execution satisfactorily will not be cancelled other than the order on which severment have been done.

**(C) DEBARMENT:-** Reasons on which Debarment can be made:-

- (i) The competent authority may debar the supplier on account of his performance or other disabilities, if it is no longer considered fit to remain under vendor registration as per his obligation under vendor registration.
- (ii) If at any subsequent stage of inspection of firms after award of contract, it is found that firm does not have sufficient tech. staff or required/necessary technical equipments, the purchasing authority can debar the firm for one year or next tenders whichever is later. The debarment will be lifted only on re-inspection of firm's works; the defects noticed earlier are fully rectified to the satisfaction of Nigam.
- (iii) When contract agreement executed and supplies commenced but could supply only up to 50% of ordered quantity and scheduled delivery period expired, then the firm can be debarred for one year or next tender whichever is later in that Discom only for that particular item/rating/ capacity/size etc.
- (iv) The suppliers who have been awarded contract for supply of material is not adhering to the periodic delivery schedule, the contract awarding authority reserve the right to terminate the contract and may debar the firm in participating in tender for a period of 2 to 3 years.

Note:-1. On debarment, the Bid Security/ EMD/ SD/Vendor Registration security shall be forfeited.

Note:- 2. If the firm is debarred in one Discom for any reasons then the same should not be applicable in other Discom **subject to exception that in case of common Discoms purchases such debarment of a firm would be applicable to all three Discoms for that particular item and rating/capacity/size etc.**

**VII ) APPEALS AND APPLICATIONS :**

Appeal against the order of blacklisting, severment and debarment can be filed before BOD within a period of 3 months from the date of intimation. The letter of appeal will be addressed to the order placing authority. Who will process the case for placing the matter in B.O.D. with in a period 60 days. The BOD may reduce or waive the penalty, if sufficient reasons/supporting documents are furnished by the supplier.

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**SCHEDULE-IV `A`**

**Must be filled-in by the tenderer and attach with technical bid (Part-I)**

To,

The Superintending Engineer (MM),  
Jodhpur Vidyut Vitran Nigam Limited,  
Jodhpur.

Dear Sir,

**With reference to your tender against specification No. JDVVNL/SE/MM/TN-1695- for repairing the failed/ damaged single phase Aluminium wound distribution transformers of assorted ratings, we agree and confirm the following:-**

1. The offer is valid for a period of 120 days from the date of opening of this tender.
2. **The prices are variable with base date 01.03.2021 irrespective of date of opening the tender as per P.V. Formula and IEEMA enclosed at Schedule-III-A with the specification.**
3. We confirm all the terms & conditions as well as the technical stipulations of your specification No. JVVNL/SE/MM/TN-1695 and there are no deviations other than as specified in the **Schedule VI (A&B)**.

Yours faithfully,

Signature of tenderer  
with stamp  
Dated

**SCHEDULE-V**

**OFFICE OF THE ASSISTANT CONTROLLER OF STORES  
JDVVNL.....**

The Sr. Accounts Officer (Cash/ CPC)  
Jodhpur Vidyut Vitran Nigam Ltd.,  
Jodhpur.

Sub:- Performance Certificate in respect of distribution transformers  
repaired against TN-1117 work order reference No. \_\_\_\_\_  
D. \_\_\_\_\_ dated. \_\_\_\_\_.

The supplier M/s ..... have  
completed the repair work of ..... Nos. transformers under TN-1117  
work order No. ....D.....dated ..... and  
12 months performance guarantee period after repairs and supply to stores  
has passed satisfactorily.

It is also hereby certified that :

1. No transformer after repairs under this rate contract is reported to have failed and lying pending for the want of repairs.
2. No recovery/outstanding are due under this rate contract against the supplier.
3. In view of the above 10% / 5% amount as got deducted against the performance guarantee from the repair bills may be released.

**Assistant Controller of Stores,  
JDVVNL.....**

Copy submitted to the following for information and necessary action :

1. The Superintending Engineer (O&M),JDVVNL, .....
2. The Superintending Engineer (MM),JDVVNL ,Jodhpur

**Assistant Engineer of stores  
JDVVNL.....**

Schedule - VI (A)

**JODHPUR VIDYUT VITRAN NIGAM LIMITED**

**A Govt. of Rajasthan Undertaking**

**DEPARTURE/DEVIATION FROM TECHNICAL SPECIFICATION**

The bidder shall state under this schedule the departure from the Purchaser's specification in respect of technical is as under:-

---

S.No.	Main Deviations from Technical Specification.
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Certified that we agree to all the technical specification of the NIT except for the deviation to the extent indicated above.

**(Signature)**

Name & Designation  
with seal of the bidder.

**SCHEDULE - VI (B)**

**JODHPUR VIDYUT VITRAN NIGAM LIMITED**

**A Govt. of Rajasthan Undertaking**

**DEPARTURE FROM COMMERCIAL TERMS & CONDITIONS OF THE  
SPECIFICATION**

The bidder shall state under this schedule the departure from the Purchaser's specification in respect of Commercial terms & conditions:-

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S.No.	Main Deviations from Specification.
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Certified that we agree to all the commercial terms & conditions as laid down in General Conditions of Contract to the specification except for the deviation to the extent indicated above.

**(Signature)**

Name & Designation  
with seal of the bidder.

## Schedule - VII

**JODHPUR VIDYUT VITRAN NIGAM LIMITED**

A Govt. of Rajasthan Undertaking

**LIST OF PAST SUPPLIES**

The bidder shall state under this schedule whether material and equipments, similar to those offered in the tender have been previously supplied by him. A list shall be given of such orders executed by him together with information regarding the names of purchasing organizations, quantities supplied and when the supplies were effected. This list should be in form given below:-

S.No.	Detailed particulars of items supplied	Qty in Nos.	Order No. & Date	Name & details of purchasing authority	Date of Completion
1	2	3	4	5	6

If executed partially to be mentioned (Qty. in Nos..)	whether still to be executed	Delivery stipulated in order	Remarks
7	8	9	10

**Note:** Separate schedules are to be furnished by the bidder for past supply to the **JVVNL/AVVNL/JdVVNL**, other State Electricity Boards and other Departments /Organisations.

**(Signature)**Name & Designation  
with seal of the bidder.



**JODHPUR VIDYUT VITRAN NIGAM LIMITED**  
**A Govt. of Rajasthan Undertaking**

List of Equipments and Technical Hands Available with the Firm

(To be filled in by the bidders & enclosed with the bid)

Manufacturers and / or their authorized agents who are quoting against this bid are requested to furnish the following information along-with the bid. The Purchaser will have the discretion to ignore the bid without the under noted particulars and/or ignore the bid particulars.

1. Name and Address of Manufacturer.
2. Place where works exist.
3. GST No. with Certificate.
4. Details of machinery particularly with B.H.P. of each item installed.
5. Details of staff employed in the works.
6. Date when started the manufacturing of item under reference.
7. List of items manufactured.
8. Literature and drawings of items manufactured showing their description, size, design and other important technical particulars.
9. Details of order so far, executed alongwith the names of organization to whom supplied.
10. Manufacturing capacity.
11. Is the workshop open for inspection by the representative of the board, if required?
12. Statement of financial resources and Banking Reference alongwith Balance-Sheet for previous two years.
13. Testing facilities available for the manufactured articles in the testing laboratory of works.
14. Whether the Firm is a small/medium/large scale industry.
15. Registration No. with :-
  - i. Small Scale, National/State.
  - ii. DGTD
  - iii. State Industries Department.

**(Signature)**

Name & Designation  
with seal of the bidder.

**SCHEDULE-IX-(B)****LIST OF TESTING INSTRUMENTS**

Sr. No.	Item	Quantity	Make	Sr. No. of meter	Range	Accuracy	Date of calibration	Lab Report, CRT No. & Date
1.	VOLTMETER 0-150-300-600V (CLASS-1 ACURACY OR BETTER)	3 Nos.						
2.	AMMETER 0/10 AMP (CLASS-1 ACURACY OR BETTER)	3 Nos.						
3.	WATTMETER 0-750W (CLASS-0.5 OR BETTER) 0-150-300-600 V 5/10 AMPS RANGE	3 Nos.						
4.	RATIOMETER RANGE 111.1	1 No.						
5.	MEGGAR 2500 VOLTS	1 No.						
6.	HV TRANSFORMER 0-50 KV	1 No.						
7.	LV TRANSFORMER 0-3 KV	1 No.						
8.	PORTABLE CURRENT TRF. CLASS 0.5	3 Nos.						
9.	PORTABLE POTENTIAL TRF. CLASS 0.5	3 Nos.						
10.	OIL TESTING SET (0-100KV)	1 No.						
11.	DOUBLE VOLTAGE GENERATOR 100 CYCLE 250,500,1000 V	1 No.						
12.	STOP WATCH	1 No.						
13.	CLIP ON METER	1 No.						
14.	WHEATSTONE BRIDGE	1 No.						
15.	DIGITAL METER OR KELVIN BRIDGE	1 No.						
16.	INTERMEDIATE TRANSFORMER	1 No.						
17.	PANEL METERS OF TEST BENCH WITH FREQUENCY METER	1 No.						
18.	MULTIMETER	1 No.						

NOTE:

ALL THE TESTING INSTRUMENTS SHALL BE CALIBRATED ONCE IN A YEAR IN GOVERNMENT APPROVED LABORATORY.

**SCHEDULE-IX-(C)****LIST OF MACHINERY AT WORKS**

SR NO	DESCRIPTION	QTY.	MAKE	SR.NO
1	HV WINDING MACHINE 1 HP	1 NO		
2	LV WINDING MACHINE 2 HP	1 NO		
3	AIR COMPRESSOR WITH MOTOR & OTHER ACCESSORIES	1 NO		
4	SPRAY GUN	1 NO		
5	DRILLING MACHINE	1 NO		
6	FLEXIBLE SHAFT GRINDER	1 NO		
7	JIB CRANE 1 TON CAPACITY	1 NO		
8	CHAIN PULLEY BLOCK WITH LOADING & UN LOADING ARRANGEMENT 2 TON CAPACITY.	1 NO		
9	DRIER WITH 1 HP MOTOR 8 KW CAPACITY 100 DEG. C TEMP	1 NO		
10	OIL FILTER MACHINE 120 GHP	1 NO		
11	VARNIER CALIPERS & GAUGE METER	1 NO		
12	WELDING MACHINE- 300 AMP	1 NO		
13	GAS CUTTING CYLINDER & EQUIPMENT	1 NO		
14	CIRCLE CUTTING MACHINE	1 NO		
15	WEIGHING MACHINE	1 NO		
16	SHEARING MACHINE	1 NO		
17	FLY PRES AND DIE FOR CUTTING DOVETAIL BLOCKS	1 NO		



## APPENDIX-B

S.NO.	DESCRIPTION
1.	NAME OF REPAIRING AGENCY
2.	ADDRESS & PHONE NO. i) OFFICE ii) WORKS
3.	i) SSI REGISTRATION NO. & DATE (COPY TO BE SUBMITTED) ii) WHETHER THE FIRM IS SMALL/ MEDIUM/ LARGE SCALE INDUSTRY.
4.	DETAILS OF SHED ( COPY OF LAY OUT IS TO BE SUBMITTED) a) OPEN AREA b) BUILT UP AREA
5.	TYPE OF SHED- OWN/RENTAL (COPY OF DOCUMENT OF OWNERSHIP/RENTAL IS TO BE SUBMITTED)
6.	PROPRITERSHIP/PARTNERSHIP (COPY OF DOCUMENT OF OWNER- SHIP/RENTAL IS TO BE SUBMITTED) a) NAME OF PROPRIETOR b) ADDRESS & PHONE NO. OFFICE RESIDENTIAL c) LIST OF PARTNERS ADDRESS PHONE NO. (OFFICE/RESIDENTIAL)
7.	NAME OF QUALIFIED ENGINEERS. a) ADDRESS & PHONE b) QUALIFICATION c) EXPERIENCE (COPY OF CERTIFICATE/ MARK SHEET ALONGWITH PHOTOGRAPH & EXPERIENCE CERTIFICATE ARE TO BE SUBMITTED)
8.	NUMBER OF WORKERS a) SKILLED b) UNSKILLED
9.	LIST OF MACHINE/EQUIPMENTS (LIST AS PER APPENDEX-B1 IS TO BE SUBMITTED)
10.	LIST OF INSTRUMENTS (LIST AS PER APPENDIX-B2 IS TO BE SUBMITTED)
11.	PLANT MACHINERY LAYOUT TO BE SUBMITTED.
12.	ELECTRICITY SUPPLY a) NAME OF CONSUMER b) CONSUMER NUMBER c) CONNECTED LOAD (COPY OF LIGHT BILL IS TO BE SUBMITTED)

13. DETAILS OF FAILURE RATE OF LAST CONTRACT CRC TN-16951682 UPTO 31.8.02 (AS PER SCHEDULE-IX)
  14. CAPACITY OF REPAIRING/ MONTH.
  15. PREFERENTIAL CIRCLE FOR ALLOTMENT  
PREFERENCE 1  
2  
3.
  16. DATE WHEN STARTED THE MANUFACTURING OF ITEM UNDER REFERENCE.
  17. LIST OF ITEMS MANUFACTURED.
  18. LITERATURE AND DRAWINGS OF ITEMS MANUFACTURED SHOWING THEIR DESCRIPTION, SIZE, DESIGN AND OTHER IMPORTANT PARTICULARS.
  19. DETAILS OF ORDER SO FAR EXECUTED ALONGWITH THE NAMES OF ORGANISATION TO WHOM SUPPLY.
  20. MANUFACTURING CAPACITY.
  21. IS THE WORK SHOP OPEN FOR INSPECTION BY THE REPRESENTATIVE OF THE NIGAM, IF REQUIRED.
  22. STATEMENT OF FINANCIAL RESOURCES AND BANKING REFERENCE ALONGWITH BALANCE SHEET FOR PREVIOUS TWO YEARS.
  23. TESTING FACILITIES AVAILABLE FOR THE MANUFACTURED ARTICALS IN THE TESTING LABORATORY OF THE WORKS.
- 

NAME & SIGNATURE  
WITH DESIGNATION &  
SEAL OF THE FIRM

**Schedule - XI**

**APPENDIX-A**

**Bank Guarantee No.** \_\_\_\_\_.  
**Security Amount :** \_\_\_\_\_.  
**Issued on dated :** \_\_\_\_\_.  
**Valid upto :** \_\_\_\_\_.  
**Claim upto / Grace period:** \_\_\_\_\_.

**PERFORMA OF BANK GUARANTEE FOR BID SECURITY**

(Bank Guarantee in lieu of bid Security on non-judicial Stamp Paper of Rajasthan State of 0.25% of the B.G. value or Rs.25,000/-, whichever is less)

To,

**The Superintending Engineer (MM&C),  
 Jodhpur Vidyut Vitaran Nigam Limited,  
 Jodhpur.**

1. Whereas \_\_\_\_\_ (name of the Bidder) (hereinafter called "the Bidder") has submitted its bid dated \_\_\_\_ (date of submission of bid) for \_\_\_\_\_ (name of contract/ name of the material with Bid no. / TN No. \_\_\_\_ ) (hereinafter called 'the Bid').
2. KNOW ALL PEOPLE by these presents that WE \_\_\_\_\_ (name and address of branch of Bank ) of \_\_\_\_\_ (name of country), having our registered office at \_\_\_\_\_ (addresses of bank) (hereinafter called 'the Bank'), are bound unto \_\_\_\_\_ (name of Purchaser) (hereinafter called "the Purchaser") in the sum of Rs. \* \_\_\_\_\_ for which payment well and truly to be made to the said Purchaser, the Bank binds itself, its successors, and assigns by these presents sealed with the Common Seal of the said Bank this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_.
3. THE CONDITIONS of this obligation are :
  - i. If the bidder withdraws its Bid during the period of bid validity specified by the Bidder in the Bid Form; or
  - ii. If the bidder refuses to accept the correction of error in his Bid; or
  - iii. If the bidder, having been notified of the acceptance of its Bid by the purchaser during the period of bid validity:
    - a. Fails or refuses to execute the Contract Agreement within the time specified in purchase / work order, if required, or
    - b. Fails or refuses to furnish the performance security within the time specified in purchase / work order in accordance with the GCC, or
    - c. Fails to commence supply of goods or services or execute work as per purchase / work order within time specified.
  - iv. If the bidder breaches any provision of the Code of integrity specified in the RTPP Act and Chapter VI of the RTPP Rules.
4. We undertake unconditionally and irrevocably to guarantee as primary obligator and not as surety merely to pay to the purchaser a sum of Rs. \_\_\_\_\_ (in words Rs. \_\_\_\_\_) upon receipt of its first written demand, without the purchaser having to substantiate its demand, provided that in its demand the Purchaser will note that the amount claimed by it is due to it owing to the occurrence of one or all of the three conditions specifying the occurred condition or conditions.
5. The decision of the Superintending Engineer (MM&C), Jodhpur Vidyut Vitaran Nigam Limited, Jodhpur shall be final whether breach has been committed on the right to demand the amount of guarantee from us which has accrued to the purchaser.
6. This guarantee shall not cease or determine, if the purchaser grants time or indulgence or vary the terms of the contract with the Contractor or without our consent or knowledge.
7. The guarantee herein contained shall not be affected by any change in the constitution of the Contractor.

8. We \_\_\_\_\_ (Bank Name) further undertake not to revoke this guarantee during its currency except with the previous consent of the Superintending Engineer (MM&C), Jodhpur Vidyut Vitaran Nigam Limited, Jodhpur.
9. All disputes arising under the said guarantee between the Bank and the Nigam or between the Contractor and the Nigam pertaining to the guarantee, shall be subject to the jurisdiction of the Courts in Jodhpur, Rajasthan alone.
10. This guarantee will remain in force up to and including one hundred eighty (180) days after the date of the opening of bids, i.e. upto \_\_\_\_\_, with a further grace period of Ninety (90) days and any demand in respect thereof should reach the Bank not later than the above date.

Yours faithfully,  
Bankers (EXECUTANT)  
Signed by the above named Bank in presence of :  
(signature with full Name and Address)

Witness :

1. \_\_\_\_\_.
2. \_\_\_\_\_.

Attested by Notary Public, First Class Magistrate or directly confirmed by the executing Bank.

\* The Bidder should insert the amount of the guarantee in words and figures denominated in the currency of bid.

**Note :** In case the bid is submitted by a Joint Venture, the Bid Bank guarantee shall be in the name of Lead partner or in the name of joint venture partners submitting the Bid covering all the partners of the joint vent



APPENDIX-B

**FORM OF BID-SECURING DECLARATION**

(On Rajasthan Non-Judicial Stamp Paper worth Rs.50/- + Surcharge on Stamp Paper as per rules)

**Form of Bid-Securing Declaration**

Date:

Bid No. :

Alternative No. :

To:

-----  
-----

We, the undersigned, declare that:

**We understand that, according to your conditions, bids must be supported by a Bid-Securing Declaration.**

We accept that we are required to pay the bid security amount specified in the Term and Condition of Bid, in the following cases, namely :-

- (a) when we withdraw or modify our bid after opening of bids;
- (b) when we do not execute the agreement, if any, after placement of supply/work order within the specified period;
- (c) when we fail to commence the supply of the goods or service or execute work as per supply/work order within the time specified;
- (d) when we do not deposit the performance security within specified period after the supply/work order is placed; and
- (e) if we breach any provision of code of integrity prescribed for bidding specified in the Act and Chapter VI of these rules.

In addition to above, the State Government shall debar us from participating in any procurement process undertaken for a period not exceeding three years in case where the entire bid security or any part thereof is required to be forfeited by procuring entity.

We understand this Bid Securing Declaration shall expire if:-

- (i) we are not the successful Bidder;
- (ii) the execution of agreement for procurement and performance security is furnished by us in case we are successful bidder;
- (iii) thirty days after the expiration of our Bid.
- (iv) the cancellation of the procurement process; or
- (v) the withdrawal of bid prior to the deadline for presenting bids, unless the bidding documents stipulate that no such withdrawal is permitted.

Signed:-----

Name :\_-----

In the capacity of :-----

Duly authorized to sign the bid for and on behalf of:

Dated on        day of

Corporate Seal .-----.

**[Note: In case of a Joint Venture, the Bid Securing Declaration must be signed in name of all partners of the Joint Venture that is submitting the bid.]**