



RAJASTHAN RAJYA VIDYUT PRASARAN NIGAM LTD.

An ISO 9001: 2008 Certified Company

OFFICE OF THE SUPERINTENDING ENGINEER

(TRANSMISSION LINE PROCUREMENT CIRCLE)

M. M. Building of RVPN,
Old Power House Premises,

Near Ram Mandir, Bani Park, Jaipur - 302 006-02.

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TENDER SPECIFICATION NO. RVPN / SE / TLPC / STEEL / A-III / TN.3748

**FOR PURCHASE OF 245 kV AND 145 kV CAPACITOR VOLTAGE
TRANSFORMERS (GENERAL CLASS)**

LAST DATE OF RECEIPT OF TENDER	:	29.09.2011 UP TO 2.30 PM
DATE OF OPENING OF TENDERS	:	29.09.2011 AT 3.00 PM
EARNEST MONEY	:	Rs.1,00,000.00 /Exemption Certificate or Vendor Registration Certificate of Category 'A'
COST OF SPECIFICATION	:	Rs.2,000.00
ITEM & QUANTITY	:	
(i) 245 kV CVT (General Class)	:	260 Nos.
(ii) 145 kV CVT (General Class)	:	342 Nos.
VALIDITY	:	120 DAYS FROM THE DATE OF OPENING OF TENDER

IMPORTANT NOTE:

1. Furnishing of earnest money / valid exemption certificate as per clause No.1.03 of Section-I of this specification is essential otherwise the tender offer will not be opened. However the Vendors who have registration with RVPN under class 'A' under vendor registration scheme of RVPN or Central / State Govt. Undertakings / Corporation or Company are only exempted from furnishing of Earnest money as per purchase manual Clause 25.4 on production of an attested copy of valid Vendor Registration **along with copy of valid BG furnished against vendors registration** or documentary evidence in support of their being Govt. (Central / State) Undertaking / Corporation or Company. **EMD, if required shall be furnished through DD / Pay order drawn in favour of Accounts Officer (TLPC), RVPN Ltd., Jaipur.**
2. Technical deviation including GTP and commercial deviations including delivery, if any, shall only be mentioned in schedule II(A) & II(B) "Departure from the SPECIFICATION" attached with

this specification. **Mentioning of such deviations elsewhere in the offer will not be considered as deviation. The printed terms & conditions of firms, if any, attached with the tender will not be considered.** RVPN shall have right to accept or reject these deviations.

3. (i) The tenderers shall quote both the Ex-works and FOR destination prices separately indicating the freight and insurance charges in Schedule - IV. **They will also indicate the prevailing rates of Excise Duty, Education Cess on ED and Sales Tax (whether inclusive or Exclusive in the quoted prices).** The schedule - IV should be packed in "price bid" envelope. If Schedule - IV is not filled completely the offer is likely to be ignored.

(ii) The tenders are also required to indicate the quantity quoted in schedule IV-A and attach the same with technical bid (Part-I).
4. (i) The prices quoted shall be variable without ceiling as per IEEMA price variation formula for CVT with base date **01.08.2011** irrespective of date of opening of tender.

(ii) In case IEEMA changes the applicable formula for price variation for any item & issue guidelines for adopting the same during pendency of the contract the new formula & guidelines shall be become applicable for which no confirmation shall be taken from the supplier.
5. The tender documents should be addressed to Superintending Engineer (TLPC), RVPN, M. M. Building of RVPN, Old Power House Premises, Near Ram Mandir, Bani Park, Jaipur-302006.
6. The tender offer shall be furnished as per clause 1.02(i) of Section - I.
7. Offer of Bidders without, Schedule-I to VII and without relevant documents with respect to 'Qualifying Requirement' is likely to be ignored.
8. The tender shall be furnished in single copy only.
9. Tenderers shall indicate in their bid the name and complete address of Excise authorities under whose jurisdiction their works / office falls.
10. Any cutting / overwriting in the figures of the tendered documents should also be clarified / indicated in the words duly signed.
11. RVPN has the right to reject any offer on the basis of track record of poor performance in execution of previous order / equipment supplied / after sales service while evaluating the technical bid (part-I).
12. Deviation of any kind shall not be quoted in price bid, if found quoted, the same shall be ignored.
13. The purchaser will respond in writing to any request for clarification on tender documents which it receives not later

than 15 days prior to deadline for submission of tender, after which no correspondence shall be entertained.

14. The bidders are required to furnish the clarification / confirmation / documents sought subsequent to opening of bid within specified time failing which, the case shall be finalised / decided on the basis of available information. The responsibility of being ignored on account of delay in furnishing of desired information / documents shall be of the bidder.
15. The year-wise past supplies for the last five years for 245 kV and 145 kV Capacitor Voltage Transformers including the supplies made to RVPN may be furnished in Schedule - III.
16. As per notification dated 12.07.2004, the Raj. State Entry Tax shall be applicable on the firms having their works outside Rajasthan. The entry tax shall be borne by RVPN on FORD price. However, the same shall be considered while evaluating the prices. The present rate of entry tax is @ 4%. Any increase in the rate of entry tax beyond delivery schedule shall be to the supplier's account.
17. The following facilities to be provided by the supplier at his own costs to the Inspecting Officer of RVPN (Applicable in case ordered cost of material is more than 50 lacs).
 - (i) Suitable accommodation to the Inspecting Officer of RVPN.
 - (ii) In case of joint inspection, single or shared double room accommodation shall be provided.
 - (iii) Local conveyance between arrival point, place of stay, works and departure point.
 - (iv) The firm shall assist in arranging return ticket and reservation on the request of Inspecting Officer for which payment shall be made by the Inspecting Officer.
18. Material / Equipment on order shall be required to be despatched by Road on 'Freight paid basis'.
19. The bidder, if is a Micro, Small or Medium enterprise as per the Micro, Small & Medium enterprise development act, 2006 (MSMED Act 2006) and registered with the authorities under the above Act for the item / services covered under the tender, then the party has to indicate the Entrepreneurs Memorandum No. (Twelve digit) and enclose a copy of the certificate issued by the Authorities under the MSMED Act, 2006.
20. RVPN is eligible for concessional rates of CST / VAT. Present concessional rate of VAT is 5% for which requisite certificate shall be issued by the purchase officer.
21. This specification includes Section - I, Section - II (with addendum / corrigendum & additional addendum / corrigendum) and Section - III.

(Please note that bids received after specified time on due date of opening will not be accepted and such offer shall be ignored).

Superintending Engineer (TLPC)

LIST OF DOCUMENTS OF TENDER SPECIFICATION
NO. RVPN / SE / TLPC / STEEL / A-III / **TN - 3748.**

S.NO.	CONTENTS		PAGE NO.
1.	Instruction to tenderers as prescribed in Section-I of the specification.	SECTION-I	--
2.	General Conditions of Contract as Prescribed in Section-II (with addendum / corrigendum & additional addendum / corrigendum) of the specification.	SECTION-II	--
3.	Technical Specification which cover requirement, manufacture, testing, supply & delivery of material / equipment etc.	SECTION-III	5-13
4.	Required Technical particulars	Appendix-I	14-16
5.	Pre-Qualifying requirements	Appendix-II	17-32
6.	Price variation clause as per IEEMA	Appendix-III	33-36
7.	Requirement schedule	Appendix-IV	37
8.	Delivery Schedule	Appendix-V	38
9.	Statement of Guaranteed Technical Particulars.	Schedule-I	39-41
10.	Form of departure from technical and commercial specification.	Schedule-II(A)&(B)	42 & 43
11.	Form Indicating the past performance (list of past supplies)	Schedule-III	44
12.	Tender form (Price schedule)	Schedule-IV&IV-A	45 & 46
13.	Form of Indicating the delivery (Delivery schedule)	Schedule-V	47
14.	List of equipments & technical hands available with the tendering firm.	Schedule-VI	48
15.	Bill of Material	Schedule-VII	49

SECTION - III

TECHNICAL SPECIFICATION FOR 245 kV AND 145 kV CAPACITOR VOLTAGE TRANSFORMERS (GENERAL CLASS) AGAINST TN - 3748

3.1 SCOPE :

This specification covers the design, manufacture, assembly and testing at manufacturer's works before despatch, supply and delivery of single phase, 50 Hz. Oil immersed, self cooled outdoor type 245 kV and 145 kV Capacitor Voltage Transformers for installation at various Grid Sub Stations of Rajasthan. The equipment shall be suitable for installation in system with neutral effectively grounded. The equipment should be complete in all respect and to the entire satisfaction of the purchaser. It will however be the responsibility of the supplier to supply all apparatus, appliances and material whether specifically mentioned or not but which may be found necessary to complete the equipment as well as for the perfect operation of the equipment.

3.2 STANDARDS:

The design, manufacture and testing of various equipments covered by this specification shall comply with the latest issue of the following standards except the value(s) wherever specified shall be considered relevant.

- a) IS:9348 Specification for coupling capacitor and capacitor divider.
- b) IS:5547 Application guide for capacitor voltage transformers.
- c) IS:3156 Specification for voltage transformers (Part.I to IV)
- d) IS:5621 Specification for Hollow porcelain Bushing.
- e) IS:2099 Specification for Bushing.
- f) IS:5561 Specification for electric power connectors.
- g) IS:335 Specification for new insulating oil.
- h) IS:3070 Specification for lightning arrestors for A. C. System.
- i) IS:4146 Application guide for voltage transformers.
- j) IS:3347 Dimension of Porcelain transformer bushings.
- k) IS:2071 Method of high voltage testing
- l) IS:2165 Insulation Co-ordination for equipment for 100KV & above.
- m) IS:2633 specification for ferrous metal galvanisation.
- n) IEC 867

3.3 Equipment and material conforming to other internationally recognised standards which ensure quality equal to or better than the Indian Standard mentioned above, would also be acceptable. In case the tenderers wish to offer equipment conforming to other standards they shall furnish an English translation of the relevant standard.

3.4 CLIMATIC CONDITIONS:

The equipment to be supplied under the specification shall be suitable for satisfactory operation under the following tropical humid conditions:

i)	Location	RAJASTHAN STATE
ii)	Max.ambient air Temp.(deg.C).	50 deg.C
iii)	Min. Ambient air Temp.(Deg.)	(-) 5.0 Deg.C
iv)	Average daily Ambient Air Temp.	32.2 deg C
v)	Max.relative humidity(%)	100
vi)	Min.relative humidity(%)	10
vii)	Average rainfall/annum(mm)	100-1000
viii)	Max. altitude above M.S.L (Meters)	Less than 1000m
ix)	Isoceraunic level(days/annum)	40 days.
x)	Max.Wind pressure (Kg/cm.sq.)	195
xi)	Seismic level(Horizontal/ Acceleration).	0.08 g.
xii)	Number of rainy days/year	70

The atmosphere is to be considered as laden with industrial and toxic gas and dust in suspension during dry months. Fog, smoke and mild acids are also present. Heavy lightning may also be present during the month from June to October.

3.5 GENERAL DESCRIPTION FOR 245 KV AND 145 KV CAPACITOR VOLTAGE TRANSFORMERS:

3.5.1 The capacitor voltage transformer shall be suitable for line to ground connection. It shall be formed by two independent main parts, a capacitor potential divider column and an electromagnetic unit, assembled together to constitute a complete CVT unit.

3.5.2 The capacitor potential divider shall consists of series connected capacitors fully immersed in insulating oil having high dielectric constant and high chemical stability contained in a hermetically sealed porcelain housing. An intermediate tapping shall be provided for supply to the electromagnetic unit. The capacitor shall serve as capacitor potential divider as well as coupling capacitor.

3.5.3 The electromagnetic unit shall be contained in a separate oil filled welded steel tank, which shall also form the mounting of the capacitor column. The Earthing link / connection shall exist between upper portion and bottom portion of the tank which is separated by an 'O' ring or gasket. The electromagnetic unit shall comprise of intermediate potential transformer (whose primary is fed from the intermediate tapping from the capacitor potential divider), a compensating reactor, a damping device, a surge voltage arrester, etc. The secondary terminals of the electromagnetic unit shall be brought out in a weather proof box out side the steel tank housing of the electromagnetic unit. Screwed connections shall not be accepted. Internal connections should have lock nut or locking feature to prevent loosening of studs. The terminal box shall be hot dip galvanised. The terminal box shall have 2 nos. Cable glands of 25mm size for receiving Control cables and hinged door provided with locking arrangement. The door shall have suitable arrangement to check the ingress of moisture into the terminal box. HRC fuses 16Amp rating shall be provided in the secondary terminal box. The rating, type and make of fuses provided shall be indicated in the tender as well as in the drawings. Necessary oil level indicator, oil filling and sampling valves /suitable arrangement shall be provided on the tank. Connection diagram, rating plate and two grounding pads of

size 75 × 50 mm, protected against corrosion and metallicly clean, shall also be provided on the tank.

3.5.4 (a) PORCELAIN HOUSING:

The details of location and type of joint, if provided, on the porcelain, shall be furnished by the supplier along with the offer. The housing shall be made of homogeneous, vitreous porcelain of high mechanical and dielectric strength. Glazing of porcelain shall be of uniform brown or dark brown colour with a smooth surface arranged to shed away rain water or condensed water particles (fog). The profile of porcelain shall be aerodynamic type as per IEC-815.

(b) Details of attachment of metallic flanges to the porcelain shall be brought out in the offer.

(c) The metal tanks shall have bare minimum number of welded joints so as to minimise possible locations of oil leakage. The metal tank shall be made out of steel / stainless steel / aluminium alloy, depending on the requirement. Welding in Horizontal plane is to be avoided as welding at this location may give way due to vibrations during transport resulting in oil leakage. Supplier has to obtain specific approval from purchaser for any horizontal welding used in the bottom tank.

3.5.5 The grounding connection of the potential divider shall preferably be let out of the steel case through a suitable bushing. When the CVT is not to be used for carrier coupling, the grounding connection shall be earthed through a suitable grounding switch or link. The details of grounding switch must be clearly shown in the drawing.

3.5.6 All ferrous parts of CVT including tank and secondary terminal box shall be hot dip galvanised as per IS: 2633 (latest amendments). Bolts, nuts, screws, pins, washers etc, used in the equipment shall also be galvanised either hot dip or electrically. All current carrying parts shall be of non ferrous metals or alloy and shall be designed to limit sharp points, edges, etc.

3.6 DESIGN REQUIREMENT FOR 245 KV AND 145 KV CVTs:

3.6.1 The CVT shall conform to the standards given in clause No.3.2 and technical particulars at "Appendix - I" and shall be suitable to use as measuring unit as well as a coupling capacitor for the power line carrier communication network i.e. voice communication, carrier, protective relaying, telemetering and teleprinting service over one or more carrier channels in 40 KHz to 500 KHz frequency range. The CVT shall be provided with an insulated low voltage terminal for connection to H.F. coupling unit. The CVTs shall have an inductive reactance (HF Choke) connected preferably between intermediate voltage terminal and primary of EMU to minimize attenuation to the carrier frequencies. The details of H.F choke shall be clearly mentioned in the drawing for CVT.

3.6.2 Each capacitor voltage transformer shall be suitable for connection directly to the bus or line without the use of auxiliaries such as isolating switch / fuse. The capacitor of the unit shall be so designed that application of lightning impulse voltage of the magnitude as per relevant standard shall not damage the internal working of elements or cause a change in their electrostatic capacitance.

- 3.6.3 The intermediate potential transformer shall be of oil immersed self cooled design and shall be suitable for metering, relaying and synchronizing services. The core of this transformer shall be made of non ageing, cold rolled, laminated, electrical grade silicon steel having low hysteresis loss and high permeability so as to ensure high accuracy at normal as well as at over voltage. The primary winding shall be connected through a reactor suitable for compensating any increase in the intermediate tapping point voltage at all loadings and upon the rated burden.
- 3.6.4 (a) The CVT shall be provided with a suitable device so that ferro-resonance and other oscillations due to saturation of iron core of transformer or due to any inductance connected in parallel with it and initiated by either over voltages on the network side or by opening of the short circuited primary or secondaries, are practically zero for no burden to rated burden. Oscillations of the secondary voltages which may rise as a result of break down of primary voltage due to short circuits shall not affect the proper working of protective relays. The design of the compensating reactor and the intermediate potential transformer as well as of the damping device, inserted in the winding of the intermediate transformer shall be such that ferro-resonance should not occur.
 (b) The Capacitor voltage divider shall be capable of being used over complete carrier frequency bandwidth. The value of capacitance shall be suitably chosen for reliable wide band carrier operation.
- 3.6.5 WINDING:
- 3.6.5.1 The primary of the potential device shall be connected to a suitable tap of the capacitor potential divider. The secondary of the intermediate potential transformer shall be provided with three separate windings, each rated for $110/\sqrt{3}$ volts.
- 3.6.5.2 The rated output burden of the secondary windings and the accuracy class at 25% to 100% burden for protection cores and metering core shall be as per the table below.

No.	Burden / Accuracy class	Core 1	Core 2	Core 3	Simultaneous Burden
		Protection	Protection	Metering	
1. 245 kV CVTs (General Class)					
(a)	Burden (VA)	50	50	50	100
(b)	Accuracy Class	3P	3P	0.5	--
2. 145 kV CVTs (General Class)					
(a)	Burden (VA)	50	50	50	100
(b)	Accuracy Class	3P	3P	0.5	--

- 3.6.6. TEMPERATURE RISE:
 The CVT shall be designed to limit the temp. of winding and other parts as specified in the standards, when corrected for the difference between temperature prevailing at site and temperature specified by the standards. The temperature rise at 1.2 times rated primary voltage and at rated frequency and rated burden shall not exceed the limits specified above and the temperature rise at 1.5 times rated primary voltage when

applied for 30 seconds shall not exceed the limits as mentioned in the relevant standards.

3.7 INSULATION:

The CVT shall withstand satisfactorily electric test voltages corresponding to the values mentioned in the relevant Indian Standards.

3.8 INSULATING OIL:

The quantity of insulating oil for first filling in each equipment shall be stated in the tender. The insulating oil shall conform to the requirements of latest issue of IS: 335 along with all its amendments. The CVT shall be supplied duly filled with insulating oil and shall be hermetically sealed. The CVT manufacturer, as an option, may use synthetic insulating liquids conforming to IEC: 867 or equivalent with latest revision in capacitor column.

3.9 TERMINAL CONNECTORS:

All the CVTs required shall be provided with one number each of solder less, clamp type aluminium alloy terminal connector of suitable size (ACSR ZEBRA for 245 kV CVTs and ACSR PANTHER for 145 kV CVTs). Each terminal connector shall be suitable for both horizontal and vertical connections. The terminal connector should have spring washer and double nut provision in each bolt. The nuts and bolts shall be hot dip galvanised. The spring washers shall be electro galvanised. The CVTs shall also be provided with two Nos. earthing pads of size 75x50 mm protected against corrosion and metallicly clean.

3.10 BUSHING / INSULATORS:

The bushing / insulators shall be of standard make such as **WSI / BHEL / MIL / Birla NGK / IEC**. The make and catalogue No., total creepage distance, protected creepage distance and other details be clearly stated in the GTP.

3.11 TYPE OF MOUNTING:

The CVTs shall be suitable for mounting on both steel structures and concrete pedestals.

3.12 DRAWINGS / MANUALS:

3.12.1 DRAWINGS:

The following dimensional drawings, in addition to the other special characteristic drawings / literature, shall be submitted along with the tender. In absence of these drawings tender shall be treated as incomplete and will not be considered.

- i) Out line dimensional drawings showing general arrangement and loading data of the equipment.
- ii) Drawings showing inside details (vertical sectional view of equipment).
- iii) Drawings showing details of terminal connectors with number of bolts and washers.
- iv) Drawings showing details of mounting arrangement.
- v) Drawings of connection diagrams showing the details of secondary terminals.

- vi) Technical and descriptive literature explaining constructional features and the details of the equipments.
- vii) Name / rating plate.
- viii) Drawings depicting magnetisation curve for each of the secondaries.
- ix) Accuracy curves for CVTs will be supplied with each CVT of frequency ranges (GTP point No.33).
- x) Drawing for hollow porcelain insulators indicating all details.

3.12.2 INSTRUCTION MANUAL:

At least six copies of operation, maintenance and erection manuals shall be supplied to this office one month prior to the shipment of the equipment. One copy of operation, maintenance and erection manuals shall be supplied along with each CVT. The manuals shall be bound volumes and shall contain all the drawings and information required for erection, operation and maintenance of the equipment. Besides other things the manuals should also include the following particulars:

- i) Marked erection prints identifying the components of the equipment with assembly drawings.
- ii) Details dimensions, assembly & description of the auxiliaries.
- iii) List of spare parts.

3.13 INSPECTION & TESTING:

3.13.1 TYPE TEST

245 kV and 145 kV CVTs shall comply with the requirement of the following type tests as per IS: 3156 - 1992 (All parts) / IS: 9348 - 1998 (IEC 358) / other relevant standards:

1. Ferro - resonance test.
2. Transient response test.
3. Temperature rise test
4. Impulse voltage test
5. Chopped lightning impulse test.
6. High frequency capacitance and equivalent series resistance measurements in the range of the temperature category.
7. Stray capacitance and stray conductance measurements of the low voltage terminal.
8. A. C. voltage test, wet.
9. Discharge test.
10. Partial discharge test
11. Determination of temperature coefficient.
12. Determination of errors or other characteristics according to the requirements of the appropriate designation or accuracy class.
13. Short circuit withstand capability test.
14. Cantilever test.

(i) The bidder shall furnish valid and authenticated Type test certificate from a Govt. / a Govt. approved / a Govt. recognized / NABL accredited laboratory / ILAC i.e. International Laboratory Accreditation Cooperation (in case of foreign laboratory) of similar rating and design of tendered equipment. Such type test certificate should not be older than 7 years as on the date of bid opening. For this purpose date of conducting type test will be considered.

(ii) The bidder should furnish documentary evidence in support of the laboratory whose type test have been furnished, that the said laboratory is a Govt. / a Govt. approved / a Govt. recognized / NABL accredited laboratory / ILAC accredited (in case of foreign laboratory).

(iii) The type test certificate from in house laboratory of tendering firm even if it is a Govt. approved / Govt. recognized / NABL accredited / ILAC accredited shall not be accepted in case of their own tender. This will not apply if tendering firm is Govt. Company / Public Sector Undertaking.

(iv) Alternatively in lieu of type test certificate(s) bidder may furnish Bank Guarantee of Rs. 5.00 lacs in the prescribed proforma Annexure-II A, only in cases as specified at clause no. 3.04 of Pre-qualifying requirements of the specification (Appendix - II).

3.13.2 ROUTINE TEST

The CVTs shall be subjected before despatch to stipulated routine test at manufacturers work's during the process of manufacture visiting inspector or any other representative of purchaser may examine this record.

3.13.3 INSPECTION

(i) No equipment shall be despatched from its point of manufacturer unless the material has been satisfactorily inspected and cleared.

(ii) The inspection of the equipment shall be got carried out by the purchaser in accordance to the relevant standards. The following routine tests shall be carried out on all the CVTs in the presence of the Inspecting Officer nominated by RVPN.

1. Verification of terminal marking and polarity.
2. Determination of errors or other characteristics according to the requirements of the appropriate designation or accuracy class.
3. Power frequency dry withstand test on primary winding.
4. Power frequency dry withstand test on secondary windings.
5. Capacitance measurements before and after high voltage test.
6. Capacitor loss measurement before and after high voltage test.
7. A. C. voltage test between low voltage terminal and earth terminal.
8. Partial discharge test.
9. Sealing test / visual check for leakage.
10. Test on the electromagnetic unit: Induced A. C. voltage test on primary and secondary windings.
11. Checking of the rating plate.

(iii) Inspection and acceptance of any quantity of equipment shall in no way relieve the supplier from his responsibility for meeting all the requirements of this specification and this shall not prevent subsequent rejection if such equipment is later on found defective.

3.13.4 The following facilities shall be provided by the successful tenderer at his own cost to the Inspecting Officers of RVPN, in case the tender specification and purchase order is of the value of 50 lacs and above.

- a) A suitable accommodation to the inspecting officers. In case of joint inspection, single or shared double room accommodation shall be provided.
- b) Local conveyance between arrival point/departure point, place of stay and works.
- c) The firm shall also assist in arranging return ticket and reservation on the request of the Inspecting Officer for which the payment shall be made by the Inspecting Officer.

3.14 NAME / RATING PLATE:

All items of the equipment included in this specification shall be provided with name/ rating plates as per relevant standards. Rating plate and terminal marking shall be as per relevant ISS. The TN No. and P.O. No. must be provided on the name plate.

3.15 SITE TESTS:

The purchaser reserves the right to carry out any site tests as he may decide at his own cost. In case equipment is not found as per purchase order all expenses incurred during site testing will be to the supplier's account and material will be replaced by the supplier at site, free of cost including the transportation, handling, installation and any incidental charges shall be borne by the supplier.

3.16 GUARANTEED TECHNICAL PARTICULARS:

The tenderer shall furnish all the guaranteed technical particulars as called for in schedule - I. Any other particulars considered necessary by the tenderer may also be given in addition to those listed in Schedule - I. The tenders lacking in supply of requisite information as called for may be rejected as incomplete.

3.17 MATERIAL AND WORKMANSHIP:

All materials used in the manufacture of aforesaid equipment shall be of best quality and capable of satisfactory operation under climatic conditions mentioned in clause 3.4 of the specification. The workmanship shall be of the highest grade and the entire manufacture shall be in accordance with the best modern engineering practice.

3.18 COMPLETENESS OF EQUIPMENT:

All fittings accessories or apparatus which may have not been specifically mentioned in this specification but which are usual or necessary for the completeness of the equipment shall be deemed to have been included in this specification.

3.19 LATENT DEFECTS, ERRORS AND OMISSIONS:

Any material / equipment or parts thereof that developed defects, errors or omissions in the apparatus, not disclosed prior to the final acceptance by the purchaser but disclosed during the guarantee period, shall be corrected promptly, or the apparatus or part thereof shall be replaced by the supplier free of charge and all expenses for the transportation, handling, installation of such replacement or any other incidental charges if any shall be borne by the supplier.

3.20 SCHEDULE OF EQUIPMENTS/PRICES AND DELIVERIES:

3.20.1 The tenderer shall quote for both Ex-works and F.O.R. Destination unit prices and delivery in the Schedules provided with this specification.

3.20.2 Tenderers must submit all the schedules duly completed in all respects with the tenders.

3.20.3 The tenderers shall confirm that they have quoted the prices after considering the modvat benefits accrued to them and that they will pass on the additional modvat benefits to the Nigam due to any change in tariff of modvat scheme subsequently.

3.20.4 DEVIATIONS:

Any deviation from the provisions of this specification Section-I, II, III shall be clearly listed and brought out separately in Schedule - II-A and II-B.

APPENDIX - I

**TECHNICAL AND OTHER PARTICULARS OF 245 kV AND 145 kV
CAPACITOR VOLTAGE TRANSFORMERS AGAINST TN - 3748**

S. No.	PARTICULARS	245 kV CVTs (General Class)	145 kV CVTs (General Class)
1	NOMINAL SYSTEM VOLTAGE	220 kV	132 kV
2	HIGHEST SYSTEM VOLTAGE.	245 kV	145 kV
3	RATED SYSTEM FREQUENCY/PHASE	50 Hz / 3 PHASE	50 Hz / 3 PHASE
4	TYPE OF EARTHING	EFFECTIVELY EARTHED	EFFECTIVELY EARTHED
5	TYPE OF MOUNTING	PEDESTAL TYPE	PEDESTAL TYPE
6	NO. OF PHASES FOR CVTs	SINGLE PHASE	SINGLE PHASE
7	NO. OF SECONDARY WINDING OF POTENTIAL DEVICE.	THREE	THREE
8	RATED SECONDARY VOLTAGE :		
	i) WINDING - I	110 / $\sqrt{3}$ V	110 / $\sqrt{3}$ V
	ii) WINDING -II	110 / $\sqrt{3}$ V	110 / $\sqrt{3}$ V
	iii) WINDING -III	110 / $\sqrt{3}$ V	110 / $\sqrt{3}$ V
9	RATED OUTPUT OF EACH SECONDARY WINDING.		
	i) WINDING - I	50 VA	50 VA
	ii) WINDING -II	50 VA	50 VA
	iii) WINDING -III	50 VA	50 VA
10	CLASS OF ACCURACY & PURPOSE OF EACH SECONDARY WINDING:		
	i) WINDING - I	3P FOR PROTECTION	3P FOR PROTECTION
	ii) WINDING -II	3P FOR PROTECTION	3P FOR PROTECTION
	iii) WINDING -III	0.5 FOR METERING	0.5 FOR METERING
11	TRANSFORMATION RATIO:		
	i) WINDING - I	$\frac{220 \text{ kV}}{\sqrt{3}} / \frac{110 \text{ V}}{\sqrt{3}}$	$\frac{132 \text{ kV}}{\sqrt{3}} / \frac{110 \text{ V}}{\sqrt{3}}$
	ii) WINDING -II	$\frac{220 \text{ kV}}{\sqrt{3}} / \frac{110 \text{ V}}{\sqrt{3}}$	$\frac{132 \text{ kV}}{\sqrt{3}} / \frac{110 \text{ V}}{\sqrt{3}}$
	iii) WINDING -III	$\frac{220 \text{ kV}}{\sqrt{3}} / \frac{110 \text{ V}}{\sqrt{3}}$	$\frac{132 \text{ kV}}{\sqrt{3}} / \frac{110 \text{ V}}{\sqrt{3}}$
12	MAX. TEMPERATURE RISE. (LIMITS OF TEMPERATURE RISE OF WINDING)	WITHIN LIMITS AS PER IS: 3156 (LATEST AMENDMENT ISSUED THEREOF)	WITHIN LIMITS AS PER IS: 3156 (LATEST AMENDMENT ISSUED THEREOF)

S. No.	PARTICULARS	245 kV CVTs (General Class)	145 kV CVTs (General Class)
13	MAX. RATIO (VOLTAGE) ERRORS.	WITHIN LIMITS AS PER IS: 3156 (LATEST AMENDMENT ISSUED THEREOF)	WITHIN LIMITS AS PER IS: 3156 (LATEST AMENDMENT ISSUED THEREOF)
14	MAX. PHASE DISPLACEMENT ERRORS.	--- do ---	--- do ---
15	VOLTAGE FACTOR	1.2 CONTINUOUS & 1.5 FOR 30 SECONDS.	1.2 CONTINUOUS & 1.5 FOR 30 SECONDS.
16	RATED INSULATION LEVEL: a) 1.2/50 u.s. IMPULSE WITHSTAND VOLTAGE. b) ONE MINUTE POWER FREQUENCY WITHSTAND VOLTAGE.	1050 kV (PEAK) 460 kV (RMS)	650 kV (PEAK) 275 kV (RMS)
17	RATED CAPACITANCE.	4400 pf (WITH TOLERANCE +10% AND -5%)	4400 pf (WITH TOLERANCE +10% AND -5%)
18	VALUE OF STRAY CAPACITANCE AND STRAY CONDUCTANCE IN THE CARRIER FREQUENCY RANGE OF 40 TO 500 KHZ FOR COMPLETE CVT BETWEEN LOW VOLTAGE TERMINAL AND EARTH TERMINAL (FOR CVT WITH EMU) a) STRAY CAPACITANCE. b) STRAY CONDUCTANCE.	SHALL NOT EXCEED 520 pf. SHALL NOT EXCEED 50 µs	SHALL NOT EXCEED 520 pf. SHALL NOT EXCEED 50 µs
19	a) HIGH FREQUENCY CAPACITANCE FOR ENTIRE CARRIER FREQUENCY RANGE. b) EQUIVALENT SERIES RESISTANCE OVER THE ENTIRE CARRIER FREQUENCY RANGE.	WITHIN 80% TO 150% OF RATED CAPACITANCE LESS THAN 40 Ohms	WITHIN 80% TO 150% OF RATED CAPACITANCE LESS THAN 40 Ohms
20	TEMPERATURE CATEGORY	ABOVE - 10 DEG. C TO + 50 DEG. C.	ABOVE - 10 DEG. C TO + 50 DEG. C.
21	ONE MINUTE POWER FREQUENCY TEST. a) WITHSTAND VOLTAGE BETWEEN LOW VOLTAGE TERMINAL & EARTH TERMINAL (IN RMS) b) WITHSTAND VOLTAGE FOR SECONDARY WINDING	10 kV IF EXPOSED TO ATMOSPHERE AND 4 kV IF NOT EXPOSED. 3 kV (RMS)	10 kV IF EXPOSED TO ATMOSPHERE AND 4 kV IF NOT EXPOSED. 3 kV (RMS)

S. No.	PARTICULARS	245 kV CVTs (General Class)	145 kV CVTs (General Class)
22	TANGENT OF LOSS ANGLE AT RATED FREQUENCY AND RATED VOLTAGE.	NOT MORE THAN 0.002	NOT MORE THAN 0.002
23	MIN. CREEPAGE DISTANCE OF PORCELAIN HOUSING (MM)	6125	3625
24	VISUAL CORONA EXTINCTION VOLTAGE (KV rms)	176	106
25	REFERENCE RANGE OF FREQUENCY FOR WHICH REQUIRED ACCURACIES ARE VALID.		
	a) FOR PROTECTION APPLICATION	97% TO 103% OF RATED FREQUENCY.	97% TO 103% OF RATED FREQUENCY.
	b) FOR METERING APPLICATION	99% TO 101% OF RATED FREQUENCY.	99% TO 101% OF RATED FREQUENCY.
26	SIMULTANEOUS BURDEN	100 VA	100 VA

**PRE-QUALIFYING REQUIREMENTS FOR SUPPLY OF
245 kV AND 145 kV CAPACITOR VOLTAGE TRANSFORMERS**

1.0 Status of Bidder:

- a) The bidder should be a manufacturer.
- b) The bidder may also quote as sole distributor / sole selling agent provided the manufacturer furnishes valid authorization in prescribed proforma at **Annexure - I** in favour of the bidder furnishing the bid and the manufacturer fulfils the qualifying requirement as provided in the bid document.

2.0 Past Supply & Performance Criteria:

The bidders shall meet both the past supply & performance criteria as detailed below: -

2.01 Past Supply Criteria:

2.01.1 The bidder should have supplied a minimum 40% of the NIT quantity of similar / higher rating of tendered equipment in any one year (i.e. continuous period of 12 months) during the last five years as on the date of technical bid opening to meet the past supply criteria for full NIT quantity.

2.01.2 In case of those bidders who have supplied less than 40% of the NIT quantity but more than 20% of NIT quantity of similar / higher rating of tendered equipment in any one year (i.e. continuous period of 12 months) during last five years as on the date of technical bid opening, the quantity for which the bid will be considered to be meeting the past supply criteria shall be worked out proportionately on the basis of quantity supplied (i.e. to qualify for full NIT quantity, the quantity supplied is to be 40% of NIT quantity}.

2.01.3 The bids of those bidders who have supplied less than 20% of similar / higher rating of NIT quantity in one year (i.e. continuous period of 12 months) during last five years as on the date of technical bid opening, will be considered non-responsive.

2.01.4 In support of fulfillment of the past supply criteria, the bidder shall furnish documentary evidence in the form of certificate from Chartered Accountant. This certificate should be either in original or copy duly attested by Notary. The bidder shall also sign and affix seal on the C.A. Certificate. The certificate should have membership number with the name & address of the chartered accountant. It should clearly indicate the quantity supplied, period of supply, voltage class / accuracy class of the equipment etc.

2.02 Performance Criteria:

2.02.1 At least 20% of NIT quantity of similar / higher rating of tendered equipment supplied by the bidder should have been in satisfactory operation for a continuous period of at least one year during last 5 years as on the date of technical bid opening to meet the performance criteria for full NIT quantity.

2.02.2 In case less than 20% of NIT quantity but more than 10% of NIT quantity of similar / higher rating of tendered equipment is in satisfactory operation as on date of technical bid opening then the quantity for which the bid will be considered to be meeting the performance criteria shall be worked out proportionately on the basis of quantity for which the performance has been furnished (i.e. to qualify for full NIT quantity, the performance should be for 20% of NIT quantity).

2.02.3 In cases, where less than 10% of NIT quantity of similar / higher rating of tendered equipment is in satisfactory operation as

on date of technical bid opening then bid of such bidders will be considered non-responsive.

2.02.4 In support of the performance criteria, the bidder shall furnish the performance certificate for satisfactory performance from the purchaser / user in original or duly notarised in the prescribed proforma at **Annexure - II**.

In case of those bidders who have supplied the similar / higher rating of tendered equipment to RVPN shall furnish the details of such supplies in **Annexure - II** duly signed by them and in such cases the performance certificate from the User will not be insisted. However for the supplies made to other Utilities the satisfactory performance certificate as per **Annexure - II** from the Purchaser / User is required to be enclosed with the bid.

2.02.05 The bids of the bidder will be considered for the quantity for which the bidder meets both the past supply and performance criteria as detailed below: -

Sl. No.	Past Supply Criteria	Performance Criteria	Quantity for which bid will be considered qualified.
1.	≥ 40% of NIT quantity of similar or higher rating of tendered equipments in any one year (i.e. continuous period of 12 months) during last five years as on the date of technical bid opening.	≥ 20% of NIT quantity of similar or higher rating of tendered equipments should be in satisfactory operation for a continuous period of at least one year during last 5 years as on the date of technical bid opening.	If the past supply is for equal to or more than 40% of the NIT quantity and also satisfactory performance is for equal to or more than 20% of the NIT quantity; the bid of the bidder will be considered for 100% NIT quantity.
2.	< 40% of NIT quantity but ≥ 20% of NIT quantity of similar or higher rating of tendered equipments in any one year (i.e. continuous period of 12 months) during last five years as on the date of technical bid opening.	< 20% of NIT quantity but ≥ 10% of NIT quantity of similar or higher rating of tendered equipments should be in satisfactory operation for a continuous period of at least one year during last 5 years as on the date of technical bid opening.	The quantity for which the bid is meeting the past supply and performance criteria will be worked out on the basis of the quantity supplied and the quantity is in satisfactory operation as explained at 2.01 and 2.02. The bid of the bidder will be considered for the quantity which is lower of the two.
3.	< 20% of NIT quantity of similar or higher rating of tendered equipments in any one year (i.e. continuous period of 12 months) during last five years as on the date of technical bid opening.	< 10% of NIT quantity of similar or higher rating of tendered equipments is in satisfactory operation for a continuous period of at least one year during last 5 years as on the date of technical bid opening.	If either past supply is for less than 20% of the NIT quantity or the performance is for less than 10% of NIT quantity. The bids will be considered non responsive.

NOTE: In case the quantity worked out for past supply and performance on the basis of percentages is in fraction then the fraction below 0.5 will be ignored and in case the fraction is either 0.5 or higher then next whole number will be considered.

3.0 Type Test Criteria:

3.01 The bidder shall furnish valid and authenticated Type test certificate from a Govt. / a Govt. approved / a Govt. recognized / NABL accredited laboratory / ILAC i.e. International Laboratory Accreditation Cooperation (in case of foreign laboratory) of similar rating and design of tendered equipment. Such type test certificate

should not be older than 7 years as on the date of bid opening. For this purpose date of conducting type test will be considered.

The type test certificate from in house laboratory of tendering firm even if it is a Govt. approved / Govt. recognized / NABL accredited / ILAC accredited shall not be accepted in case of their own tender. This will not apply if tendering firm is Govt. company / Public Sector Undertaking.

- 3.02 The bidder should furnish documentary evidence in support of the laboratory whose type test have been furnished, that the said laboratory is a Govt. / a Govt. approved / a Govt. recognized / NABL accredited laboratory / ILAC accredited (in case of foreign laboratory).
- 3.03 The type test certificates shall be furnished either in original or copy duly attested by notary.
- 3.04 The bids of only those bidders shall be considered to be meeting the type test criteria who furnishes complete type test certificate with the bid as per above provision.

However in the following cases the bid of the bidder may be considered meeting the type test criteria if the bidder furnishes an undertaking stating that valid type test certificate from a Govt. / Govt. approved / Govt. recognized / NABL accredited / ILAC Accredited laboratory shall be furnished before commencement of supplies (without asking any delivery extension) along with bank guarantee with the technical bid from a Nationalized / Scheduled bank in prescribed proforma at **Annexure - II (A)** or DD / Pay order amounting to Rs. 5 lacs:-

- (i) Where one or more type test (s) is / are older than 7 years.
- (ii) Where new type tests have been added in the specification.
- (iii) Where some changes in respect of type test procedure of existing type tests have been introduced in the relevant standard.
- (iv) Where the new item is being purchased by Nigam for the first time.

- 3.04.1 In case, the bidder fails to furnish the type test certificate before commencement of supplies, their bank guarantee / DD / pay order will be invoked / forfeited and their performance will be adjudged poor.

- 4.01 The bids of only those bidders will be considered to be qualified for price bid opening who meet the qualifying criteria at 1 to 3 above. Such bidders shall however quote for minimum 20% of NIT quantity, failing which the offer will be considered non-responsive.

5.0 Collaboration with other manufacturer.

- 5.01 With a view to promote new / superior technology in respect of purchase of Capacitor Voltage Transformer, the manufacturer (s) who have recently established production line in India for the similar or higher rating of tendered equipments based on technological support of a parent company or foreign collaborator, can also be considered, provided the manufacturer and parent company (Principal) / foreign collaborator jointly meets the qualifying requirement stipulated at 2.0 & 3.0 above, and furnishes (jointly with the parent company) following with the bid.

- (a) A confirmation letter from Parent company (Principals) / or foreign collaborator as per prescribed Performa at **Annexure-III.**
- (b) Legally enforceable joint undertaking to guarantee satisfactory design, manufacture, quality, timely supply, performance and warranty obligations as per prescribed Performa enclosed at **Annexure - IV** (for subsidiaries of parent company).

- (c) Legally enforceable undertaking jointly executed by the bidder and the foreign collaborator for the satisfactory design, manufacture, testing and performance of the equipment offered as per prescribed Proforma at **Annexure - V** in case of collaboration with foreign collaborator).
- 5.02 For meeting the qualifying requirement the bidder shall furnish the documentary evidence as at 2.0 & 3.0 above either of their own or of his collaborator as the case may be.
- 5.03 If Indian manufacturer meets the type test criteria at 3.0 above on the basis of the type test certificates of the Parent company or Foreign Collaborator, in that case the Indian Manufacturer will also be required to furnish an undertaking along with the technical bid that valid type test shall be got conducted on the first lot manufactured in India from a Govt. / Govt. approved / Govt. recognized / NABL accredited / ILAC Accredited laboratory and the same shall be furnished before commencement of supplies (without asking any delivery extension) along with bank guarantee from a Nationalized / Scheduled bank in prescribed proforma at **Annexure-II (A)** or DD / Pay order amounting to Rs. 5 lacs.
- In case, the bidder fails to furnish the type test certificate before commencement of supplies, their bank guarantee / DD / pay order will be invoked / forfeited and their performance will be adjudged poor.
- 5.04 The bidders submitting bid under 5.01 above for NIT material if found qualified shall be considered for placement of order restricted up to 10% of the NIT quantity and in no case it will be beyond 10% of NIT quantity. The next order will be placed only after adjudging their performance of equipments for 12 months after commissioning. Such bidders should quote for maximum 10% of NIT quantity.
- 5.05 The bidder who qualifies on the basis of provisions of Clause No.5.01 above and in case the contract is awarded to such bidder then the bidder shall be required to furnish an additional performance bank guarantee equivalent to ten percent (10%) of the contract value. This bank guarantee shall be in addition to the performance bank guarantee required as per provision of GCC.
- 6.0 Poor Record of Performance and Delivery:**
- 6.01 RVPN reserves the right to reject any offer on the basis of poor after sales service and performance of the equipment supplied by the bidder against the previous orders. For this purpose the orders executed by bidder up to last three years (as on the date of bid opening) for the same items in RVPN shall be considered.
- 6.02 The bids of existing bidders will not be considered for opening the price bid in the following cases:-
- (i) The bidders who are defaulters for 25% or more quantity for more than 6 months or any quantity for more than 12 months in making the supplies against order placed during last three years as on the date of technical bid opening beyond the overall delivery schedule for the total ordered quantity.
- (ii) The bids of firms, which have been debarred, black listed or with whom business relations have been severed shall not be considered.
- 7.0 The following firms are exempted from submitting the requisite documents towards past supply and performance criteria as detailed below:
- (a) M/s ABB Ltd., Jaipur.
(b) M/s AREVA T&D INDIA Ltd., Jaipur.
(c) N/s CGL, Jaipur.
(d) M/s BHEL, Jaipur.

8.0 Trial order

- (a) Where the price offered by any qualified firm/bidder which is new to RVPN is L-1 or lower than the price quoted by qualified regular supplier, such new bidder will be considered for placement of trial order only. The trial order for a particular item shall not generally exceed 10% of the total quantity considered for placement of order.
- (b) However in case of purchase of any special/ uncommon items where there are not many qualified regular suppliers or where only new bidder(s) get qualified for regular/common item or the regular bidder is not qualified for the NIT quantity /balance quantity after allocating the trial order quantity to new bidder, or regular bidder has not quoted for full NIT quantity or for any other reasons which the purchase committee may feel appropriate, this ceiling/ restriction can be relaxed by the purchase committee competent to decide the purchase.
- (c) In other case of purchase of regular/common items, the ceiling of 10% may be relaxed by the CMD level purchase committee.
- (d) As far as possible, the material received under the trial order will be put to use promptly with a view to watching its suitability/ performance. The firms executing trial order will be considered for placement of next order as regular supplier in case the performance of the material/ equipment supplied by the firm is found satisfactory for at least 12 months period.
- (e) In respect of items where performance criteria is specified in pre qualification requirement, if the performance period of 12 months specified as above is not over till the date of opening of technical bid of the subsequent tender for the same item, the bid of the firm executing trial order may be considered for price bid opening for the trial order again subject to the condition that the firm is meeting the P.Q.R. and has completed the supply of trial order placed on it within specified overall delivery schedule of total ordered quantity.

For items where the performance criteria is not stipulated in P.Q.R. and the performance period of 12 months specified as above is not over prior to the date of technical bid opening, the price bid of the firm executing trial order may be considered for price bid opening as regular supplier subject to the condition that the bidder has supplied the ordered quantity within the stipulated overall delivery schedule.

- 9.0** RVPN reserves the right to accept minor deviations in Qualifying requirement & Techno-Commercial Conditions on the merits.

ANNEXURE - I

MANUFACTURERS' AUTHORIZATION FORM

No. _____ dated _____

To,

Dear Sir,

NIT Under (TN No. _____) for supply of _____(Item)

We _____ who are established and reputable manufacturers of _____ (name & descriptions of goods offered) having factory) at (address of factory) do hereby authorize M/s _____ (Name and address of Agent) to submit a bid, and sign the contract with you for the above goods manufactured by us against the above NIT under TN No. _____

No company or firm or individual other than M/s _____ are authorized to bid, and conclude the contract for the above goods manufactured by us against this specific NIT.

We hereby extend our full guarantee and warranty as per the General Conditions of Contract appended with specification for the goods and services offered for supply by the above firm against this NIT.

Yours faithfully,

(Name of manufacturer)

Note: This letter of authority should be on the letter head of the manufacturer and should be signed by a person competent and having the power of attorney to legally bind the manufacturer. It should be included by the Bidder in its bid.

ANNEXURE - II

PERFORMANCE CERTIFICATE

It is to certify that M/s. _____ has supplied the following materials for the quantities indicated against each.

S. No.	Order no. & date	Designation & address of order placing authority / User	Description of material	Quantity	Name of S/S or line along with voltage rating where material installed	Date of commissioning	Performance of material.

The above-mentioned material installed in our system and its performance is found satisfactory.

Date of issuing _____

Signature of issuing authority with seal
 Name and Designation of issuing authority
 Address along with Phone No. and
 Fax no. of issuing authority

NOTE: In case of those bidders who have supplied the similar or higher rating material to RVPN shall furnish the details of such supplies in the above proforma which shall be signed by their authorized signatory along with seal and certificates is not required from the Purchaser / User in respect of such supplies.

ANNEXURE - II A

BANK GUARANTEE IN LIEU OF FURNISHING TYPE TEST CERTIFICATE

(On Rajasthan Non Judicial Stamp paper worth Rs.100/-)

To,

The Chief Engineer (MM),
RVPN, M. M. Building of RVPN,
Old Power House Premises,
Near Ram Mandir, Bani Park, Jaipur - 302 006

Dear Sir,

Whereas Rajasthan Rajya Vidyut Prasaran Nigam Ltd, Jaipur (hereinafter called the purchaser) has issued a tender enquiry under TN-_____ for procurement of _____(name of materials).

Whereas M/s. _____(hereinafter called the bidder) has furnished a bid for supply of _____ to the Chief Engineer (MM), Rajasthan Rajya Vidyut Prasaran Nigam Ltd, Jaipur or his nominated officer(s) .

Whereas in accordance with the provisions of the specification of the aforesaid TN_____, the bidder can deposit a bank guarantee in lieu of the requirement of furnishing the type test report.

Whereas, M/s._____(the bidder) have requested us (name of the bank) to furnish the bank guarantee, in lieu of the type test report, for an amount equivalent to Rs._____(in words also) only.

Under this bank guarantee, we (name of the bank) hereby undertake unconditionally and irrevocably to guarantee as primary obligatory and not as surety merely, the payment to the purchaser on his first demand without whatsoever right of objection on our part and without his first claim to the bidder, in the amount not exceeding (amount of guarantee in figures and words) _____.

Payment pursuant in this undertaking will be demanded by the purchaser from the bank and will be met by the bank without question in the case in which the bidder, on receipt of the order and / or after the acceptance of this tender, makes default in furnishing the required type test reports. As to whether the occasion or ground has arisen for such demand the decision of the Chief Engineer (MM), Rajasthan Rajya Vidyut Prasaran Nigam Ltd, Jaipur or any other officer exercising the powers of Chief Engineer, Rajasthan Rajya Vidyut Prasaran Nigam Ltd., shall be final.

The liability of the bank shall not at any time exceed Rs. _____ (Rupees in words)_____.

The under taking will be determined on _____ but will not withstanding such determination, continue to be in-force till the expiry of 3 months from that date.

No indulgence or grant of time by the purchaser to the bidder without the acknowledgement of the bank will discharge the liabilities of the bank under guarantee.

The guarantee herein contain shall not be affected by any change in the constitution of the bidder.

All disputes arising under the said guarantee between the bank and the NIGAM or between the bidder and the purchaser pertaining to the guarantee shall be subject to the jurisdiction of courts only at Jaipur in Rajasthan.

The bank further undertakes not to revoke this guarantee during its currency except with previous consent of the CE (MM), RRVPNL, Jaipur.

Notwithstanding any thing contain herein before, the bank's liability under this guarantee is restricted to Rs. _____ (Rupees in words) and the guarantee shall remain in force up to _____. Unless demand or claim in writing is presented on the bank within 3 months from that date the bank shall be released and discharge from all liabilities there under.

IN WITNESS WHEREOF the Bank has executed these presents the day _____ month _____ and year _____.

Yours faithfully,

(Bankers)
Executant

Witness: 1.
2.

ATTESTED BY NOTARY PUBLIC.

ANNEXURE - III

PROFORMA OF UNDERTAKING BY
THE PARENT COMPANY (PRINCIPALS / OR COLLOBORATOR)
(On Non-Judicial Stamp Paper of appropriate value Rs.100/-)

To,

The Superintending Engineer ()
Rajasthan Rajya Vidyut Prasaran Nigam Ltd.,
Jaipur.

Specification No. _____ FOR SUPPLY OF

Dear Sir,

With reference to Clause 5.0 of Qualification Requirements, of bidding documents for Tender No. _____, for supply of _____ (name of item) we the parent company / collaborators _____ having registered office at _____ (Principals or Collaborators) agree to furnish the following in favour of M/s _____ (bidder) having registered office at _____ who are having collaboration with us for manufacture & supply of _____ (Name of item)

Jointly with the bidders, a legally enforceable undertaking to guarantee, design, manufacture quality, timely supply, performance and warranty obligations as specified in the contract.

Yours faithfully,

Witness

ANNEXURE - IV

**PROFORMA OF JOINT UNDERTAKING BY THE
PARENT COMPANY (PRINCIPALS) WITH THE BIDDER**

(On Non-Judicial Stamp Paper of appropriate value Rs.100/-)

This deed of undertaking executed this _____ day of _____ by _____ having it's registered office at _____ (hereinafter called the 'Parent Company' which expression shall include its successors, administrator, executors and permitted assigns) and _____ having it's Head Office at _____, India (hereinafter called the 'Subsidiary' (Bidders which expression shall include its successors, administers, executors and permitted assigns) in favour of **Rajasthan Rajya Vidyut Prasaran Nigam Ltd.** (Hereinafter called the "Purchaser").

a) WHEREAS the Purchaser invited Bids as per its Specification No. for the equipment _____ at **Jaipur** and whereas the bid documents stipulates that Manufacturer(s) who have recently established production line in India for goods / equipment of same rating indicated in the schedule of requirements based on Technological support of a parent company or collaborator can also be considered provided the parent company (Principal) or collaborator meets qualifying requirements stipulated and furnish undertaking (jointly with the parent company as under).

AND WHEREAS _____ HAS submitted it's proposal to the Owner vide _____ based on the Association of the Parent Company & Subsidiary.

NOW THEREFORE THIS UNDERTAKING WITNESSED AS UNDER:

1. In consideration of the award of Contract by the Purchaser to the Supplier we the parent Company (Principals) and the Subsidiary do hereby declare and undertake that we shall be jointly and severally responsible and bound unto the **Rajasthan Rajya Vidyut Prasaran Nigam Ltd.** of the successful performance of the characteristics as specified in the contract to the satisfaction of the Owner.
2. In case of any breach of the Contract committed either by us and or by the Subsidiary, we the Parent Company (Principals) do hereby undertake, declare and confirm that we shall be fully responsible for successful performance of the contract and undertake to carry out all the obligations and responsibilities under the contract in order to discharge the Purchaser's obligations stipulated in the contract, we undertake to execute the work in its entirety and hold responsibility even in respect of the work entrusted by us to our subsidiary. We hereby indemnify the Purchaser that we will compensate the Purchaser if any loss occurred either due to our default in executing the work or by our subsidiary.
3. Without in any way affecting the generality and total responsibility in terms of this Deed of undertaking, the Principal hereby agrees to depute their technical experts from time to time to the Subsidiary's Works / Purchaser project site as mutually considered necessary by the Purchaser / Subsidiary's and the Principals to ensure proper design, manufacture, testing.
4. Successful performance of the equipment under the said Contract in accordance with Contract specifications and if necessary the

principals shall advise the Subsidiary suitable measures to discharge the obligations under Contract.

5. This Deed of Undertaking shall be construed and interpreted in accordance with the laws of India and the Courts at **Jaipur, Rajasthan** shall have exclusively jurisdiction in all matters arising under this undertaking.
6. As a security, the parent company/ bidder shall apart from the contractor's performance Bank Guarantee, furnish an additional contract performance guarantee from its Bank in favour of the owner in a form acceptable to purchaser. The value of such guarantee shall be equivalent to ten percent (10%) of price of contract value and it shall be part of guarantee towards the faithful performance / compliance of this deed of undertaking in terms of the contract. The guarantee shall be unconditional, irrevocable and valid for the entire period of the contract, namely till the end of the warranty period (name of the equipment / material) under the contract. The bank guarantee amount shall be payable to the owner on demand without any reservation or demur.
7. We the Parent Company (Principals) and the Subsidiary agree that this undertaking shall be irrevocable and shall form an integral part of the Contract and further agree that this undertaking shall continue to be enforceable till the successful completion of the Contract and Owner discharges it. It shall become operative from the effective date of the Contract.
8. We, the Principals will be fully responsible for the quality of all Equipment / Components manufactured at it's works or at it's vendor's works and if necessary, their repairs or replacement for successful performance of the Contract in terms of the Contract.

IN WITNESS WHEREOF, the Parent Company (Principals) and the Subsidiary through their Authorized representatives, have executed these present and affixed Common Seals of their respective Companies, on the day, month, and year first mentioned above.

WITNESS :	(PARENT COMPANY)
1
(Signature)	(Signature)
.....
(Name)	(Name)
.....	
(Official Address)	Common Seal of Company

2.

(SUBSIDIARY)

.....
(Signature)

.....
(Signature)

.....
(Name)

.....
(Name)

.....
(Official Address)

Common Seal of Company

NOTE: This deed of joint undertaking duly certified by the company secretary shall be submitted along with bid. Further the deed of Joint undertaking should be attested by Notary Public of the place/ country of the respective executants or it should be duly registered with the Indian Embassy / High Commission in that country.

ANNEXURE - V

**PROFORMA OF JOINT UNDERTAKING BY THE COLLABORATOR / ASSOCIATE
ALONG WITH THE BIDDER**

(On Non-Judicial Stamp Paper of appropriate value Rs.100/-)

THIS DEED OF UNDERTAKING executed this day of..... Two thousand and by a Company incorporated under the laws of and having its registered office at (hereinafter called the "Collaborator"/"Associates" which expression shall include its successors, executors and permitted assigns) and a company incorporated under the Companies Act, 1956 having its Registered office at (Hereinafter called the "Bidder"/"Contractor" which expression shall include its successors executors and permitted assigns) in favour of **Rajasthan Rajya Vidyut Prasaran Nigam Ltd.**, a company incorporated under the Section, having its registered Office at **Jaipur** (hereinafter called the "Owner" which expression shall include its successors, executors and assigns).

WHEREAS the Purchaser invited Bids as per its specification No.....) for the design, manufacture, shop testing transportation to site, unloading at site, storage, erection / testing / commissioning of (Name of the material).....

AND WHEREAS Clause of Section, Qualifying Requirement of the bid document No. inter-alia stipulates that the Bidder along with its Collaborator/Associate must fulfill the qualifying requirements and be jointly and severally bound and responsible for the successful performance of the Contract in the event the Bid is accepted by the Owner resulting in a "Contract".

AND WHEREAS the Bidder has submitted its Bids to the Owner vide Proposal No..... dated..... based on the Collaboration/Association of the Collaborator/Associate.

NOW THEREFORE THIS UNDERTAKING WITNESSES as under:

1.0 In consideration of the award of Contract by the Owner to the Bidder hereinafter referred to as the "Contract" we, the Collaborator/Associate and the Bidder / Contractor do hereby declare that we shall be jointly and severally bound unto the **Rajasthan Rajya Vidyut Prasaran Nigam Ltd.** for the successful performance of the Contract and shall be fully responsible for the design, manufacture, shop testing, transportation, unloading at site, storage, erection, testing and commissioning and successful performance of (Name of the material)in accordance with the Contract specifications.

2.0 In case of any breach of the Contract by the Contractor, we, the Collaborator / Associate do hereby agree to be fully responsible for successful performance of the Contract and undertake to carry out all the obligations under the Contract in order to discharge Contractor's obligations stipulated in the Contract. Further, if the Owner suffers any loss or damage on account of any breach in the contract or non-performance of the complete equipment fully meeting the performance guaranteed as per Bid specifications in terms of the

Contract, we the Collaborator/Associate and the contractor jointly and severally undertake to pay such loss or damages to the Owner on the demand without any demur. This is without prejudice to any rights of the Owner against the Contractor under the contract and connected documents / guarantees. It shall not be necessary or obligatory for the Owner to proceed against Collaborator / Associate before proceeding against or while dealing with the Contractor, nor any extension of time or any relaxation by the Owner to the Contractor shall prejudice any rights of the Owner under this deed of undertaking against the Collaborator / Associate or the Contractor.

3.0 Without in any way effecting the quality and total responsibility in terms of this Deed of undertaking, the Collaborator / Associate in particular hereby agrees to depute their technical experts from time to time to the Contractor's works / Owner's Project site as mutually considered necessary by the Owner, Contractor and the Collaborator / Associate to ensure proper design, manufacture, shop testing, transportation, unloading at site, Storage, erection testing and commissioning and successful performance of the equipment package in accordance with Contract Specifications and if necessary the Collaborator / Associate shall advise the Contractor suitable modifications of designs and implement necessary corrective measures to discharge the obligations under the contract.

4.0 This deed of undertaking shall be construed and interpreted in accordance with the laws of India and the courts in **Jaipur** shall have exclusive Jurisdiction in all matter arising under the undertaking.

5.0 As a security, the collaborators/bidder shall apart from the contractor's performance Bank guarantee, furnish an additional contract performance guarantee from its Bank in favour of the owner in a form acceptable to purchaser. The value of such guarantee shall be equivalent to ten percent (10%) of price of contract value and it shall be part of guarantee towards the faithful performance / compliance of this deed of undertaking in terms of the contract. The guarantee shall be unconditional, irrevocable and valid for the entire period of the contract, namely till the end of the warranty period (Name of the equipment / material) under the contract. The bank guarantee amount shall be payable to the owner on demand without any reservation or demur.

6.0 We, the Collaborator / Associate and the Bidder / Contractor agree that this undertaking shall be irrevocable and shall form an integral part of the Contract and further agree that this undertaking shall continue to be enforceable till the Owner discharges it. It shall become operative from the effective date of contract.

IN WITNESS WHEREOF the Collaborator / Associate and the Bidder / Contractor have through their Authorized Representatives executed these presents and affixed Common Seals of their respective Companies, on the day, month and year first above mentioned.

For Collaborator / Associate

WITNESS

1
(Signature)

.....
(Name in Block Letters)

.....
(Office Address)

(Signature of Authorized Representative)

Name

Designation
Common Seal of Company

2
(Signature)

.....
(Name in Block Letters)

.....
(Office Address)

For Bidder / Contractor

(Signature of Authorized Representative)

Name.....

Common Seal of
The Company

NOTE: This deed of joint undertaking duly certified by the company secretary shall be submitted along with bid. Further the deed of Joint undertaking should be attested by Notary Public of the place/ country of the respective executants or it should be duly registered with the Indian Embassy / High Commission in that country.

APPENDIX - III

- (A) **PRICE VARIATION CLAUSE FOR INSTRUMENT TRANSFORMERS 72.5 kV AND ABOVE** (Current and Potential Transformers designated for operation on system voltage 72.5 kV and above):

The price quoted / confirmed is based on the input cost of raw materials / components and labour cost as on the date of quotation and the same is deemed to be related to prices of raw materials and all India average consumer price index number for industrial workers as specified in the price variation clause given below. In case of any variation in these prices and index numbers, the price payable shall be subject to adjustment, up or down in accordance with the following formula:

$$P = \frac{P_0}{100} \times \left(18 + 13 \times \frac{C}{C_0} + 12 \times \frac{ES}{ES_0} + 12 \times \frac{IS}{IS_0} + 23 \times \frac{IM}{IM_0} + 6 \times \frac{TB}{TB_0} + 16 \times \frac{W}{W_0} \right)$$

wherein;

P = Price payable as adjusted in accordance with the above formula.

Po = Price quoted/ confirmed

Co = Average LME settlement price of copper wire bars (refer notes)
This price is as applicable for the month, two months prior to the date of tendering.

Eso = C&F price of CRGO Electrical Steel Sheets (refer notes)
This price is as applicable on the 1st working day of the month, one month prior to the date of tendering.

ISo = Wholesale price index number for "Iron & Steel" (Base 1993-94=100) (refer notes)
This index number is as applicable for the week ending 1st Saturday of the month, three months prior to the date of tendering.

IMo = IEEMA Index for insulator (Base: January 2003=100) (refer notes)
This index is applicable on the 1st working day of the month, one month prior to the date of tendering.

TBo = Price of Transformer Oil Base Stock (refer notes)
This price is as applicable on the 1st working day of the month, two months prior to the date of tendering.

Wo = All India average consumer price index number for industrial workers, as published by the Labour Bureau, Ministry of Labour, Govt. of India (Base 1982=100)
This index number is as applicable on the first working day of the month, three months prior to the date of tendering.

For example, if date of tendering falls in October 2005, the applicable prices of Copper Wire Bars (Co) and Transformer Oil Base Stock (TBo) should be for the month August 2005, where as the applicable price of CRGO steel Sheets (ESo) and IEEMA Index for Insulator (IMo) should be as on 1st September 2005 and Wholesale price index number for "Iron & Steel" (ISo) should be for the week ending first Saturday of July 2005 and all India average consumer price index number (Wo) should be for the month of July, 2005.

The above prices and indices are as published by IEEMA vide circular reference number IEEMA(PVC) / CTPT / _ / _ prevailing as on first working day of the month i.e. one month prior to the date of tendering.

C = Average LME settlement price of copper wire bars (refer notes)

This price is as applicable for the month, two months prior to the date of delivery.

ES = C&F price CRGO Electrical Steel Sheets (refer note)

This price is as applicable on the 1st Working day for the month, one month prior to the date of delivery.

IS = Wholesale price index number for 'Iron & Steel (base: 1993-94=100)' (refer notes)

This index number is as applicable for the week ending 1st Saturday of the month, three months prior to the date of delivery.

IM = IEEMA index for insulator (Base: January 2003=100) (refer notes)

This index is applicable on the 1st working day of the month, one month prior to the date of delivery.

TB = Price of Transformer Oil Base Stock (refer notes)

This price is applicable on the 1st Working day of the month, two months prior to the date of delivery.

W = All India average consumer price index number for industrial workers, as published by the Labour Bureau, Ministry of Labour, Govt. of India (Base 1982 =100).

This index number is as applicable on the first working day of the month, three months prior to the date of delivery.

For example, if date of delivery in terms of clause given below falls in December 2005, the applicable prices of Copper Wire Bars(C) and Transformer Oil Base Stock (TB) should be for the month October 2005; where as applicable prices of CRGO Electrical Steel sheets (ES) and IEEMA Index for Insulator (IM) should be as on 1st November 2005 and Wholesale price index number for "Iron & Steel" (IS) should be for the week ending first Saturday of September 2005 and all India average consumer price index number (W) should be for the month of September 2005.

The date of delivery is the date on which the instrument transformer is notified as being ready for inspection / dispatch (in the absence of such notification, the date of manufacturer's despatch note is to be considered as the date of delivery) or the contracted delivery date (including any agreed extension thereto) whichever is earlier.

Notes:

(a) All prices of raw materials are exclusive of modvatable excise /CV duty amount and exclusive of any other central, state or local taxes, octroi etc. Instrument transformers manufacturers import major raw materials like Copper, CRGO Electrical Steel Sheets and TOBS etc. The landed cost of these imported raw materials includes applicable custom duty but exclusive of modvatable CVD.

(d) All prices are on first working day of the month.

(e) The details of prices are as under:-

1) The LME price of Copper Wire Bars (in Rs./MT) is the LME average settlement price of Copper Wire Bars for one month prior to the month of the circular converted into Indian Rupees with applicable exchange rates prevailing as on 1st working day of the subsequent month. This price is the landed cost, inclusive of applicable customs duty only but exclusive of countervailing duty.

2) The price of CRGO Electrical Steel Sheets (in Rs. / MT) is the average C&F in US \$ per MT converted into Indian Rupees with applicable exchange rate prevailing as on 1st working day of the month, as quoted by primary producers. This price is the landed cost, inclusive of applicable customs duty only but exclusive of countervailing duty.

3) The wholesale price index number for Iron & Steel' is as published by the Office of Economic Advisor, Ministry of Industry, Govt. of India, New Delhi with base 1993-94=100. This wholesale price index number is being published weekly on provisional basis. However the same gets finalized after eight weeks and is normally available after two months. Therefore we are considering in our calculations this final index for the first Saturday of the months two months prior to the date of which the prices of other raw materials such as AI, IM are published for the corresponding month.

4) IEEMA Index for insulator (Base January 2003=100) is published in basis price circular for insulator vide reference IEEMA (PVC) / INSLR / _ / _ applicable for IEEMA price variation clause for insulator viz IEEMA (PVC) / INSLR effective from 1st April, 2003.

5) The price of TOBS is C&F price (in Rs. / K.Ltr) for Group II grade 70 Base Oil as published in ICIS-LOR bulletin for the 1st week of the previous month. This price is normally published in US\$ per US Gallon, which is converted in Rs. / K.Ltr with applicable exchange rate prevailing on 1st working day of the subsequent month. This price is the landed cost, inclusive of applicable customs duty only but exclusive of countervailing duty.

(B) The basic cost applicable for claiming price variation shall be the ruling price of raw materials and all India average consumer price index number for individual workers in the manner prescribed hereunder.

(i) When the material is offered within stipulated delivery schedule

For allowing P.V. the date of delivery shall be considered the date on which material is notified as being ready for inspection (date of receipt of inspection call in the office, if the offered material is lying ready) or the date of actual delivery, which ever is beneficial to the Nigam.

(ii) When the material is offered after expiry of stipulated delivery schedule

For allowing P.V. in the cases the supplies are made after the expiry of scheduled delivery, the price prevailing in the last month of the stipulated scheduled delivery or the date on which material is notified as being ready for inspection (date of receipt of inspection

call in the office if the offered material is lying ready) or actual date of delivery whichever is beneficial to Nigam.

(iii) When the material is offered ahead of delivery schedule on the request of RVPN

Normally supplies ahead of delivery schedule shall not be accepted. However in case of urgency of material, if supplies are accepted ahead of delivery schedule, PV shall be allowed on the basis the material is notified as being ready for inspection (date of receipt of inspection call in the office if the offered material is lying ready) or the actual date of delivery whichever is beneficial to Nigam.

(iv) When the material is offered ahead of delivery schedule by firm at their own and accepted by RVPN on the request of firm

Normally the request of the firm to accept the material ahead of delivery schedule will not be accepted. In case firm offers supplies ahead of delivery schedule at their own and such request is accepted by RVPN, the price prevailing in the first months of stipulated delivery schedule or the date on which material is notified as being ready for inspection (date of receipt of inspection call in the office if the offered material is lying ready) or actual date of delivery whichever is beneficial to Nigam shall be allowed.

REQUIREMENT SCHEDULE

The requirement of 245 kV and 145 KV CVTs are as under.

S. No.	Particulars	Quantity
1	<u>245 kV CVTs (General Class):</u>	260 Nos.
	i) <u>Winding -I:</u> RATIO - $\frac{220 \text{ KV}}{\sqrt{3}}$ / $\frac{110 \text{ V}}{\sqrt{3}}$	
	Burden 50 VA	
	Accuracy class 3P	
	ii) <u>Winding -II:</u> RATIO - $\frac{220 \text{ KV}}{\sqrt{3}}$ / $\frac{110 \text{ V}}{\sqrt{3}}$	
	Burden 50 VA	
	Accuracy class 3P	
	iii) <u>Winding -III:</u> RATIO - $\frac{220 \text{ KV}}{\sqrt{3}}$ / $\frac{110 \text{ V}}{\sqrt{3}}$	
	Burden 50 VA	
	Accuracy class 0.5	
	Simultaneous Burden 100 VA	
2	<u>145 kV CVTs (General Class):</u>	342 Nos.
	i) <u>Winding -I:</u> RATIO - $\frac{132 \text{ KV}}{\sqrt{3}}$ / $\frac{110 \text{ V}}{\sqrt{3}}$	
	Burden 50 VA	
	Accuracy class 3P	
	ii) <u>Winding -II:</u> RATIO - $\frac{132 \text{ KV}}{\sqrt{3}}$ / $\frac{110 \text{ V}}{\sqrt{3}}$	
	Burden 50 VA	
	Accuracy class 3P	
	iii) <u>Winding -III:</u> RATIO - $\frac{132 \text{ KV}}{\sqrt{3}}$ / $\frac{110 \text{ V}}{\sqrt{3}}$	
	Burden 50 VA	
	Accuracy class 0.5	
	Simultaneous Burden 100 VA	

DELIVERY SCHEDULE

The delivery schedule of the material shall be as mentioned here under:-

S. No.	Particulars of Material	Commencement Period	Rate of Supply	Period for completion of delivery of entire material
1.	245 kV, 4400 pf Capacitor Voltage Transformers having winding burden 50VA/ 3P, 50VA/3P and 50VA/0.5 with simultaneous burden 100VA. (General Class)	From the date of issue of P.O.	(i) 30% quantity within three months from the date of issue of PO. (ii) Next 20% quantity after three months and upto six months from the date of issue of PO. (iii) Next 20% quantity after six months and upto nine months from the date of issue of PO. (iv) Balance 30% quantity after nine months and upto twelve months from the date of issue of PO.	Twelve months from the date of issue of P.O.
2.	145 kV, 4400 pf Capacitor Voltage Transformers having winding burden 50VA/ 3P, 50VA/3P and 50VA/0.5 with simultaneous burden 100VA. (General Class)	From the date of issue of P.O.	(i) 30% quantity within three months from the date of issue of PO. (ii) Next 20% quantity after three months and upto six months from the date of issue of PO. (iii) Next 20% quantity after six months and upto nine months from the date of issue of PO. (iv) Balance 30% quantity after nine months and upto twelve months from the date of issue of PO.	Twelve months from the date of issue of P.O.

Note: The above delivery schedule can be revised by the purchaser at his discretion.

Signature
Name & Designation with
Seal of the firm

**GUARANTEED TECHNICAL AND OTHER PARTICULARS OF 245kV AND 145kV
CAPACITOR VOLTAGE TRANSFORMERS AGAINST SPECIFICATION NO.
RVPN/SE/TLPC/STEEL/A-III/TN - 3748**

S. NO.	PARTICULARS	245 KV CVT (General Class)	145 KV CVT (General Class)
1	NAME OF THE MANUFACTURER		
2	MANUFACTURER TYPE DESIGNATION.		
3	A) NOMINAL SYSTEM VOLTAGE (KV) B) HIGHEST SYSTEM VOLTAGE (KV)		
4	CAPACITANCE (PF) A) PRIMARY CAPACITANCE (PF) B) SECONDARY CAPACITANCE (PF) C) EQUIVALENT CAPACITANCE (PF) D) TEMPERATURE CATEGORY (DEG. C) E) RATED CAPACITANCE		
5	MAXIMUM VOLTAGE AT INTERMEDIATE VOLTAGE TERMINAL		
6	THE RANGE OF CARRIER FREQUENCY (KHz)		
7	NATURAL FREQUENCY AS COUPLING CAPACITOR (KHz)		
8	NO. OF SECONDARY WINDINGS		
9	TRANSFORMATION RATIO. A) WINDING - I B) WINDING - II C) WINDING - III		
10	RATED SECONDARY BURDEN. A) WINDING - I (VA) B) WINDING - II (VA) C) WINDING - III (VA)		
11	SIMULTANEOUS BURDEN		
12	ACCURACY CLASS: A) WINDING - I (VA) B) WINDING - II (VA) C) WINDING - III (VA)		
13	VOLTAGE FACTOR		

14	<p>A) TEMPERATURE RISE AT 1.2 TIMES RATED VOLTAGE AND AT RATED BURDEN FREQUENCY AFTER STEADY STATE CONDITIONS AT NORMAL RATED VOLTAGE AND BURDEN OVER AN AMBIENT TEMPERATURE OF 50 DEG, C.</p> <p>B) TEMPERATURE RISE AT 1.5 TIMES RATED VOLTAGE FOR 30 SEC AND AT RATED BURDEN AND FREQUENCY OVER AN AMBIENT TEMPERATURE OF 50 DEG. C.</p>		
15	<p>A) ONE MINUTE POWER FREQUENCY (KV rms) WITHSTAND DRY TEST VOLTAGE.</p> <p>B) ONE MINUTE POWER FREQUENCY (KV rms) WITHSTAND WET TEST VOLTAGE.</p>		
16	<p>1.2 /50 MICRO SECONDS IMPULSE WITHSTAND VOLTAGE (KV PEAK)</p>		
17	<p>ONE MINUTE POWER FREQUENCY WITHSTAND VOLTAGE ON SECONDARIES:</p> <p>A) WINDING - I (KV rms)</p> <p>B) WINDING - II (KV rms)</p> <p>C) WINDING - III (KV rms)</p>		
18	<p>ONE MINUTE POWER FREQUENCY WITHSTAND VOLTAGE OF LV TERMINAL</p>		
19	<p>A) MAX. RATIO ERRORS</p> <p>B) MAX. PHASE ANGLE ERRORS</p> <p>C) TANGENT OF LOSS ANGLE AT RATED FREQUENCY AT RATED VOLTAGE</p>		
20	<p>PARTIAL DISCHARGE LEVEL. (PICO-COLOUMBS)</p>		
21	<p>VALUE OF PRESSURE FOR OIL LEAKAGE TEST (KN / MTRS SQ.)</p>		
22	<p>VALUE OF STRAY CAPACITANCE AND STRAY CONDUCTANCE IN THE CARRIER FREQUENCY RANGE OF 40 TO 500 KHz FOR COMPLETE CVT BETWEEN LOW VOLTAGE TERMINAL AND EARTH TERMINAL (FOR CVT WITH EMU)</p> <p>A) STRAY CAPACITANCE.</p> <p>B) STRAY CONDUCTANCE.</p>		

<p>23</p>	<p>A) HIGH FREQUENCY CAPACITANCE FOR ENTIRE FREQUENCY RANGE.</p> <p>B) EQUIVALENT SERIES RESISTANCE OVER THE ENTIRE FREQUENCY RANGE.</p>		
<p>24</p>	<p>IS TO WHICH CVTs CONFORM.</p>		
<p>25</p>	<p>DO THE CVTs CONTAIN BUILT IN COMPENSATING REACTOR, HF CHOKE COIL, VOLTAGE ARRESTERS AND DAMPING DEVICE IN PT PORTIONS.</p>		
<p>26</p>	<p>MASS OF OIL:</p> <p>A) IN CAPACITOR UNIT.</p> <p>B) IN ELECTROMAGNETIC UNIT.</p>		
<p>27</p>	<p>TOTAL MASS OF CVT.</p>		
<p>28</p>	<p>PARTICULARS OF DAMPING DEVICE INCLUDING ITS V/L CHARACTERISTIC AND VOLTAGE RATING AND WHETHER PERMANENTLY CONNECTED ON PRIMARY OR SECONDARY SIDE OF ELECTROMAGNETIC UNIT.</p>		
<p>29</p>	<p>A) TOTAL CREEPAGE DISTANCE.</p> <p>B) IS TO WHICH INSULATOR CONFORMS.</p> <p>C) MAKE OF INSULATOR</p>		
<p>30</p>	<p>OVER ALL DIMENSIONS.</p>		
<p>31</p>	<p>MOUNTING DETAILS.</p>		
<p>32</p>	<p>SPECIFY REFERENCE RANGE OF FREQUENCY FOR WHICH REQUIRED ACCURACIES ARE VALID.</p> <p>A) FOR PROTECTION APPLICATION.</p> <p>B) FOR METERING APPLICATION.</p>		
<p>33</p>	<p>SPECIFY DEVIATION IN ACCURACY IN FREQUENCY RANGE 47 Hz TO 51 Hz (EXCLUDING REFERENCE RANGE OF FREQUENCY)</p>		

SCHEDULE-II (A)

DEPARTURE/ DEVIATION FROM TECHNICAL SPECIFICATION.

The tenderer shall state under this schedule the departures from the purchaser's specification in respect of Technical Specification:-

S. No.	Purchaser's Specification Clause Ref.	Deviation from the Specification
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Certified that we agree to all technical specification of NIT accept except for the deviation to the extent indicated above.

(Signature)
Name & Designation
with Seal of the firm.

SCHEDULE - II(B)

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

The tenderer shall state under this schedule the departures from the purchaser's specification in respect of commercial terms & condition:-

S. No.	Purchaser's Specification Clause Ref.	Deviation from Specification
--------	--	---------------------------------

Certified that we agree to all commercial terms & condition as laid down in general condition of contract of the Specification except for the deviation to the extent indicated above.

(Signature)
Name & Designation
with Seal of the firm.

SCHEDULE-III

LIST OF PAST SUPPLIES

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

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

If executed partially to be mentioned qty. in MT.	Whether still to be executed	delivery stipulated in order	Remarks
7.	8.	9.	10.

- i) It is certified that the information furnished above is correct to the best of my knowledge and we are liable for action if any information is found incorrect.
- ii) Separate schedule are to be furnished by the tenderer for past supply to the RVPN (Erstwhile RSEB) other state electricity Board and other department / organisation.
- iii) In support of above details we are enclosing the performance certificates from the purchaser / consignee.

(Signature)
Name & Designation
with Seal of the firm

SCHEDULE-IV

**FORM OF TENDER (PRICE SCHEDULE) FOR SUPPLY OF
245 kV AND 145 kV CVTs AGAINST SPECIFICATION
NO.RVPN/SE/TLPC/STEEL/A-III/TN - 3748**

(Must be filled-in by the Tenderer and returned with the Tender IN A SEPARATE SEALED ENVELOPE)

The Superintending Engineer (TLPC),
RVPN, Jaipur.

Dear Sir,

With reference to your invitation of tender against your specification No. RVPN / SE / TLPC / STEEL / A-III / TN - 3748, our prices are given as below:-

S. No	Particulars of Item	Tendered Quantity	Qty. offered	Unit Ex-works	ED on Ex-works & Education cess	CST/VAT per unit	Unit Freight. Ch.	Unit Ins. Ch.	Total of 5+6+7+8+9	Entry Tax @ 4% for outside Raj. firms (10 x 4%)	FORD Price per unit including entry tax	Total FORD price
1	2	3	4	5	6	7	8	9	10	11	12	13

Note:

(i) The prices quoted above are valid for a period of 120 days from the date of opening of this tender.

(ii) The prices are variable as per IEEMA PV formula annexed at Appendix-III of Specification TN-3748, with base date 01.08.2011. Base date for this tender shall be 01.08.2011 irrespective of the date of opening of tender.

In case IEEMA changes the applicable formula for price variation for any item & issue guidelines for adopting the same during pendency of the contract the new formula & guide lines shall become applicable for which no confirmation shall be taken from the supplier.

(iii) RVPN is eligible for concessional rates of CST / VAT. Present concessional rate of VAT is 5% for which requisite certificate shall be issued by the purchase officer.

(iv) As per notification dated 12.07.2004, the Raj. State Entry Tax shall be applicable on the firms having their works outside Rajasthan. The entry tax shall be borne by RVPN on FORD price. However, the same shall be considered while evaluating the prices. The present rate of entry tax is @ 4%. Any increase in the rate of entry tax beyond delivery schedule shall be to the supplier's account.

(v) The bidder shall furnish individual details in respect of all the columns price bid schedule separately. If ED including CESS charges /CST / VAT indicated as inclusive the bidder should indicate the present rate of applicable ED including CESS and CST/VAT. In case present applicable ED inclusive of CESS and CST / VAT is less than the maximum rate, the bidder should confirm that they shall absorb the ED inclusive of CESS and CST / VAT upto the maximum rate during the currency of contract.

Yours faithfully,

Place :

(Signature)

Date :

Name & desig. with seal of the firm.

SCHEDULE-IV "A"

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

The Superintending Engineer (TLPC),
RVPN, Jaipur.

Dear Sir(s),

With reference to your invitation to the tender against specification No. RVPN / SE / TLPC / STEEL / A-III / TN - 3748, we agree to supply the following quantity.

S. No.	Particulars of item	Tendered Qty.	Qty. offered
1.	245 kV CVT (General Class)	260 nos.	
2.	145 kV CVT (General Class)	342 Nos.	

- 1) The offer is valid for a period of 120 days from the date of opening of this tender.
- 2) The prices are variable as per IEEMA PV Formula annexed at Appendix -III of Specification TN-3748, with base date as 01.08.2011. Base date for this tender shall be 01.08.2011 irrespective of the date of opening of tender.
- 3) It is noted that the quantities as mentioned in the specification are approximate and we agree to supply any quantity as per your requirement.
- 4) The delivery shall strictly be in accordance with our delivery clause as given in Appendix - V of this specification. In case we fail to deliver the material as indicated in the Clause No. 1.23 we shall pay penalty as per clause No. 1.24 of this section-2 of this specification.
- 5) The material shall conform to your specification No. RVPN / SE / TLPC / Steel / A-III / TN - 3748 and as per relevant ISS in all.
- 6) We confirm that we agree to all the terms and conditions as well as the technical stipulations of your specification No. RVPN / SE / TLPC / Steel / A-III / TN - 3748 and there are no deviations other than as specified in the Schedule -II (A&B).
- 7) (a) VARIATION IN TAXES / DUTIES WITHIN CONTRACTUAL COMPLETION PERIOD: Any upward or downward variation in the effective rates of existing taxes/duties or change in financial liability due to introduction of new taxes/duties or abolition of existing taxes/duties within stipulated completion period shall be to RVPN's account and all taxes/duties shall be paid at actuals. However, supplier shall have to furnish supporting document(s) in the form of Gazette Notification for approval before claiming any upward variation.
(b) VARIATION IN TAXES / DUTIES AFTER EXPIRY OF CONTRACTUAL COMPLETION PERIOD: Any additional financial liability due to increase in rates of existing taxes/duties and introduction of new taxes and duties arising consequent upon failure of the supplier to adhere to the stipulated delivery schedule shall have to be borne by the supplier. However any reduction in financial liability due to abolition of existing taxes/duties or revision in the effective rate of taxes/duties after expiry of stipulated completion period shall be passed to RVPN.
- 8) **The bidder shall quote for minimum 20% (twenty percent) of the NIT quantity of each size failing which the offer may be considered non responsive.**

Yours faithfully,

(Signature)

Name & Designation with seal of the firm

SCHEDULE-V

DELIVERY SCHEDULE

The delivery schedule of the material shall be as mentioned here under:-

Delivery Rate :

Signature
Name & Designation with
Seal of the firm

LIST OF EQUIPMENTS AND TECHNICAL HANDS
AVAILABLE WITH THE FIRM

(TO BE FILLED IN BY THE TENDERER & SENT WITH THE TENDER)

Manufacturer's and / or their authorised agents who are quoting against this tender are requested to furnish the following information along with the tender. The purchaser will have the discretion to ignore the tender without the under noted particulars and /or ignore the tender particulars.

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

(Signature)
Name & Designation with
Seal of the firm.

