

By Regd. Post with Ack. Due.



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

(PURCHASE ORDER)

Phones: 0870-2461507.
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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. K.R.K. Power Private Ltd.,
Plot No. 7 & Part of 8, Road No. 1,
I.D.A., Nacharam,
Hyderabad – 500 076.

GSTIN No. 36AABCN2875L321.

SAP No.	5	1	0	0	0	0	1	8	8	3
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P.O.No.CGM/P&MM/NPDCL/Wgl./GM/DE-2/A3/PM- 5315/17, Dt.23 -09-2017.

Sir,

Sub : TSNPDCL – P&MM Wing - Tender Specification No. STN-08/17-18
- Supply of **9 Nos.** 33/11 KV 5 MVA Power Transformers for **Water Grid Works – Purchase Order** – Issued – Reg.

Ref : 1. Tender Specification No. STN-08/17-18.
2. Lr.No.CGM/P&MM/NPDCL/WGL/GM/P2/A3/STN-08/17-18/
D.No.2154/17, Dt.18.09.2017.
3. Firm's acceptance letter received on 21.09.17.

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- 1). **ACCEPTANCE :** I, acting for and on behalf of and by the order and direction of TSNPDCL accept the rates for supply of **9 Nos.** 33/11 KV 5 MVA Power Transformers for **Water Grid Works** as per Clause–3.0 Schedule of material and as per the above cited correspondence subject to the following terms and conditions.
- 2). **PRICES :** The prices indicated in schedule of materials are variable in rupees and inclusive of F&I, CGST@9% & SGST@9% and with the terms and conditions as per tender specification No. STN-08/17-18.

The prices indicated in schedule of materials are variable in rupees as per IEEMA price variation formula given in the specification with base rates prevailing on **01-08-2017** and with 30% ceiling on positive side and no ceiling on negative side as per clause 14.8 of general terms of conditions of specification.

$$P = \frac{PO}{100} \left[10 + 33 \frac{C}{Co} + 24 \frac{ES}{ESo} + 8 \frac{IS}{Iso} + 4 \frac{IM}{IMo} + 6 \frac{TO}{TOo} + 15 \frac{W}{Wo} \right]$$

If the date of delivery as defined in the P.V. formula is beyond the contracted delivery date the scheduled delivery date or inspection offer date or the actual delivery date which ever is advantageous to the Purchaser will form the basis for calculation of price variation.

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.

The date of delivery for the purpose of price variation shall be date on which the material is notified as being ready for inspection/ despatch (in the absence of such notification the date of manufacturer's despatch note shall be considered as the date of delivery) or the contracted delivery date including any agreed extension thereto whichever shall be the earlier.

As far as practicable, prices will be revised (upward or downward) abinitio, to take care of any variation in prices of raw materials as defined above but if for any reason it is not found to practicable shall be effected at the contracted price and price variation claimed subsequently through a supplementary bill which will be paid as per the 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.

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

The unloading charges at destination stores shall be to TSNPDCL's account.

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:**

Sl. No.	Description	Qty. in (Nos.)	FADS Price (Rs. Ps.)	Amount (Rs. Ps.)
1.	5000 KVA, 33/11KV, 3-Phase Delta/Star, 50 cycles, oil immersed, naturally self cooled, core type, outdoor power transformer (double wound with insulated copper wire conductor) conforming to latest IS:2026 with ON LOAD TAP CHANGING GEAR on HV side for HV variation of +5% to -15% in 16 equal steps of 1.25% with accessories and required oil conforming to ISS:335 latest version.	9	33,49,000.00 Ex-Works : 28,18,687.00 F&I : 19,448.60 CGST@9% : 2,55,432.20 SGST@9% : 2,55,432.20	3,01,41,000.00
		9 Nos.	Total	3,01,41,000.00
(Rupees Three Crores One Lakh Forty One Thousand Only)				

Note: You are requested to furnish the required Type Test Certificates before approval of Drawings as per tender specification STN-08/17-18.

Guarantee Maximum Allowable Losses:

	5 MVA
No Load Losses	4.0 Kw (Max.) (No positive tolerance is allowed)
Load Losses	23 Kw (Max.) (No positive tolerance is allowed)
Impedance	7.15% (The tolerance will be applicable as per IS : 2026.)

- 4). **PERFORMANCE GUARANTEE** : You are requested to furnish performance bank guarantee in the prescribed proforma within 15 days of receipt of purchase order to the extent of 10% value of the purchase order valid upto 6 months over and above the guarantee period to draw 100% payment. **The Bank Guarantee shall be furnished only from the Nationalized/Scheduled Bank.**
- 5). **DELIVERY** : You shall commence and complete the supplies of the above Power Transformers as follows.

Date	Qty. In Nos.
31.10.2017	4
30.11.2017	5
TOTAL	9

However you are requested to advance the deliveries on written request from TSNPDCL. Drawings of Power Transformers and OLTC may be got approved before commencement of supplies. Samples of fittings stated in the Annexure-I shall also be got approved along with the drawings.

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 supplier to make alternate arrangements for transporting the materials 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 supplier after due notice. Unloading of the materials at the destination stores shall be arranged by the consignee at TSNPDCL cost.

TSNPDCL shall have the right to vary the ordered quantity by $\pm 50\%$ at any time during the execution of the order.

- 6). **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, 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.

The 100% payment mentioned above is subject to on submission of 10% performance security as per clause-39 of specification by the supplier.

The supplier should invariably submit test certificates and other documents, the purchaser specifies as soon as despatch is made so that they can be checked and approved well in advance.

The performance guarantee to be executed in accordance with this specification will be furnished on a stamp paper of value Rs. 100. The Bank Guarantee will be extended if required suitably, in accordance with the provisions of clause No. 39 of specification.

If the supplier has 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 this specification, the TSNPDCL reserves the right to collect the same from any other amount and or Bank guarantees given by the company due to or with the TSNPDCL.

When the supplier does not at any time, fulfill his 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, wharf ages or damage occurring to the consignments so dispatched.

- 7). **DESPATCH:** Please arrange to supply the articles specified herein and dispatch them by goods train or lorry freight prepaid to the persons and stations which will be issued separately.
- 8). **ACKNOWLEDGEMENT:** The railway receipt/lorry 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 acknowledgement of receipt of the goods. A copy of the Invoice shall be sent to this office as soon as despatch is made.
- 9). **LOSS OR DAMAGE :** You are responsible for the safe delivery of the goods in good 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.

External damages or shortages that are prima facie the results of rough handling in transit or due to defective packing will be intimated within a fortnight of the receipt of the materials. Internal defects, damages or shortages of any internal parts which cannot ordinarily be detected on a superficial visual examination though due to bad handling in transit or defective packing would be intimated within 2 months from the date of receipt of these articles. In either case, the damaged or defective materials should be replaced by you free of cost to TSNPDCL.

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 cause to be repaired or rectified the defective materials or replace the same and recover or rectified the defective materials or replace same and recover the expenditure incurred therefore from the deposits such as EARNEST MONEY DEPOSIT, SECURITY DEPOSIT AND PERFORMANCE GUARANTEE or other monies available with the TSNPDCL /TSTRANSCO or by resorting to legal action and also decline to accept further delivery of material/equipment.

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 30 days from the date of receipt of intimation.

The defective portions or whole of the equipment so replaced or renewed should give satisfactory performance till the expiration of 6 months (six) from the date of such replacement or until the end of guarantee period whichever is later.

For the purpose of any legal construction, the material shall be deemed to pass into TSNPDCL's ownership only at the destination stores where they are delivered and accepted.

The TSNPDCL reserves the right apart from the above said provisions, not to accept further dispatches of materials and connected bills etc., under conditions of your continued negligence to rectify repair or replace any equipment or materials supplied earlier and received in damaged condition or failed during the guarantee period or not conforming to the purchase order/specification conditions.

10). **GUARANTEE:**

- i) The material have been guaranteed by you for satisfactory operation for a minimum period of **5 years (60 months)** from the date of receipt of the material/Equipment in good condition i.e. Form-13 date and the same shall be embossed on a separate metal sheet, painted prominently and welded to the transformer tank just below the name plate.
- ii) In case any unit fails within the guarantee period the same shall have to be guaranteed by you for satisfactory performance for an extra period of 6 months from the date of re-commissioning. If the same unit fails again for second time within the guarantee period, you may be asked to replace it with a New Unit at the discretion of TSNPDCL.
- iii) Please note that you shall rectify or replace the defective materials within 30 days of receipt of intimation of defects or such other reasonable time as TSNPDCL may deem proper to afford failing which payment to the extent of failed units will be deducted from the subsequent bills/ bank guarantees.

- 11). **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/**Sub-station/Sub-station site of TSNPDCL** 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.

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”.

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

- 13). **PENALTY FOR LATE DELIVERY :**

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 $\frac{1}{2}$ % of the **total 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% of cost of the undelivered portion within scheduled time.

The date of certified receipt of materials 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.

- 14). **FORCE MAJEURE:** The supplier 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, action of Government, fires, floods, epidemics, quarantine restrictions, strikes, riots, lockouts, riots freights embargoes and provided that the supplier shall be 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.
- 15). **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.
- 16). **DRAWINGS AND MANUALS:** The following drawings of 6 sets shall be furnished for our approval.
- a) Rating plate.
 - b) Diagram plate with tap position and relative HV/LV voltage.
 - c) Outline diagram i.e., complete dimensional drawing showing the general arrangement, fitting details and clearances.
 - d) Valve diagram.
 - e) Details of weather proof marshalling box.
 - f) Marshalling box wiring diagram.

- g) Core coil assembly drawing and weights of main component parts (Internal construction)
- h) Oil flow diagram.
- i) General arrangement of OLTC (*)
- j) Schematic diagram of OLTC (For local manual and local electrical control)

(*) As furnished by manufacturer and as per specification.

Note :

- 1) A detailed operation and maintenance manual with each unit shall be supplied by you to the consignees.
- 2) The detailed short circuit and temperature rise calculations shall be furnished along with the drawings.

- 17). **INSPECTION** : The accredited representative of TSNPDCL/accredited representative Govt. institution 3rd party identified by TSNPDCL shall have access to the suppliers works at any time during working hours for the purpose of inspecting the materials and may select samples from the materials to be offered for inspection. You shall offer the equipment for 3rd party 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 despatches shall be effected only if the test results comply with specification.

In case of materials are not of acceptable quality or not confirming to specification, the materials will be rejected. You have to re-offer the material for inspection. In such case 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 despatches shall be made only after the inspection by 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.

- 18). **TESTS & TEST CERTIFICATES** : The latest certificates containing the results of the tests as per IS-2026/1977 (or latest issue) must be submitted to the Chief General Manager/P&MM 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 free of cost.
 - b) You have to submit records of impulse and short circuit test certificates of Power Transformers ordered essentially, as a representative of the transformers being purchased and as on evidence of impulse & SC tests conducted out at free of cost and certificates furnished.
 - c) The losses specified in the purchase order are without positive tolerance and no negative tolerance is allowable for percentage impedance.
 - d) If the actual losses are more than the guaranteed losses, the transformers will be totally rejected.

- e) The SC withstand test report must be accompanied by the drawings of the active part and general arrangement of fittings, duly inspected and certified by testing agency. The SC tested unit will not be accepted for supply to TSNPDCL.
- f) TSNPDCL shall have all the rights to conduct type tests at its own cost by an independent agency, whenever there is a dispute regarding the quality of supply (or) interpretation of test results. In the event of failure of transformer in such tests the expenses incurred in testing shall be to your account. The failed unit will not be accepted for supply to TSNPDCL even after repairs.
- g) The addition to the routine tests listed in IS-2026, the following tests shall be carried out by the supplier on each and every unit manufactured by them.
 - i) Oil leakage test.
 - ii) Dielectric test on transformer oil.
 - iii) Check for pre shrinkages.
 - iv) Spill current on neutral.

19). **GUARANTEED TECHNICAL PARTICULARS:** The Technical particulars as per IS & Annexure – III have been guaranteed by you for the supplies against this order.

20). **INSURANCE :**

The Materials / equipment supplied under the Contract will be fully insured against loss or damage incidental to manufacture or acquisition, transportation and delivery and also storage for **45** days at destination stores.

The bidder shall a) Initiate and pursue insurance claim till settlement, and b) Promptly arrange for repair and/or replacement of any damaged items in full irrespective of settlement of insurance claim by the under Writers. c) All costs because of insurance liabilities covered under the contract will be to supplier's account. The supplier shall provide the Purchaser with a copy of all insurance policies and documents taken out by him in pursuance of the 'Contract'. Such copies of documents shall be submitted to the purchaser immediately after such insurance coverage. The supplier shall also inform the Purchaser in writing at least sixty (60) days in advance, regarding the expiry, cancellation and/or change in any of such documents and ensure revalidation/renewal etc., as may be necessary well in time.

The risks that are to be covered under the insurance shall be comprehensive and shall include but not limited to, the loss or damage in transit, storage, due to theft, pilferage, riot, civil commotion, weather conditions, accident of all kinds, fire, flood, war risk (during ocean transportation) bad or rough handling etc. The scope of such insurance shall cover the entire contract value.

The insurance will be in an amount equal to 100% FADS value of Materials / equipment on all risks basis. The policy will have a provision for extension to cover further storage if necessary at destination stores / site at TSNPDCL cost. **The insurance beneficiary shall be TSNPDCL.**

21). **DESPATCH INSTRUCTIONS:** All the materials detailed in Clause-3 must be consigned and despatched as per despatch 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/TSNPDCCL.	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

22). **PACKING :**

- i). The packing may be in accordance with the manufacturer's standard practice unless otherwise specified, you shall however ensure that the packing is such that the equipment reach the department stores without damages after transport by Road. The packing should stand unloading and inter stores transfer with reasonable care.
- ii) Whenever you despatch materials to consignee, you should prepare the following information in the form of packing slip in quadruplicate and send the same to the consignee and obtain his acknowledgement 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.
- iii) You shall invariably send to the purchasing officer copy of the delivery challan whenever materials are despatched.

23). **NOTE :** It may be noted that

- a) The prices cited are Variable with 50% ceiling on positive side and no ceiling on negative side and with base date as 01-11-2016.
- b) The ownership of the materials would rest with you till they are all received at destination in good condition.
- c) Freight charges shall be prepaid.
- d) The materials may be duly insured at your cost as per specification.
- e) **Interchangeability :** All similar materials and removable parts of similar equipment shall be interchangeable with each other.
- f) **Name Plate :** The equipment shall be marked with your trade mark, Sl.No. and the year of manufacture, capacity and other details as specified in the relevant ISS and as stated in Annexure-I. The P.O.No. and date and words TSNPDCL must be etched on the name plate.
Tank shall be embossed with TSNPDCL. The size of the embossing of the word shall be 2 inches.
- g) For the transformers failed within the guarantee period, you shall rectify the same within 30 days from the date of receipt of such information (or) mutually agreed period, whichever is earlier.

24). **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.

25). **GENERAL :**

- i) Your bills in duplicate along with a duplicate 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.
- ii) 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.
- iii) 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.
- iv) All and any disputes or differences arising out of or touching this order shall be decided by counts or tribunals situated in Warangal. No suit or other legal proceedings shall be instituted elsewhere.
- v) Unless otherwise specified, you shall abide by all the terms and conditions specified in the specification No. STN-08/17-18.
- vi) This is in regularization of preliminary acceptance by you vide reference 3rd cited above.
- vii) 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 order and furnish 10% Performance Security.

Encl: ANNEXURE - 1

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 :-**

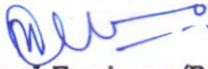
The Chief General Manager/ Finance./NPDCL/Warangal.
The Chief General Manager/Construction/Warangal.
The Chief General Manager/Commercial/Warangal
The Chief General Manager/O&M/NPDCL/Warangal.
The Chief General Manager/P&MM/SPDCL/H. No. 19-13-65/A,
Kesavyanagunta, Tirupati.
The Chief General Manager/P&MM/CPDCL/4th Floor, Corporate Office,
Mint Compound, Hyderabad – 500 004.
The Chief General Manager/P&MM/EPDCL/TPT Colony, Seetammadara,
Visakhapatnam – 13.


Copy to:-

The Superintending Engineer/Operation/WGL, KNR, KMM, NZB & ADB.
The Accounts Officer/Expr. O/o. SE/Opn./ WGL, KNR, KMM, NZB & ADB.
The Asst. Divisional Engineer/Storages/ 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.



CONTRACT FORM

THIS AGREEMENT made the. day of. 200 Between.(Name of Purchaser) of the one part and.(Name of Supplier) of the other part:

WHEREAS the Purchaser invited bids for certain Materials / equipment and ancillary services viz., (Brief description of Materials / equipment and Services) and has accepted a bid by the Supplier for the supply of those Materials / equipment and services in the sum of(Contract Price in Words and Figures) (hereinafter called "the Contract Price").

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions will have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
2. The following documents will be deemed to form and be read and construed as part of this Agreement, viz.:
 - (a) the Bid Form and the Price Schedule submitted by the Bidder;
 - (b) the Schedule of Requirements;
 - (c) the Technical Specifications;
 - (d) the General Conditions of Contract;
 - (e) the Purchaser's Notification of Award.
3. In consideration of the payments to be made by the Purchaser to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Purchaser to provide the Materials / equipment and services and to remedy defects therein in conformity in all respects with the provisions of the Contract.
4. The Purchaser hereby covenants to pay the Supplier in consideration of the provision of the Materials / equipment and services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

Brief particulars of the Materials / equipment and services which will be supplied/ provided by the Supplier are as under:

	Brief Description of Materials/Equipment & services	Quantity to be supplied	Unit Price Rs.	Total Price Rs.	Delivery Terms

TOTAL VALUE: (Rupees _____only)

DELIVERY SCHEDULE:

IN WITNESS whereof the parties hereto have caused this Agreement to be executed on the day and year first above written.

Signed, Sealed and Delivered by the

said.(for the Purchaser)

in the presence of.

Signed, Sealed and Delivered by the

said.(for the Supplier)

in the presence of.

NOTE:To be executed on a Rs.100/- Non-judicial stamp paper.

Sd/-
(B. ASHOK KUMAR)
CHIEF GENERAL MANAGER,
P&MM/NPDCL/WARANGAL.

ANNEXURE – II
GUARANTEED TECHNICAL PARTICULARS TO BE FURNISHED BY THE
MANUFACTURER

I. STANDARD FORM OF TECHNICAL PARTICULARS:

1.	Name of the Manufacturer	:	M/s K R K POWER PVT LTD., Hyderabad
2.	Service	:	Out door
	Type	:	POWER TRANSFORMER
3.	Ratings :- Rated KVA	:	5000
	Rated voltage of HV/LV KV	:	33/11
	No – Load Voltage Ratio KV	:	33/11
	Temperature rise in oil deg. C	:	50
	Temperature rise by resistance Winding of deg. C	:	55
	Rated frequency : c/s	:	50
4.	Number of Phases	:	3
5.	Connections	:	
	High Voltage	:	Delta
	Low Voltage	:	Star
	Vector group of reference	:	Dyn11
6.	Tappings	:	
	High Voltage %	:	+ 5% to –15% in 16 equal steps of 1.25%
	Low Voltage %	:	Not Applicable
7	No. load loss at rated voltage KW	:	4.0
8.	Load loss at rated current at 75 deg.C (KW)	:	23
9.	% Impedance at rated current and freq. At 75 deg. C	:	7.15 (± IS Tol)
10.	Reactance at rated current and frequency %	:	7.13
11	Efficiencies at 75 deg. C at unity power factor	:	
	At full load %	:	99.46
	At ¾ full load %	:	99.55
	At ½ full load %	:	99.61
12.	Regulation at full load at 75 deg. C at unity power factor %	:	0.71
	At 0.8 Power factor lagging %	:	4.79
13.	No load current at rated voltage and frequency	:	2% of the FLC
14	Approximate weights : KG	:	
	I) Core KG	:	4550
	II) Windings KG	:	2250 (With Insulation)
	III) Core with frame KG	:	5055
	IV) Tank and fittings KG	:	3600
	V) Oil (Excluding OLTC Goil) KG	:	3310
	VI) Total weight KG	:	14950
15.	Approximate quantity of oil Ltrs. (including OLTC-OIL)	:	4200
16.	Approximate overall dimensions	:	
	Length mm	:	3950
	Breadth mm	:	3450
	Height mm	:	3400
17.	Terminal arrangements	:	
	High voltage	:	Bare Bushing
	Low voltage	:	Bare Bushing
18.	Reference standard	:	IS-2026
19.	Remarks	:	Nil

II. ADDITIONAL TECHNICAL PARTICULARS :			
1	Approximate Max. Flux density at rated vol. & Frequency CGS Lines/cm ²	:	16900(1.69 Tesla)
2.	Efficiencies at 75 deg. C at 0.8 Power factor lagging		
	At full load %	:	99.33
	At ¾ full load %	:	99.44
	At ½ full load %	:	99.51
3.	Load at which maximum efficiency occur (full load) %	:	41.70
4.	Maximum efficiency %	:	99.62
5.	Impulse levels with 1/50 ms wave		
	High voltage KV	:	170 kVpeak
	Low voltage KV	:	75 kV kVpeak
6.	No. load loss at 110% rated voltage and rated frequency KW	:	7.9
7.	No load current at 110%rated voltage and rated frequency	:	3% of Full load current
8.	Type of windings		
	High voltage	:	Continuous Disc Winding
	Low voltage	:	Continuous Disc Winding
9.	Insulation materials	:	
	Turn insulation high voltage	:	Multiple Paper Covering
	Turn insulation low voltage	:	Triple Paper Covering
	Insulation core to low voltage	:	Insulation PC Board
	Insulation high voltage to low voltage	:	Insulation PC Board
10.	Clearances		
	Minimum clearance between phases		
	a) In oil mm	:	33 kV 11 kV 20 -
	b) Out of oil mm	:	400 320 320 140
	Minimum clearance high voltage to (mm) earth in oil		50 mm,
	Minimum clearance high voltage to tank (mm) in oil		100 mm
III	Details of tank		
1	Length X Breadth X Height mm	:	2270 x 975 x 1700/1710
2	Approximate thickness of sides mm	:	6
3	Approximate thickness of top mm	:	8
4	Approximate thickness of bottom mm	:	8
5	Approximate thickness of tube radiators mm	:	1.25
6	Minimum clearance height for lifting core & windings from tank (mm)	:	4500
7	Shipping details		
	Parts detached for transport		Radiator, Conservator & Explosion vent
	Approximate weight of heaviest package (Kg)	:	12500
	Approximate dimensions of largest package	:	
	Length (mm)	:	3900
	Breadth (mm)	:	1810
	Height (mm)	:	2850
IV. DETAILS OF AUXILIARY WINDINGS :			
1.	Rating	:	
	Rated KVA		Not Applicable
	Rated voltage KV		Not Applicable
2.	Connections		Not Applicable

3.	Tappings		Not Applicable
4	Impedance at 75 deg/C/rated current at	:	Not Applicable
	With respect to high voltage %	:	Not Applicable
	With respect to low voltage%	:	Not Applicable

V. DETAILS OF BUSHINGS

1.	Type	:	Solid Porcelain Type
2.	Momentary Power Frequ. Dry withstand voltage KV	:	Confirm to IS-2099 & IS-3347
3.	Visible power freq. Discharge voltage KV	:	-- do --
4.	One minute dry withstand power frequ. Voltage KV	:	-- do --
5.	One minute wet withstand power frequ. Voltage KV	:	-- do --
6.	Full wave withstand impulse voltage KV	:	-- do --
7.	Under oil flashover or puncture withstand voltage KV	:	-- do --
8.	Creepage distance in air (mm)	:	16
9.	Recommended gap settings (mm)	:	160
10	Weight of assembled bushing (kg)	:	11kV – 3.0Kg 33kV – 5.0Kg

VI. DETAILS OF ON LOAD TAP CHANGING GEAR :

1.	Make	:	OLG / CTR
2.	Type	:	Transition Resistor Tap changer
3.	Rating MVA	:	5
	Rated voltage KV	:	33kV
	Rated Current A	:	60 A
	Step Voltage V	:	412.5
	No. steps	:	16
4.	Control	:	17 Position
5.	Auxiliary supply details	:	415 V 3Phase AC
6.	Voltage control	:	+5% to -15% in steps of 1.25%
7.	Line drop compensation	:	Will be provided if necessary
8.	Parallel operation	:	Will be provided if necessary
9.	Protective devices	:	Buch-Holtz relay, Fuses etc.,
10.	Approx. Overall weight kg	:	1191
11.	Approx. Overall dimensions (mm)	:	2172 x 1033 x 919
12.	Approx. overall quantity of oil (Ltrs).	:	700 ltrs

VII DETAILS OF TYPE TESTS:

1.	Type Test :				
	(a) Is the offered design type-tested? (Yes/No).			Yes	
	(b) If yes, fill up the following table				
Sl. No	Name of test	Description of Power Transformer with losses	Date of test	Tested Laboratory & Location	Number of sheets
1 (a)	Short-circuit dynamic and thermal withstand test	33/11 kV, 5000 KVA (Cu) NLL : 4.0 kW , LL : 23 kW Sl.No. PT- 1219	15 th & 16 th Dec'16	At CPRI, HPL, Bangalore	
(b)	Impulse withstand test with chopped wave as per clause no.13 of IS-2026, part-III	33/11 kV, 5000 KVA (Cu) NLL : 4.0 kW , LL : 23 KW Sl.No. PT- 1219	30 th Nov '16	At CPRI UHV Lab, Uppal, HYDERABAD	
2.	Whether the transformer conform to IS-2026 (Yes/No)			Yes	

3.	OLTC Particulars (i) Make : CTR/OLG or equivalent (ii) Type : OLTC shall be provided external type but not built in type and with separate conservator. It should be bilinear type but not coarse & fine system. (iii) Rating : (iv) Control : Manual & Electrical and compatible for RTCC and Parallel operation. (v) Auxiliary supply : 3-Phase, 440V, 50 Hz (vi) Approx. overall weight : (vii) Approx. overall dimensions : (viii) Approx. overall quantity of oil (Ltrs.)		CTR Linear - Manual & Electrical Yes 744 Kgs 930 x 1996 x 827 700 (Ltrs) Approx
4.	Any technical deviations offered (Yes/No) If yes, mention the clause no. and reason for deviation		NO
5.	Type of supports for HV delta, line and tap leads		Pharmali wooden cleats
6.	Material and size of HV delta and tap leads		Flexible copper Conductor
7.	Size of core frame channel		200 x 70 mm
8.	Size and no. of core studs		M-24 – 8 Nos
9.	Size and no. of tie rods		M-30 – 8Nos
10.	Limit of unbalance of LV neutral (max)		3%

VIII. FURTHER ADDITIONAL DETAILS

Sl.No	Description		5.0 MVA
1.	Core Grade	:	H1B or Superior
2.	Core diameter (mm)	:	355
3.	Gross core area (Sq.mm)	:	949.0
4.	Net core area (sq.cm)	:	92.10
5.	Flux density Tesla	:	1.69
6.	Weight of the core (Kg)	:	4550
7.	Loss per Kg. Of core at the specified Flux Density	:	0.72
8.	Core Window Height mm	:	900
9.	Center to center distance mm	:	695
10.	No. of L.V. Turns	:	184
11.	No. of H.V. Turns		1004-956-812
12.	Size of L.V. conductor bare/covered (mm)	:	11.30 x 2.60 / 11.8 x 3.10
13.	Size of H.V. conductor bare/covered (mm)	:	10.50 x 1.60/11.10 x 2.20
14.	No. of parallels		LV – 4, HV – 2
15.	Current density of L.V. winding Amps/mm ²	:	Less than 2.4
16.	Current density of H.V. winding Amps/mm ²	:	Less than 2.4
17.	Wt. of the H.V. winding copper for transformers Kg	:	1440
18.	Wt. of the L.V. winding copper for transformer (kg)	:	810
19.	No. of L.V. COILS/PHASE		01
20.	No. of H.V. COILS/Phase	:	01
21.	Height of L.V. winding mm	:	785
22.	Height of H.V. winding mm	:	785
23.	ID/OD of L.V. winding mm	:	380/480
24.	ID/OD of L.V. winding mm	:	522/675
25.	Size of the duct in L.V. winding mm	:	-

26.	Size of the duct in HV winding mm	:	-
27.	Size of the duct between HV & LV mm	:	-
28.	HV winding to LV clearance (mm)	:	20
29.	HV winding to tank clearance (mm)	:	100 mm
30.	Calculated impedance %	:	7.18
31.	HV to earth creepage distance (mm)	:	900 mm
32.	LV to earth creepage distance (mm)	:	300 mm

Sd/-
(B. ASHOK KUMAR)
CHIEF GENERAL MANAGER,
P&MM/NPDCL/WARANGAL.