

By Regd. Post with Ack. Due.



NORTHERN POWER DISTRIBUTION COMPANY OF TELANGANA LTD
WARANGAL – 506 001.

(PURCHASE ORDER)

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From

The Chief General Manager / P&MM,
2-5-31/2, 1st Floor, Vidyuth Bhavan,
T.S.N.P.D.C.L, Corporate Office,
Nakkalagutta, Hanamkonda,
Warangal – 506 001.

To

M/s. Transcon Industries
Survey No. 102 & 103,
Plot No. 11-13-173/15/15A/20/21,
Sifco Road, APIE, Balanagar,
Hyderabad – 500 037.

GSTIN No. 36AABCN2875L3Z1.

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P.O.No.CGM/P&MM/NPDCL/Wgl./GM/DE-2/A3/PM- 5310/17, Dt.23-09-2017.

Sir,

Sub:- TSNPDCL – P&MM Wing - Tender Specification No.STN-06/2017-18 for procurement of 11KV/433-250V, 3 Phase 1600 KVA, Conventional Copper Wound Distribution Transformers with BIS Energy Efficiency Level-2 (Star-1) **for Water Grid Works – Purchase Order – Issued** – Reg.

Ref:- 1. Tender specification No. STN-06/2017-18.
2. Lr.No.CGM/P&MM/NPDCL/WGL/GM/DE-2/A3/STN-06/17-18/ D. No. 2150/17, Dt. 18.09.17.
3. Firm's Letter of Acceptance received on Dt. 21.09.2017.

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- 1. ACCEPTANCE :** I acting for and on behalf of and by the order and direction of the TSNPDCL, accept the rates for supply of 1600 KVA, Conventional Copper wound Distribution Transformers with BIS Energy Efficiency Level-2 (Star-1) **for Water Grid Works** with guaranteed losses as per **Clause-5.0** and as per the above cited correspondence at the following terms and conditions.
- 2. PRICES :** The prices noted are variable and free at a destination stores inclusive of Freight & Insurance, Ex-works and CGST @9% & SGST @ 9%. The unloading charges at destination stores shall be to TSNPDCL's account. The prices are variable as per IEEMA price variation formula as given below with base date as **01-08-2017** with ceiling limit of 30% on positive side and there is no limit on negative side.

$$P = \frac{P_0}{100} \left\{ 10 + 33 \frac{C}{C_0} + 24 \frac{ES}{ES_0} + 9 \frac{IS}{IS_0} + 4 \frac{IM}{IM_0} + 5 \frac{TO}{TO_0} + 15 \frac{W}{W_0} \right\}$$

The date of delivery for the purpose of price variation, shall be the date on which the Distribution Transformers is notified as being ready for inspection/despatch (in the absence of such notification, the date of manufacturers despatch note shall be considered as the date of delivery) or the contracted delivery date (including any agreed extension thereto) (or) actual date of delivery, whichever is advantageous to purchaser for supplies made beyond schedule delivery date. For material deliveries before the schedule delivery date, the prices shall be as per the IEEMA PVC Clause (on TSNPDCL request for early supplies in writing).

As far as practicable, prices will be revised (upward or downward) abinitio, to take care to any variation in price of raw materials as defined above, but if for any reason it is not found to be practicable, the deliveries shall be effected at the contracted price and price variation claimed subsequently through a supplementary bill which will be paid as per the purchase order terms after approval by this office. If any time, any documentary evidence proof or certificate in regard to the price variation bill is required by this office the supplier shall have to furnish the same.

The price variation bills shall be claimed separately which will be paid after approval of the same by this office and after adjustment of recoveries, if any, intimated by field officers. You shall claim only the prices as indicated in the purchase order in your regular bills.

If there is downward revision in the prices of materials at the time of supply, the suppliers shall invariably claim the invoices at reduced rates on account of such downward revision.

Any variation up or down taxes or other statutory levies, or new levies introduced after placing of the order, under this specification, shall be to the TSNPDCL's account, provided that, the delivery schedules are adhered to by the supplier. In case, if there are increase in tax or other statutory levies or new levies after the agreed delivery dates, the supplier shall bear the impact of these levies and if there is downward variation/revision TSNPDCL shall be given credit to that extent.

3. SCHEDULE OF MATERIALS :

1600 KVA DTR with BIS EE Level-2

Sl. No.	Particulars	Qty. (Nos.)	Rate per unit (Rs. Ps.)	Amount (Rs. Ps.)
1.	11KV/433-250V, 1600 KVA, BIS Standard mark, oil immersed naturally cooled three phase, 50 Hz double wound, CRGO Core copper Winding, outdoor type, Conventional Distribution Transformers with BIS Energy Efficiency Level-2 (STAR-1) top cover fixed with nut and bolt and neoprene gasket arrangement generally conforming to IS 1180 (Part 1) : 2014 latest versions except where specified otherwise with first filling of oil generally as per IS-335/1983 (latest version) and as per specification.	7	<p>17,52,000.00</p> <p>Ex-works : 14,84,745.77 (Including F&I) CGST @ 9% : 1,33,627.11 SGST @ 9% : 1,33,627.11</p>	1,22,64,000.00
		7	Total :	1,22,64,000.00
(Rupees One Crore Twenty Two Lakhs Sixty Four Thousand Only)				

NOTE:-

- a) The above transformers are guaranteed for a period of **five years** from the date of receipt of material at destination stores.
- b) 6 sets of drawings, guaranteed technical particulars, additional details and Source of materials shall be submitted within 2 days of receipt of purchase order and all other particulars mentioned in the list of fittings.
- c) You are requested to furnish the type test reports and BIS certificate before commencement of supplies as per specification.

4. DELIVERY:

The delivery of the transformers shall commence and complete as shown below.

Schedule Date of Delivery	1600 KVA (Qty. In Nos.)
10.11.2017	3
20.12.2017	4
Total	7

The type test reports and drawings of the above 1600 KVA, Conventional Copper wound Distribution Transformers with BIS Energy Efficiency Level -2 may be got approved well before commencement of supplies.

Delay in delivery of materials free at destination stores due to non-availability of transport facility and any such reasons will not be considered. It is the responsibility of the suppliers to make alternate arrangements for transporting the material so as to see the material reaches the destination within the stipulated period.

The TSNPDCL shall have the right to vary the delivery schedule mentioned in this purchase order due to any operational exigencies at any time during the execution of the order by the suppliers, after due notice.

The TSNPDCL shall have the right to increase or decrease the quantity by **50%** at any time during the execution of the order.

5. LOSSES:

The total losses (includes no-load & load losses) at 50% and 100% loading as per IS 1180 (Part-1): 2014 shall not exceed the values at rated voltage and rated frequency permitted at 75 Deg.C are indicated below :

Voltage ratio	KVA rating	Max. Total Losses @ 50% load in Watts	Max. Total Losses @ 100% load in Watts
11KV/433 V	1600	4200	11800

The above losses are maximum allowable and there would not be any positive tolerance. Firm has to supply the transformer as per no load losses, load losses and Maximum losses at 50% and 100% as mentioned in GTP.

6. PENALTY FOR EXCESSIVE LOSSES: (During Guarantee period).

6.1. During testing, if it is found that the actual measured losses are more than values mentioned in GTP/specified losses, penalty shall be recovered from the supplier.

(a) No load losses Rs. 288.23 per watt or part of there excessive loss.

(b) Load loss: Rs. 93.68 per watt or part of there excessive loss.

For fraction of a KW, proportionate penalty will be recovered.

6.2 Transformers with temperature rise and impedance beyond guaranteed values not be accepted.

Transformers with temperature rise and impedance beyond guaranteed values:

i. If the temperature rise exceeds the guaranteed values in any sample of the transformer during testing, purchaser reserves the right to reject the available lot of the transformer.

ii. If the impedance values differ from the guaranteed values including tolerance in any sample of the transformer during testing, purchaser reserves the right to reject the available lot of the transformer.

7. DESIGN & CONSTRUCTION:

7.1 CRGO Core: Material shall be CRGO sheet (M4 or Better grade) only prime quality material should be used. Prime excesses, Used material, Scrap, seconds, material or core removed from the second hand transformers shall not be used

a) The core shall be of high grade cold rolled grain oriented annealed steel lamination having low loss and good grain properties, coated with hot oil proof insulation, bolted together and to the frames firmly to prevent vibration or noise. The complete design of core must ensure permanency of the core losses with continuous working of the transformers. The value of the flux density allowed in the design and grade of lamination used shall be clearly stated in the offer.

b) The transformer core shall be suitable for over fluxing (due to combined effect of voltage and frequency) upto 12.5% without injurious heating at full load conditions and shall not get saturated. The bidder shall furnish necessary design data in support of this situation.

c) No-load current for rating 800kVA and upto 1600kVA shall not exceed 2% of full load current and will be measured by energising the transformer at rated voltage and frequency. Increase of 12.5% of rated voltage shall not increase the no-load current by 5% of full load current.

d) Number of steps of core shall be minimum of 9 Nos.

7.2 Windings: winding material shall be as per tender specification.

7.3 INSULATION MATERIAL & CLEARANCES:

Insulation material shall be as per tender specification.

7.4 TANK: The design of the tank shall be maintained as specified in the tender specification.

7.5 Lifting Lugs : 4 Nos. welded heavy duty lifting lugs of MS plate 8 mm thick suitably reinforced by vertical supporting flat welded edgewise below the lug on the side wall.

7.5.1 The sealing: Corner bolts are to be welded / anti-theft fasteners are to be provided to prevent the top cover being removed from the field.

7.5.2 Manufacturer has to emboss his company monogram and the word **“TSNPDCL,”** shall be embossed on a separate plate and welded to the side sheet of the Tank. The size of the embossing word **“TSNPDCL” is of 2” Inches.** The following information shall also be embossed on a separate MS sheet of thickness 2mm and firmly welded (No Tack welding) on one side of the transformer. **The size of the word is of 1” inch. a) P.O. No. & Date, b) Year of manufacture c) Make and Serial No. d) 5 years Guarantee period.**

For Corrugated Tanks: Manufacturer has to emboss his company monogram and the word “TSNPDCL” shall be embossed on a separate sheet of the tank. The size of the embossing of the word “TSNPDCL” is of 2 inches.

BIS Standard mark: As per the Gazette of India published on 7th May of 2015 sample of any electrical transformer should bear the standard mark obtained from Bureau of Indian Standards. Expenses incurred towards BIS Standard Mark are solely on the account of suppliers only. The certificate issued by BIS for Standard Mark shall be submitted .

7.6. SURFACE, PREPARATION AND PAINTING: Shall be maintained as specified in the tender specification.

7.6.1 Tests for painting.

7.6.2 The painted surface shall be tested for paint thickness.

7.6.3 The painted surface shall pass the Cross Hatch Adhesion test, Salt spray test and hardness test as per the relevant ASTM standards.

7.7. FINISHING:

i) Following are the types of paint which may be suitably used for the items to be painted at shop and supply of matching paint to site: Heat resistant paint (Hot

oil proof) for inside surface

- ii) For external surfaces one coat of thermo setting powder paint or one coat of epoxy primer followed by two coats of polyurethane base paint. These paints can be either air drying or stoving.

The colour of the finishing coats shall be Dark Admiral Gray conforming to No. 632 of IS-5 of 1961 colours for ready mixed paints.

7.8. BUSHINGS: Shall be maintained as specified in the tender specification.

7.9 Terminal Connectors:

7.9.1 The LV and HV bushing stems shall be provided with suitable terminal connectors, so as to connect the jumper without disturbing the bushing stem. Terminal connectors shall be type tested as per relevant standard. Suitable rating of tinned brass connecting busbars shall be provided for LV bushings with respect to the full load current of the distribution transformer.

7.9.2. LV Terminal Arrangement :

Cable Box – For 800 KVA

Bus duct arrangement - for 1000 KVA & 1600 KVA

- i) LV side may be suitable for adoption of single core XLPE cables.
- ii) The transformer shall be fitted with suitable LV Cable Box having non-magnetic material glands plate with appropriate sized single compression brass glands of LV side to terminate 1.1 KV/single core XLPE. Support insulators shall be provided to avoid oil leakages and tension on LT bushings.

The ratings of brass rod and copper rod for HV and LV respectively shall be as per IS for different capacities of distribution transformers.

7.10 Rating Plates :

The rating plates on the transformer containing the information specified in IS 1180 (Part-1): 2014. 50% & 100% total losses of the transformer should also be mentioned on the rating plate.

7.11. Arcing Horns to be provided as per latest IS 1180 (Part-1):2014.

7.12 FITTINGS : The following standard fittings shall be provided.

- i. Rating and terminal marking plates, non-detachable.
- ii. Earthing terminals with lugs - 2 Nos.

- iii. 4 no-Lifting lugs for main tank and 2 Nos for top cover.
- iv. Terminal connectors on the HV/LV bushings.
- v. Thermometer pocket with cap - 1 No.
- vi. Air release device
- vii. HV bushings - 3 Nos.
- viii. LV Epoxy/porcelain bushings - 4 Nos.
- ix. Pulling lugs
- x. Stiffener
- xi. Radiators /corrugations.
- xii. Arcing horns for HV bushings
- xiii. Prismatic oil level gauge.
- xiv. One filter valve on upper side of the transformer
- xv. Oil filling hole having p. 1- ¼ " thread with plug and drain plug on the conservator.
- xvi. Silica gel breather

The breather shall be poly propylene on par with PTRs and Volume of breather shall be suitable for 1kg of silica gel up to and including 1000kVA and 2 kg of silica gel for above 1000kVA conforming to IS 3401.

- xvii. The under base of all transformers shall be as per Fig 7 of IS 1180 to make them suitable for mounting on rollers.

<i>Rating (kVA)</i>	<i>X</i>	<i>Y</i>
2500	1200	800
2000	900	800
1600	900	800
1250	800	800
1000	800	800
800	800	800
630	800	800

- xviii. 4 No. rollers for all transformers
- xix. Pressure relief device or explosion vent .
- xx. Oil level gauge
-5 °C, 30 °C and 90°C marking
- xx. Bucholtz relay.
- xxi. Off circuit tap changer.

7.13. FASTENERS:

All bolts, studs, screw threads, pipe threads, bolt heads and nuts shall comply with the appropriate Indian Standards for metric threads, or the technical equivalent. Bolts or studs shall not be less than 6 mm in diameter except when used for small wiring terminals. All nuts and pins shall be adequately locked. Wherever possible bolts shall be fitted in such a manner that in the event of failure of locking resulting in the nuts working loose and falling off, the bolt will remain in position.

All bolts/nuts/washers exposed to atmosphere should be as follows.

- a) Size 12 mm or below – Stainless steel
- b) Above 12 mm- steel with suitable finish like electro galvanized with passivation or hot dip galvanized.

Each bolt or stud shall project at least one thread but not more than three threads through the nut, except when otherwise approved for terminal board studs or relay stems. If bolts and nuts are placed so that they are inaccessible by means of ordinary spanners, special spanners shall be provided.

The length of the screwed portion of the bolts shall be such that no screw thread may form part of a shear plane between members.

Taper washers shall be provided where necessary.

Protective washers of suitable material shall be provided front and back of the securing screws.

7.14 OVER LOAD CAPACITY: The transformers shall be suitable for loading as per relevant standard IS 2026 (Part-7).

8.0. TESTS:

8.1 ACCEPTANCE & ROUTINE TESTS : All transformers shall be subjected to routine tests at the manufacturer's works. The following routine tests shall be carried out in accordance with the details specified in *REC Specification No: 23/1983*, IS: 1180 (Part-I): 2014 and IS:2026 or as agreed upon between the TSNPDCL and the manufacturer.

1. *Checking of weights, dimensions fitting and accessories, tank thickness, oil qty., material, finish and workmanship as per purchaser order and contract drawings.*
2. Measurement of winding resistance
3. Measurement of voltage ratio, *polarity* and check of voltage vector relationship
4. Measurement of Impedance voltage, *short circuit impedance and load loss at rated current and normal frequency.*
5. Measurement of No Load loss and current at service voltage and normal frequency.
6. Measurement of Insulation resistance
7. Induced of over voltage with stand test
8. Separate source voltage withstand test
9. Pressure and vacuum test for checking the deflection on one transformer of each type in every inspection.

All above acceptance and routine tests shall be carried out by the supplier in presence of purchaser's representative on 10% of quantity offered every time.

Following tests shall be carried out at manufacturer's works on one unit of each rating by the supplier in presence of purchase representative.

I.

Temperature rise test.

- II. Air pressure test on empty tank of transformer opened for physical verification test (Once only).
- III. Heat run test shall have to be conducted at suppliers cost on one transformer of each rating, from first offered lot, during the course of supplies.

To facilitate conduction of heat run test on any unit in any lot at any point of time during the supply, the manufacturer will provide a thermometer pocket which gets immersed in oil on the side of the transformer in all the transformers. The depth of the projecting stem of this pocket inside the transformer will be below oil level. It shall not fringe with electrical clearance nor obstruct the untanking of the active part.

- IV. The test certificates for all routine and type tests for the transformers and also for the bushings and transformer oil shall be submitted.
- VIII. Tests at site: The purchaser reserves the right to conduct all tests on Transformer after arrival at site and the contractor shall guarantee test certificate figures under actual service conditions.

8.2 TYPE TESTS:

The Firm has to furnish the type test reports before commencement of supplies. The type test should have been conducted on a transformer as per the tender specification. The following Type tests shall be conducted on one transformer

- 1. Impulse voltage test: with chopped wave of IS 2026 part-III. BIL for 11 kV shall be 75 kV.
- 2. Temperature rise test: For determining the maximum temperature rises after continuous full load run.
- 3. Pressure test as per IS 1180 (part-1):2014

8.2.1 The purchase of third party shall witness the type test on randomly selected distribution transformers. The supplier shall make all arrangements for witnessing type test at his own cost.

8.3 **TOLERANCE:** Unless otherwise specified herein the test value of the transformers supplied should be within the tolerance permitted in the relevant standards. No positive tolerance is allowed on guaranteed 50% and 100% load losses.

8.4 **TESTING FACILITIES:** The supplier should have adequate testing facility and also arrange for measurement of losses, resistance etc. All test equipments shall be calibrated at NABL accredited laboratory and reports shall be within one year.

8.5 **INSPECTION AND TESTING OF TRANSFORMER OIL :** Shall be maintained as specified in the tender specification. To ascertain the quality of transformer oil the manufacturer's test report should be submitted at the time of inspection. Arrangements should also be made for testing the transformer oil, after taking out the samples from the manufactured

transformer and tested in the presence of TSNPDCL's representative (or) if desired, in an independent laboratory.

9.0 INSPECTION :

The accredited representative of the TSNPDCL /accredited representative of 3rd party identified by TSNPDCL shall have access to suppliers works, at any time during working hours, for the purpose of inspecting the materials and the select samples from the materials to be offered for inspection. You shall offer the equipment to 3rd party for stage wise inspection. The contractor shall provide facilities for testing such samples at any time the supplier shall keep this office informed 15 days in advance about the manufacturing programme so that arrangements can be made for inspection. As soon as the materials are ready, you shall submit the routine test certificates. The dispatches shall be effected only if the test results comply with specification.

In the case of transformers, instrument transformers and meters, inspection will be conducted every year, for the first 2 years on a 2% sample of the quantities supplied. Samples will be collected at random to establish that the guaranteed technical parameters are as per the submitted bid by the supplier. In the case of non-adherence, the purchaser may take suitable action on the supplier including cancellation of vendor registration and banning further dealings, depending on the gravity of the deviation. These random inspections may be entrusted to a third party.

In case of materials are not of acceptance quantity or not confirming to specification, the materials will be rejected. You have to re-offer the material for inspection. In such cases the 2nd inspection charges are to your account only. In case the materials are rejected in the 2nd inspection also, the TSNPDCL reserves the right to cancel the order.

The dispatches shall be made only after inspection to the TSNPDCL's satisfaction or such inspection is waived by this office.

TSNPDCL reserves the right to insist for witnessing the acceptance/routine tests of the bought out items.

9.1 **SEALING OF TRANSFORMERS AFTER TESTING AND INDIVIDUAL TEST REPORTS:**

After witnessing testing on sample quantity and physical inspection of all offered Transformers, the purchaser's representative will provide numbered lead/ plastic seal bits to two opposite corners of tank and inspection cover of all offered Transformers, for delivery of correct inspected materials only.

The seal bit numbers against each transformer shall also be mentioned in the test reports signed by purchaser's representative submitted for delivery instructions. **The transformer serial numbers and the seal bit numbers will be verified at the stores before accepting the material.**

Manufacturer should submit the list of equipment for testing along with latest calibration certificates to the purchaser.

The TSNPDCL may, at its option open a Transformer supplied to stores in your presence at TSNPDCL's laboratory. If any of the guaranteed technical particulars are found to be at variance during this test the TSNPDCL reserves the right to reject the whole lot supplied.

In addition to the above, the TSNPDCL may pick up any Transformer and decide to get it type-tested at CPRI at TSNPDCL cost. The tenderer will have to organize packing etc. at TSNPDCL stores for which charges will be paid by TSNPDCL. If the Transformer fails to meet the requirements of type tests, the quantity of Transformers ordered on them will be rejected and TSNPDCL may go in for risk purchase.

10. TERMS OF PAYMENT:

100% payment along with F&I, taxes and duties **will be made on or after 30 days** reckoned from the date of receipt of material/ equipment at destination/ stores (i.e., 103 entry in SAP module), duly transferring the said amount to the bank account of the supplier by the purchaser bank. The supplier will have to predefine the Bank details while entering into contract for electronic transfer of payments.

NOTE:-i) The date of delivery would be the date on which the stores officer certifies the receipt of materials at stores in good condition.

(ii) The supplier should invariably submit test certificates as soon as despatch is made so that the test certificates can be checked up and approved well before it becomes due for payment. Routine Test Certificates of the entire lot shall be submitted to the Consignee.

(iii) The performance bank guarantee to be executed in accordance with this specification shall be furnished on a stamp value of Rs.100/- within 15 days from the date of receipt of purchase order. The performance bank guarantee shall be from any nationalized / scheduled bank. Within Fifteen (15) days of receipt of the notification of Contract award, the successful Bidder shall furnish to the Purchaser the performance security for an amount 10% of the contract value for proper fulfillment of the contract, which will include the warranty period, and completion of performance obligations including Warranty obligations. The Performance Security will cover 60 days beyond the date of completion of performance obligations including Warranty obligations. The performance guarantee has to be extended suitably by you in accordance with the guarantee clause, so that the last consignment against the order is covered by the guarantee.

iv) If you have received any over payments by mistake or if any amounts are due to the TSNPDCL due to any other reason, when it is not possible to recover such amounts under the contract resulting out of the subject specification, the TSNPDCL reserves the right to collect the same from any other amounts and/or bank guarantee given by you due to or with the TSNPDCL.

v) When you do not at any time, fulfill your obligations in replacing / rectifying etc., of the damaged/ defective materials in part or whole promptly to the satisfaction of the TSNPDCL officers, the TSNPDCL

reserves the right not to accept the bills against subsequent dispatches made by the supplier and only the supplier will be responsible for any demurrages, wharfages or damages occurring to the consignment so dispatched.

11. DESPATCH :

Please arrange to supply the article specified herein and dispatch them by lorry freight prepaid to the persons and stations noted separately.

12. ACKNOWLEDGEMENT:

The Transport receipt should be sent to the persons noted against each item and should be accompanied by two copies of the invoice/challan, one of which will be returned to you direct in token of acknowledge of receipt of the goods. A copy of the invoice shall be sent to this office as soon as despatch is made.

13. LOSS OR DAMAGE :

- a). You are responsible for the safe delivery of the goods in condition at destination stores. You should acquaint yourself of the conditions obtaining for handling and transport of the goods to destination and shall include and provide for security and protective packing of the goods so as to avoid damage in transit.
- b) External damages or shortages that are prima facie the result of rough handling in transit or due to defective packing will be intimated within a fortnight of receipt of materials. Internal defects damages or shortages or any internal parts which cannot ordinarily be detected on superficial examination though due to bad handling in transit or defective packing would be intimated within 2 months from the date of receipt of the materials. In either case the damaged or defective materials should be replaced by you free of cost to TSNPDCL.
- c) If no steps are taken within 15 days of receipt of intimation of defects or such other reasonable time as the TSNPDCL may deem proper to afford, the TSNPDCL may without prejudice to its other rights and remedies causes to be repaired or rectified the defective materials or replace the same and recover the expenditure incurred therefore from the deposits such as PERFORMANCE or other monies available with the TSTRANSCO or by resorting to legal action and also decline to accept further delivery of materials/equipment.

- d) Where any plant/machinery or other materials supplied by you is found to be defective in whole or in part WITHIN THE GUARANTEE PERIOD, you will be intimated of the same. You should take immediate steps to rectify the defect or to replace the defective materials free of cost within 60 days from the date of the receipt of the intimation.
- e) The defective portions or whole of the materials so replaced should give satisfactory performance till the expiry of six months from the date of such replacement or until the end of guarantee period whichever may be later.
- f) For the purpose of any legal construction, the materials should be deemed to pass into TSNPDCL's ownership only at the destination stores where they are delivered and accepted.
- g) The TSNPDCL reserves the right apart from the above said provisions, not to accept further dispatches of materials and the connected bills etc. under conditions of your continued negligence to replace any materials supplied earlier and received in damaged condition or failed within the guarantee period, or not conforming to the purchase order /specification conditions.

14. **GUARANTEE :**

- i) The above Distribution Transformers have been guaranteed by you for satisfactory operation for a period of 5 years from the date of supply. The 5 years guarantee shall be embossed on a separate metal sheet and welded to the transformer tank just below the nameplate.
- ii) For strict implementation of this clause you may note:
 - a) On failure of a transformer, a telegraphic intimation/letter will be given to you and the transformer will be shifted to SPM Centre. You should either rectify the transformer or replace it with a good transformer within 30 days of intimation.
 - b) Please note that you shall rectify/replace the defective transformer within 30-days of receipt of intimation of defects failing which payment to the extent of failed units will be deducted from the subsequent bills/banks guarantee.
 - c) In case the transformer is repaired or replaced by you after 180 days of date of telegraphic intimation you should note that 5 years guarantee will be counted from the date from which the transformer is replaced and commissioned successfully by us.
 - d) If the transformer is repaired or replaced beyond 3 months of date of telegraphic intimation to you, you should note that the 5 years guarantee period will be extended by the number of days by which 90 days or exceeded from the date of telegraphic intimation of failure to you.

e) TSNPDCL reserves the right to claim the financial loss incurred suffered due to failure of Distribution Transformers during the guarantee period.

- 15. CHALLENGE TESTING:** “The other manufacture can also request challenge testing for any test based on specification and losses. The challenger would request for testing with testing fee. The challenge test fees are proposed at least three times the cost of testing. This is likely to deter unnecessary challenges. The challenger would have the opportunity to select the sample from the store and any such challenge should be made within the guarantee period. The party challenged, and the utility could witness the challenged testing.

The challenged testing would cover the

1. Measurement of magnetizing current
2. No Load losses test.
3. Load Losses test (At 50% loading or as per acceptance test)
4. Temperature rise test.
5. Physical verification test.

The challenge test could be conducted at NABL accredited laboratory, like ERDA and CPRI. If the values are within limit the product gets confirmed else not confirmed. No positive tolerance in losses is permitted. If the product is not confirmed the manufacture would pay the challenge fee and challenger would get the fee refunded. However as redressal system the challenger would allowed to ask for fresh testing of two more samples from the store and the same be tested in NABL laboratory in presence of party challenged, challenger and the utility.

If any one or both sample does not confirm the test then the product said to have failed the test. In such cases the manufacture will be declared as unsuccessful manufacturer for the said product with wide publicity and would not be allowed to compete in tenders of the Boards for the period of three years and heavy penalty would be imposed”.

- 16. DEFECTIVE SUPPLIES :** If, during the guaranteed period, any of the goods are found to be defective in materials or workmanship they shall be replaced by you free of cost.

- 17. PENALTY :**

GENERAL:- The delivery of materials as per the agreed schedule of delivery is the essence of the contract and no extension of the time for delivery would be allowed except under recognized force majeure conditions.

For supplies made beyond the agreed delivery schedule, penalty shall be levied for an amount of equivalent to ½ % of the contract value of the material not delivered within the prescribed time limit for every week of delay or part thereof subject to a maximum of 5% cost of Contract value of the undelivered portion within scheduled time.

The date of certified receipt of material at destination stores in good condition will be taken as the date of delivery. For calculation of penalty the date of receipt of material at destination stores is the "Date of Delivery" subject to the condition that, the materials is received in good condition. For penalty, the number of days would be rounded off to the nearest week and penalty calculated accordingly.

In case you do not adhere to the delivery schedule the TSNPDCL reserves the right to purchase the balance quantity from the open market and recover expenditure incurred from you. This is in addition to the right of the TSNPDCL mentioned in first para of this clause and under law.

18. **FORCE MAJEURE:** You shall not be liable for any liquidated damages for delay or for failure to perform the contract for reasons of Force Majeure such as acts of God, acts of Public enemy, acts of Govt., fires, floods, epidemics, quarantine restrictions, strikes, lock-outs, riots freight embargoes and provided that you shall within 10 days from the beginning of such delay notify the TSNPDCL in writing of the cause of delay, the TSNPDCL shall verify the facts and grant such extension as facts justify.
19. **EXTENSION OF TIME:** If the completion of supplies is delayed due to reason beyond the control of the supplier, the supplier shall without delay give notice to the purchaser in writing of his claim for an extension of time. The purchaser on receipt of such notice may agree to extend the contracted delivery to such date as may be reasonable but without prejudice to other terms and conditions of the contract.
20. **DRAWINGS AND MANUALS:** The following drawings of 6 sets shall be furnished for arranging approval.
 - a) Rating plate.
 - b) Outline diagram i.e., complete dimensional drawing showing the general arrangement, fitting details and clearances.
 - c) Core coil assembly drawing and weights of main component parts (internal construction with bill of materials).

The detailed thermal ability to withstand short circuit and temperature rise and heat dissipation calculations shall be furnished along with the drawings.

21. TEST CERTIFICATES:

The latest certificates containing the results of the tests as per IS-2026/1977 (of latest issue) must be submitted to Chief General Manager, P&MM, TSNPDCL, 4th floor, Corporate Office, Mint Compound, Hyderabad – 500 004 and got approved by him before sending bills for payment, which will not be paid unless these are approved (vide clause 6).

- a) Heat run test shall be carried out on one unit of each capacity at free of cost.

- b) TSNPDCL shall have all rights to conduct type tests at its own cost by an independent agency on a transformer either in service or from stores at its discretion. In the event of failure of transformer in such tests, the expenses incurred in testing shall be to the suppliers account. The failed unit will not be accepted for supply TSNPDCL even after repairs.
- c) Proof of purchase or CRGO Core, transformer oil and E grade Copper/Aluminum must be furnished along with each inspection offer.

22. GUARANTEED TECHNICAL PARTICULARS: The technical particulars as per Annexure have been guaranteed by you for the supplies against this order.

23. DISPATCH INSTRUCTIONS : All the materials detailed in clause -3 must be consigned and dispatched as per dispatch instructions to be issued after inspection and the bills sent to as follows.

Sl. No.	To be sent to the TSNPDCL's stores at	Materials to be consigned and despatched to ADE/Stores/TSNPDCL	Paying officer to whom bills & RR to be sent to accounts officer/Expr. O/o. SE/Opn.
1.	Warangal	Warangal	Warangal
2.	Karimnagar	Karimnagar	Karimnagar
3.	Nizamabad	Nizamabad	Nizamabad
4.	Khammam	Khammam	Khammam
5.	Nirmal	Adilabad	Adilabad

24. PACKING :

i) The packing may be in accordance with the manufacturer's standard practice unless otherwise specified. You should however reach the departmental stores within damages after transport by Road. The packing should stand unloading and inter stores transfer with reasonable care.

ii) Whenever you dispatch materials to consignee, you should prepare the following information in the form of packing slip in quadruplicate and send the name to the consignee and obtain his acknowledge on the same. The consignee will return to you one copy of the packing slip with his remarks. The proforma of the packing slip shall be as follows.

PACKING

1. Purchase order no. and date
2. Quantity allotted to the stores and rate applicable
3. Quantity so far supplied to the stores and the rate applied
4. Quantity now supplied and the rate applied
5. Total quantity supplied under the purchase order with rates applied.

iii) You shall invariably send to the purchasing office a copy of the delivery challan whenever materials are dispatched.

25. NOTE : It may be noted that

- a) The price cited are variable, FADS.
- b) Taxes as applicable will be paid.
- c) The owner ship of the materials would rest with you till they are all received at destination in good condition.
- d) Freight charges shall be prepaid.
- e) The materials may be duly insured at your cost as per specification
- f) Interchangeability : All similar materials and removable parts of similar equipment shall be interchangeable with each other .
- g) Name Plate : The equipment shall be marked with your trade mark , SI. No. and the year of manufacture.

26. TRAINING OF TSNPDCL PERSONNEL TSNPDCL reserves the right to depute TSNPDCL's personnel for training at your works relating to design manufacture, assembly, testing and operation and maintenance in batches. You shall provide necessary facilities during training period specified by TSNPDCL.

27. GENERAL :

1. Your bills in duplicate along with a copy of invoice and substantiating vouchers for all extra claims to be made separately should be forwarded to the paying officers mentioned in the dispatch instructions.
2. All General and technical correspondence should be addressed to the Chief General Manager/P&MM, Corporate Office, 1ST Floor, Vidyut Bhavan, TSNPDCL, Hanumakonda, Warangal - 506 001.
3. All Correspondence regarding bills, payment etc. should be addressed to the Paying Officers cited in the dispatch instructions with a copy to the Pay Officer, TSNPDCL, Warangal- 506 001.
4. All and any disputes or differences arising out of or touching this order shall be decided by courts or tribunals situated in Warangal. No suit or other legal proceedings shall be instituted elsewhere.
5. Unless otherwise specified, you shall abide by all the terms and conditions specified in specification.
6. Please return within a period of 15 days one copy of the purchase order duly signed in token of acceptance of all the terms and conditions of this purchase order along with the contract form executed on a Rs. 100/- Non-Judicial stamp paper.
7. This is in regularization of preliminary acceptance Lr. No. CGM/P&MM/NPDCL/WGL/GM/DE-2/A3/STN-06/17-18/D.No.2150/17, Dt. 18.09.17.

Yours faithfully,

Sd/-

(B. ASHOK KUMAR)

CHIEF GENERAL MANAGER,
P&MM/NPDCL/WARANGAL.

We accept all the terms and Conditions of this order.

SIGNATURE OF THE CONTRACTOR**Copy Communicated to :-**


The Chief General Manager/Finance./NPDCL/Warangal.
 The Chief General Manager/ Commercial/NPDCL/Warangal.
 The Chief General Manager/Construction/NPDCL/Warangal.
 The Chief General Manager/O&M/NPDCL/Warangal.
 The Chief General Manager/P&MM/CPDCL/4th Floor, Corporate Office,
 Mint Compound, Hyderabad - 500 004.

Copy to:-

The Superintending Engineer/Operation/WGL, KNR, KMM, NZB & ADB.
 The Divisional Engineer/Transformers/ WGL, KNR, KMM, NZB & ADB.
 The Accounts Officer/Expr. O/o. SE/Opn./ WGL, KNR, KMM, NZB & ADB.
 The Asst. Divisional Engineer/Stores/ WGL, KNR, KMM, NZB & NML.
 The Divisional Engineer/IT/TSNPDCL/Warangal :

(Place the Scanned Purchase Order copy in the TSNPDCL Website).

// FORWARDED BY ORDER//


 Divisional Engineer/P&MM-2
 TSNPDCL/Warangal.

AD Comp 2
 M. Hussain
 12/10