

**BY SPEED POST**

AN ISO 9001 ORGANISATION [PSG (A) (DQM) F-06]



**NATIONAL GEOPHYSICAL RESEARCH INSTITUTE**

(Council of Scientific & Industrial Research)  
Uppal Road, Hyderabad-500 007, (AP), India

Tel: +91 40 23434700 / 23434672(Direct)

Fax: +91 40 2343 4659 / 2717 1564 / 2343 4651 Email: [ngripur@yahoo.co.in](mailto:ngripur@yahoo.co.in)

**INVITATION TO TENDER**

No.38(6)2009-Pur/T-140

February 26, 2010

**To**

Dear Sirs,

Sub: Quotation for Supply, Installation, Testing & Commissioning of LT Main Distribution System in Electric Sub-Station - Reg.
Last date & Time for submission of offer : 23-03-2010 by 2.00 P.M.
Date & Time of Tender Opening : 23-03-2010 at 3.00 P.M.

We are interested in purchase of the following materials. Kindly send your quotation under Two-Part Tendering System viz., Part-I Techno-Commercial Bid and Part-II Commercial Bid conforming to our Terms and Conditions enclosed to the bid document.

S.No.	Description	Qty
1	Supply, Installation, Testing and Commissioning of LT Main Distribution System in Electric Sub-Station. <b>Specifications, Drawings, BOQ for the Panels, Pre-requisites of the prospective bidders and Terms &amp; Conditions, List of approved electrical items/materials are enclosed.</b>	One Job

Kindly send your detailed quotation in 2 Parts, Part-I Techno-Commercial Bid with all details and specifications of item offered, delivery schedule, warranty, payment terms etc., WITHOUT PRICE AND Part-II Commercial Bid WITH PRICE, so as to reach us on or before 23.03.2010 by 2-00 P.M. and the Techno-Commercial Bids (Without Price) will be opened on 23-03-2010 at 3.00 P.M.

**E.M.D. Rs. 1,50,000/-**

EMD of Rs.1,50,000/- in the form of Demand Draft / Bank Guarantee valid beyond 45 days of bid validity from any Nationalized/Scheduled Bank drawn in favor of the Director, National Geophysical Research Institute, Uppal Road, Hyderabad and payable at Hyderabad, should be submitted along with Part-I Techno-Commercial Bid. Bids received without EMD will not be considered valid and will be rejected straight away. Pre-receipted Bills must be enclosed for refund/return of EMD. EMDs liable to be forfeited if the tenderers change/withdraw/modify their tender during its validity period.

Kindly acknowledge receipt.

NOTE: To obtain two important technical diagrams (by fax), please contact the undersigned.

Yours faithfully,

(V. VENKAT RAO)  
**SECTION OFFICER (S & P)**  
Ph: 23434773

**TERMS & CONDITIONS:**

1.	We are interested in the material available from <b>Ready Stock</b> .
2.	The rate quoted should be for <b>delivery at NGRI Stores, Hyderabad</b> .
3.	Any deviation from the delivery schedule, terms of payment and five years comprehensive onsite warranty, support and maintenance would constitute to be material deviations and hence shall be summarily rejected.
4.	The major responsibilities of bidder shall include : a) Supply, installation, testing and commissioning of LT Main Distribution System in Electric Sub – Station. b) All technical details including all circuit / block diagrams, comprehensive layout and operation and maintenance to be given along with equipment. c) Supplier should provide test certificates along with the equipment.
5.	<b>Validity of Bid :</b> The bids shall remain valid for 90 days after the date of bid opening prescribed by the Purchaser. A bid value for a shorter period may be rejected by the Purchaser as non-responsive.
6.	<b>Submission of Bid :</b> The bidder shall seal the Techno Commercial Bid and the Price Bid in two separate envelopes duly marked as “TECHNO COMMERCIAL BID” and “PRICE BID” respectively. Both the envelopes shall then be sealed in one outer (main) envelope. The inner and outer envelopes shall be addressed to the Purchaser at the following address : The Director, National Geophysical Research Institute Uppal Road, Hyderabad – 500 007 (Kind attention : Stores & Purchase Officer) And also bear the Item Name/Reference No./Last Date for Submission of Tender / Date of Opening of Tender/Firm’s Name & Address and a statement “Do not open before Time Hrs.(IST) on Date” as per the NIT details. Quotation delivered personally should be delivered to the Receipt & Dispatch Section of NGRI. Late & Delayed tenders will not be considered.  The commercial bids of those bidders will be opened whose bids are found to be technically qualified.
7.	<b>Eligibility Criteria :</b> a) The bidder should have installed a minimum of 3 installations of the similar technology and capacity. b) The bidder should provide along with his quotation a list of customers and sites with addresses having similar and higher capacity systems. c) These installations must have been in use for the past one year. A proof to this effect on the performance has to accompany the bid. d) The bidder should be authorized supplier for the LT Main Distribution System in Electric Sub – Station, being offered. The copies of the registration, VAT, Service Tax, ESI & PF, Work Contract Tax and the details of income tax registration (PAN), as well as manufacturer / latest authorized dealership certificate for the System should be enclosed. e) NGRI reserves the right to verify / seek confirmation of all original documentary evidence submitted by you in support of above mentioned clauses of eligibility criteria. In case any information furnished by you is found to be false / incorrect at

	any stage, the bid shall be summarily rejected and no correspondence on the same shall be entertained.
8.	<b>E.M.D. for Rs.1,50,000/-, drawn in favour of the Director, NGRI, payable at Hyderabad must be enclosed along with the Techno-Commercial Bid, without which the quotation will not be considered and will be rejected.</b>
9.	The complete offer should be typed in the letterhead of the tenderer. The offer should be signed & stamped by Company's authorized signatory.
10.	Rates quoted in the tender should be <b>inclusive</b> of all all taxes. Breakdown details of packing , forwarding, freight and insurance charges in percentages should be shown separately. The goods should be insured in our favor against all risks from Warehouse to warehouse.
11.	The rate of VAT/CST should be clearly indicated wherever chargeable. This Institute is <b>not eligible to issue C or D form</b> . However the concessional rate of Central Sales Tax admissible to research institutes on purchase of scientific equipments from certain States is applicable to this Institute.
12.	The Delivery period should clearly be indicated and strictly adhered to in the event of an order is placed against your offer. Late delivery will attract liquidated damages @1 % per week subject to a maximum of 10% of the total value of supply order. <b>The vendor should deliver, install and test and commission the LT Main Distribution System in Electric Sub – Station at NGRI without any additional charge. However, it may be noted that the said Distribution System, as per the contract, shall be delivered within 4 (four) weeks from the date of Contract.</b>
13	<p><b>Installation, Testing and Commissioning</b> including acceptance of the items at NGRI should be completed within one month period from the date of delivery, failing which a penalty at the rate of 1% of contract value per day subject to maximum of 10% will be imposed. Thereafter, NGRI holds the option to complete the installation work through alternative sources at the risk and cost of the defaulting vendor.</p> <p>A sticker mentioning the service support call center numbers of the vendor should be pasted on the System.</p> <p>During the installation at NGRI, if the System is found to be defective, it should be replaced with new one by the vendor at his own costs and risks within 15 days from the date on which the vendor has been informed of such damage. Copies of acceptance certificates duly signed by the authorized user should be submitted.</p>
14	Incase any of the items mentioned on pre-page is on the current rate/running contract please quote the DGS&D rate contract reference and also send a copy of the latest R.C.
15	<p><b>Warranty, Support and Maintenance :</b></p> <p>The LT Distribution .System should be under One Year comprehensive onsite Warranty, support and maintenance from the date of acceptance at the site, including free spare parts. The vendor should fulfill the following conditions during the warranty and maintenance period :</p> <p>a) Any failure in the System thereof should be responded and rectified within maximum period of 24 hours on working and 72 hours on other days of lodging complaint.</p>

	<p>b) The System displaying chronic system design or manufacturing defects or Quality Control problem, the same shall be totally replaced by the vendor with equivalent new System at his cost and risk with 30 days from the date of lodging complaint.</p> <p>c) In case of system functionality failure, vendor will ensure backing up of functionality and its restoration, while making the system operational, at NGRI.</p>
16	<p><b>Performance Security :</b></p> <p>a) Within 21 days of receipt of the notification of contract award / purchase order, the supplier shall furnish Performance Security for 20% of the contract value.</p> <p>b) The proceeds of the Performance Security shall be payable to the Purchaser as compensation for any loss resulting from the Supplier's failure to complete its obligations under the contract.</p> <p>c) The Performance Security will be discharged by the Purchaser and returned to the Supplier not later than 60 days following the date of completion of the supplier's performance obligations, including any warranty obligations.</p> <p>The Performance Security shall be in the form of a Bank Guarantee from a Scheduled / Nationalised Bank or A Bankers Cheque or Demand Draft in favour of the Director, NGRI, payable at Hyderabad.</p>
17	<p><b>Payment Schedule :</b></p> <p>80% payment of the contract value will be made against the supply of the entire ordered material at NGRI Stores and balance 20% payment will be made within 30 days of the installation, testing and commissioning of the LT Distribution System and on submission of Invoice for 20%, Performance Bank Guarantee for equivalent value (20%) valid upto a period of 60 days beyond warranty period and jointly signed (NGRI &amp; supplier) accepted installation and commissioning report.</p>
18.	Quotation erased & overwritten, will be summarily rejected unless corrections are authenticated with the tenderer's signature.
19	The Offer should be submitted strictly as per the terms and conditions failing which the offer will be liable for rejection. In the event of the tenderer remaining silent on any terms& conditions of the NIT, it will be presumed that the tenderer(s) have accepted such terms and conditions in the event of any order/contract on them.
20	<b>No deviation of the terms and conditions is acceptable. Terms and conditions which are in deviation of the tender terms are liable for rejection without making back reference to the tenderer.</b>
21.	<b>Conditional tenders will not be accepted.</b>
22	The quotation should be sealed and addressed to the Director, N.G.R.I, Uppal Road, Hyderabad., A.P. India. Each quotation sent by post in closed double cover. The inner cover should be sealed with wax and super scribed as per subject and enquiry No. mentioned on pre page. The outer cover should bear only the address of the office without any mention of quotation within. Quotation delivered personally should be delivered to the Receipt & Dispatch Section of NGRI. Late& Delayed tenders will not be considered.
23.	NGRI does not take any responsibility for loss of tender in transit.
24.	The tender(s) should enclose the list of similar item(s) supplied to any of the C.S.I.R Laboratories for the past three years with complete address, telephone /Fax No. and the contact person to whom they have supplied and installed similar item(s)with their tenders along with the prices finally paid.
25.	The Director, NGRI reserves the right to reject or accept or withdraw the tender in full or part and to increase or decrease the quantity without assigning reason thereof.

26.	The quotations are liable to be rejected if any of the above conditions are not complied with. The quotations should be complete in all respects duly signed wherever required. Incomplete and unsigned offers will not be considered. Quotations that are unclear leave room for interpretation will be considered non-responsive and will not be evaluate.
27.	<p><b>ARBITRATION: a)</b> Unless otherwise specified, in all cases of disputes which cannot be settled by mutual negotiations, the disputes or differences shall finally be settled and binding on both parties by arbitration in conformity with the rules of Indian Arbitration Act, 1940. All disputes or differences what so ever arising between the parties out of relating to the construction, meaning and operation or effect of the general terms and conditions including the Purchase Order or the breach thereof shall be settled by Arbitration Act, 1940 and the award made in pursuance thereof shall be binding on the parties.</p> <p><b>b)</b> Performance of the purchase order shall continue during arbitration and any subsequent proceedings.</p> <p><b>c)</b> The Jurisdiction and Venue of arbitration shall be Hyderabad. The Arbitrator will be the Director, N.G.R.I, or his nominee.</p>
28.	<p><b>RISK PURCHASE:</b> If you fail to deliver the ordered material within the maximum delivery period stipulated in the purchase order, we may procure the same items in such a manner as it deemed appropriate for us. And , if we happen to incur any additional cost in the process of our procurement of similar materials you are liable to pay the same.</p>
29.	<p><b>FORCE MAJURE:</b> If the performance of the obligation of either party is rendered commercially impossible by any of the events herein-after mentioned, the same party shall notice of 15 days from the date of such an event in writing to the other party.</p> <p><b>i)</b> Government regulation; <b>(ii)</b> Legislation; <b>(iii)</b> Natural disasters; <b>(iv)</b> Strikes; <b>(v)</b> Lockout; <b>(vi)</b> Act of God.</p>

**SECTION OFFICER (S & P)**

## **PRE-REQUISITES OF SUPPLIERS WITH REGARD TO INSTALLATION, TESTING & COMMISSIONING OF L.T. MAIN DISTRIBUTION SYSTEM .**

- Supplier has to prepare the concrete trench / duct and related civil work for erecting the Panels in the supervision of concerned Engineer-in-charge.
- All the required cables for termination will be supplied departmentally (except control cable for interlocking).
- Two numbers of G.I. Plate earthing (2' x 2'x 6mm) and with G.I. Strip 50mm x 6mm for body will be provided by the supplier.
- As soon as the materials will be received at NGRI, we will inform the supplier and he has to install and commission the Panels with cable glands and lugs of suitable sizes.
- Commissioning means actually connecting the Panels with main supply and showing the satisfactory performance of the Control and automotive capacitor bank on continuous load and when NGRI satisfies the commissioning, necessary certification will be done.
- Instruction manual, guarantee card for ACB's / MCCB's / APFCP and complete circuit diagram operating and servicing manual of the Panels and Capacitor Bank should be provided along with the Panels.

### **GENERAL CONDITIONS:**

- a) All the meters / indicators should be electronic / digital and flush type ISI marked. Brand will be accepted as per the NGRI approved list enclosed.
- b) Bus bar shall be three phase, neutral and earth of aluminium or aluminium alloy suitable rated for a temperature of 50 degrees C over the ambient temperature. Neutral bus bar may be half of the size of the phase bus and main incoming and outgoing bus bar shall be supported on non-hydroscopic insulator blocks to withstand thermal and dynamic over loads during system short circuited. Bus bar should be covered with heat shrink type PVC sleeves throughout the length earth bus bar of size 25% of the phase bus shall be provided throughout the length of the Panels.
- c) The Panels to be painted by ISI approved colour specified for HSD of approved synthetic enamel paint applied over the one coat of red oxide primer.
- d) All wiring shall be such gauge that it carries the rated load with negligible temperature rise of voltage drop. The insulated wires used shall conform to relevant Indian Standard.
- e) Provision shall be made for earthing all non current carrying metal parts of the equipments earth plugs of suitable size shall be provided where ever the earth connection to the apparatus are necessary.
- f) A name plate showing rating connection diagram should be provided on the Panels. All the important and major parts should bear their catalogue number, name of the parts etc. All the Control Wiring shall be provided with

letter/number/ferules both ends. Two sets of manuals giving the details about design, specifications, special features of the equipment, schematic and wiring diagram instruction regarding installation and maintenance/operation etc. should be supplied.

- g) Rates quoted are inclusive of charges for loading, unloading, installation, testing and commissioning, earth excavation for making the trench and all related civil works for installation of the Panels and providing the earth pits (TWO Nos.), and for delivery at NGRI.

#### **INSPECTION :**

NGRI's representative will come and inspect the Panels and Capacitors Bank. During the inspection, the following should be done :

- a) Demonstration of the Panels with capacitor bank and explaining all the controls provided in the Panels, from your side.
- b) Panels should be tested upto full load in the factory itself in the presence of our representative.
- c) After satisfactory inspection and certification of the Panels by our representative, the supplier will deliver the Panels at our Institute premises (DOOR DELIVERY TO NGRI).

#### **SPECIAL CONDITIONS :**

- The supplier should have ISO certifications.
- The supplier should have the certificate from CPRI for 100KA short circuit.
- The Panels should have the ISI marked.

**Note: All the above pre-requisites must be fulfilled by the bidders while submitting their quotations, failing which the quotation will be rejected.**

**SECTION OFFICER (S&P)**

**BOQ FOR THE PANELS / TECHNICAL SPECIFICATION****415V MAIN PCC PANEL****1**

SLNO	DESCRIPTION	QTY	MAKE
	<b>INCOMER: BUS 1</b>		
	4P EDO ACB WITH MICROPROCESSOR BASED O/L,S/C,U/V,S/T RELEASE 800A 50KA	1	L&T
	AUTO / MANUAL SELECTOR SWITCH	1	SALZER
	DIGITAL TYPE LOAD MANAGER CL-1 96SQMM	1	CONZERV
	TAPE WOUND CURRENT TRANSFORMER CL-1 800/5A	3	KALPA
	CT SHORTING TERMINAL BLOCKS	6	ELMEX
	LED TYPE INDICATING LAMPS R,Y,B	3	L&T
	LED TYPE INDICATING LAMPS ON,OFF,TRIP	3	L&T
	TPN MCB 6 AMPS	2	MDS
	<b>OUTGOINGS : BUS 1</b>		
	3P MCCB WITH THERMAL MAGNETIC BASED O/L,S/C RELEASE WITH RHOM 400A 35KA	4	L&T
	3P MCCB WITH THERMAL MAGNETIC BASED O/L,S/C RELEASE WITH RHOM 200A 35KA	2	L&T
	3P MCCB WITH THERMAL MAGNETIC BASED O/L,S/C RELEASE WITH RHOM 100A 35KA	2	L&T
	<b>BUS COUPLER: 1</b>		
	4P EDO ACB WITHOUT RELEASE & U/V COIL 800A 35KA	1	L&T
	AUTO / MANUAL SELECTOR SWITCH	1	SALZER
	LED TYPE INDICATING LAMPS ON,OFF	2	L&T
	<b>INCOMER: BUS 2</b>		
	4P EDO ACB WITH MICROPROCESSOR BASED O/L,S/C,U/V,S/T RELEASE 800A 35KA	1	L&T
	AUTO / MANUAL SELECTOR SWITCH	1	SALZER
	DIGITAL TYPE LOAD MANAGER CL-1 96SQMM	1	CONZERV
	TAPE WOUND CURRENT TRANSFORMER CL-1 800/5A	3	KALPA
	CT SHORTING TERMINAL BLOCKS	6	ELMEX
	LED TYPE INDICATING LAMPS R,Y,B	3	L&T
	LED TYPE INDICATING LAMPS ON,OFF,TRIP	3	L&T
	TPN MCB 6 AMPS	2	MDS
	<b>OUTGOINGS : BUS 2</b>		
	3P MCCB WITH THERMAL MAGNETIC BASED O/L,S/C RELEASE WITH RHOM 400A 35KA	4	L&T
	3P MCCB WITH THERMAL MAGNETIC BASED O/L,S/C RELEASE WITH RHOM 200A 35KA	2	L&T
	3P MCCB WITH THERMAL MAGNETIC BASED O/L,S/C RELEASE WITH RHOM 100A 35KA	2	L&T
	<b>BUS COUPLER: 2</b>		
	4P EDO ACB WITHOUT RELEASE & U/V COIL 800A 35KA	1	L&T
	AUTO / MANUAL SELECTOR SWITCH	1	SALZER
	LED TYPE INDICATING LAMPS ON,OFF	2	L&T

	<b>INCOMER: BUS 3</b>		
	4P EDO ACB WITH MICROPROCESSOR BASED O/L,S/C,U/V,S/T RELEASE 800A 35KA	1	L&T
	AUTO / MANUAL SELECTOR SWITCH	1	SALZER
	DIGITAL TYPE LOAD MANAGER CL-1 96SQMM	1	CONZERV
	TAPE WOUND CURRENT TRANSFORMER CL-1 800/5A	3	KALPA
	CT SHORTING TERMINAL BLOCKS	6	ELMEX
	LED TYPE INDICATING LAMPS R,Y,B	3	L&T
	LED TYPE INDICATING LAMPS ON,OFF,TRIP	3	L&T
	TPN MCB 6 AMPS	2	MDS
	<b>OUTGOINGS : BUS 3</b>		
	3P MCCB WITH THERMAL MAGNETIC BASED O/L,S/C RELEASE WITH RHOM 400A 35KA	4	L&T
	3P MCCB WITH THERMAL MAGNETIC BASED O/L,S/C RELEASE WITH RHOM 200A 35KA	2	L&T
	3P MCCB WITH THERMAL MAGNETIC BASED O/L,S/C RELEASE WITH RHOM 100A 35KA	2	L&T
	<b>BUS COUPLER: 3</b>		
	4P EDO ACB WITHOUT RELEASE & U/V COIL 800A 35KA	1	L&T
	AUTO / MANUAL SELECTOR SWITCH	1	SALZER
	LED TYPE INDICATING LAMPS ON,OFF	2	L&T
	<b>INCOMER: BUS 4</b>		
	4P EDO ACB WITH MICROPROCESSOR BASED O/L,S/C,U/V,S/T RELEASE 800A 35KA	1	L&T
	AUTO / MANUAL SELECTOR SWITCH	1	SALZER
	DIGITAL TYPE LOAD MANAGER CL-1 96SQMM	1	CONZERV
	TAPE WOUND CURRENT TRANSFORMER CL-1 800/5A	3	KALPA
	CT SHORTING TERMINAL BLOCKS	6	ELMEX
	LED TYPE INDICATING LAMPS R,Y,B	3	L&T
	LED TYPE INDICATING LAMPS ON,OFF,TRIP	3	L&T
	TPN MCB 6 AMPS	2	MDS
	<b>OUTGOINGS : BUS 4</b>		
	3P MCCB WITH THERMAL MAGNETIC BASED O/L,S/C RELEASE WITH RHOM 400A 35KA	4	L&T
	3P MCCB WITH THERMAL MAGNETIC BASED O/L,S/C RELEASE WITH RHOM 200A 35KA	2	L&T
	3P MCCB WITH THERMAL MAGNETIC BASED O/L,S/C RELEASE WITH RHOM 100A 35KA	2	L&T
	<b>BUS COUPLER: 4</b>		
	4P EDO ACB WITHOUT RELEASE & U/V COIL 800A 35KA	1	L&T
	AUTO / MANUAL SELECTOR SWITCH	1	SALZER
	LED TYPE INDICATING LAMPS ON,OFF	2	L&T
	<b>INCOMER: BUS 5</b>		
	4P EDO ACB WITH MICROPROCESSOR BASED O/L,S/C,U/V,S/T RELEASE 800A 35KA	1	L&T
	AUTO / MANUAL SELECTOR SWITCH	1	SALZER
	DIGITAL TYPE LOAD MANAGER CL-1 96SQMM	1	CONZERV
	TAPE WOUND CURRENT TRANSFORMER CL-1 800/5A	3	KALPA
	CT SHORTING TERMINAL BLOCKS	6	ELMEX
	LED TYPE INDICATING LAMPS R,Y,B	3	L&T
	LED TYPE INDICATING LAMPS ON,OFF,TRIP	3	L&T

	TPN MCB 6 AMPS	2	MDS
	<b>OUTGOINGS : BUS 5</b>		
	3P MCCB WITH THERMAL MAGNETIC BASED O/L,S/C RELEASE WITH RHOM 400A 35KA	4	L&T
	3P MCCB WITH THERMAL MAGNETIC BASED O/L,S/C RELEASE WITH RHOM 200A 35KA	2	L&T
	3P MCCB WITH THERMAL MAGNETIC BASED O/L,S/C RELEASE WITH RHOM 100A 35KA	2	L&T
	ELECTRICAL INETRLCOK FOR 5 I/C + 4 B/C ACB	1	
	<b>TPN ALUMINIUM BUS BAR 800A</b>	<b>1SET</b>	

**300KVAR APFC PANEL**

**1**

SLNO	DESCRIPTION	QTY	MAKE
	<b>INCOMER:</b>		
	3P EDO ACB WITH MICROPROCESSOR BASED O/L,S/C,U/V,S/T RELEASE 1000A 50KA	1	L&T
	12 STAGE APFC RELAY	1	L&T
	ON DELAY TIMER	1	REPUTED
	AUTO / MANUAL SELECTOR SWITCH	1	SALZER
	AUX CONTACTOR	6	TM
	AUTO / MANUAL SELECTOR SWITCH	1	SALZER
	DIGITAL TYPE LOAD MANAGER CL-1 96SQMM	1	CONZERV
	TAPE WOUND CURRENT TRANSFORMER CL-1 1000/5A	3	KALPA
	CT SHORTING TERMINAL BLOCKS	6	ELMEX
	LED TYPE INDICATING LAMPS R,Y,B	3	L&T
	LED TYPE INDICATING LAMPS ON,OFF,TRIP	3	L&T
	TPN MCB 6 AMPS	2	MDS
	<b>OUTGOINGS :</b>		
	3P MCCB WITH THERMAL MAGNETIC BASED O/L,S/C RELEASE WITH RHOM 125A 35KA	3	L&T
	3P MCCB WITH THERMAL MAGNETIC BASED O/L,S/C RELEASE WITH RHOM 63A 35KA	6	L&T
	3P CONTACTOR FOR CAPACITOR SWITCHING 50KVAR	3	TM
	3P CONTACTOR FOR CAPACITOR SWITCHING 25KVAR	6	TM
	440V HEAVYDUTY TYPE CAPACITOR 50KVAR	3	EPCOS
	440V HEAVYDUTY TYPE CAPACITOR 25KVAR	6	EPCOS
	COOLING FAN	9	REPUTED
	ILLUMINATED TYPE PUSH BUTTONS ON,OFF	18	L&T
	<b>SPACE FOR MOUNTING 50KVAR CAPACITOR FEEDER</b>	<b>2</b>	
	<b>SPACE FOR MOUNTING 25KVAR CAPACITOR FEEDER</b>	<b>2</b>	
	<b>TPN ALUMINIUM BUS BAR 1000A</b>	<b>1SET</b>	

**NATIONAL GEOPHYSICAL RESEARCH INSTITUTE  
(COUNCIL OF SCIENTIFIC & INSTITUTE RESEARCH)  
HYDERABAD-500 007**

List of Approved Electrical Items/Materials

<b>Sno</b>	<b>Important Name of Items</b>	<b>Approved make</b>
1	MCB Enclosures, Blanking Plates, MCB DBs, MCB Industrial Socket Outlet MCB Enclosures Indicator	Hager, MDS, Siemens, Legrand, L&T
2	Switch, Socket Outlets, Ceiling rose, Lamp Holder, Call bell	Anchor(ISI)
3	Panel mounting Fuse Bases HRC Fuse Links	GEC Alsthorn/L&T Siemens
4	Wires and Cables	Finolex/ CCI/ Universal
5	Conduits and Conduits Boxes	Mercury/ Sudhakar
6	Phenolic Sheet	Hylam Bloom DESM ISI marker IS-2096
7	Bulk head Fittings	Crompton/ Bajaj
8	MCCB's (with Electronic Protection Relay, 35KA Breaking Capacity)	GE / L&T/ Legrand
9	Digital Meters	Enercon
10	MCB (C-type, 10KA breaking Capacity)	Hager, MDS, Siemens, Legrand
11	RCCB (30-MA Sensitivity)	Hager, MDS, Siemens, Legrand
12	Selector Switches	Suizer/ Kayeee
13	Indicating Lamp Holder	Teknic