



RAJASTHAN RAJYA VIDYUT PRASARAN NIGAM LIMITED
(An ISO 9001: 2000 CERTIFIED COMPANY)
OFFICE OF THE SUPERINTENDING ENGINEER
(TRANSMISSION LINE PROCUREMENT CIRCLE)
MM BUILDING OF RVPN, OLD POWER HOUSE PREMISES,
NEAR RAM MANDIR, BANI PARK, STATION ROAD,
JAIPUR-302006-02 (RAJASTHAN)
TEL: No. :- 0141- 2208916 FAX NO: 0141-2208916 & 2208921

TENDER SPECIFICATION NO. RVPN/SE/TLPC/TLM/TN – 3744 FOR
SUPPLY OF ALUMINIUM CONDUCTOR STEEL REINFORCED CODE
'ZEBRA' (54+7/3.18mm) : QUANTITY: 3060 Kms.

LAST DATE OF SUBMISSION OF TENDER	: In the month of Sept 2011 (2.30PM)
DUE DATE OF OPENING	: In the month of Sept 2011 (3.00PM)
EARNEST MONEY	: Rs. 1,00,000.00
COST OF SPECIFICATION	: Rs. 2,000.00
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. undertaking/corporation and 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 acceptance of valid B.G. furnished against vender registration or documentary evidence in support of there 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 and Commercial deviations, if any, shall only be mentioned in **Schedule-VIA & VIB** "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 and 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 the Ex-works and FOR destination prices separately indicating freight & insurance charges in **Schedule-IV** which should be packed in smaller size envelope indicating the name of item on the smaller size envelopes (i.e Price Bid for ACSR ZEBRA) and all these smaller envelopes shall then be packed in "Price Bid" envelope. They will also indicate 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 tenderers are also required to indicate the quantity quoted in **Schedule-IV (A)** and attach the same with technical bid (Part-I).

4. The prices quoted shall be variable based on basic price indices as per CACMAI PV formula indicated at Appendix-I for conductors. The base date for price variation shall be **01.08.2011**, irrespective of date of opening of tender.
5. The tender documents should be addressed to **The Superintending Engineer (TLPC), MM Building of RVPN, Old Power House Premises, RVPN, Near Ram Mandir, Bani Park, Station Road, Jaipur – 302006-02.**
6. The tender offer shall be furnished as per Clause 1.02 (I) of Section-I.
7. Offers of Bids without **Schedule-III to IX** and **Appendix I & II (A,B)** 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 tendered documents should also be clarified /indicated in the words duly signed.
11. RRVPNL has the right to reject any offer on the basis of track record of poor performance in execution of previous orders/ 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 ACSR ZEBRA or higher ratings of ACSR conductors including the supplies made to RVPN may be furnished in **Schedule-VII**.
16. As per notification dated 12.07.2004 Raj. State Entry Tax shall be applicable on the firms having their works outside Rajasthan. The entry tax shall be born by RRVPNL on FORD price. However same will 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 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 items/services covered under this 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.
18. **Payment shall be made to the supplier/ contractors through “Real Time Gross Settlement System”(RTGS)/ “National Electronic fund Transfer” (NEFT) for quick and safe transfer of funds across the country. The charges for transfer through RTGS / NEFT shall be on the part of the supplier/ contractor. In case of order, the supplier/ contractor shall furnish particulars to the payment making authorities of RVPN in Annexure-III .**

19. The following firms are exempted from submitting the requisite documents towards past supply and performance criteria of pre qualification requirement of specification irrespective of NIT quantity:

- a) M/s Agarwal General Engineering Works (Pvt.) Ltd., Jaipur.
- b) M/s Anamika Conductors LTD, Jaipur
- c) M/s Venkateshwara Wires Pvt. Ltd., Jaipur
- d) M/s Oswal Cables Pvt. LTD., Jaipur
- e) M/s Prem Cables (Pvt.) Ltd., Pipalia Kalan
- f) M/s Rajasthan Cables & Conductors Pvt. Ltd., Jaipur
- g) M/s Rajasthan Transmission Wires Pvt. Ltd. Jaipur
- h) M/s Swastika Conductors, Jaipur.

20. This specification includes Section-I, Section-II (with addendum & additional addendum) 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).

**1. ADDITIONAL ADDENDUM / CORRIGENDUM TO
SECTION-II
GENERAL CONDITIONS OF CONTRACT**

1) Clause 1.56.3:

The Clause No. 1.56.3 be replaced as :-

The RVPN has constituted the centralized standing committee for settlement of disputed claims under conditions of contract relating to RVPN.

The committee shall consider all cases for settlement of disputed claims relating to purchases, works, turnkey contracts and labour contracts, civil works etc. The committee shall also take decision whether a particular matter is required to be referred to the Board for approval before settlement. The matter for settlement shall only be referred to the centralized standing committee of RVPN by following the guide lines detailed below:

- a) Disputes will be referred contract wise.
- b) Disputes involving amount above Rs.1.00 lacs only will be referred / entertained.
- c) Non-refundable fee shall be deposited by the contractor / firm @ 2% of disputed amount as claimed by the contractor/firm subject to maximum fee of Rs.1.00 lac.
- d) In case of disputes, Application for settlement (only in prescribed format) may be collected from the purchaser office.

The centralized standing committee fees shall be deposited in cash/ demand draft/ pay order with the Account Officer (TLPC), RVPN, Jaipur and the firm(s) / Contractor(s) shall furnish receipt thereof with a request for referring their disputes to the centralized standing committee for decision.

For settlement, the firm shall furnish their application (only in prescribed format) indicating the details of dispute/grievances along with requisite settlement fee, within a period of six months, after receiving communication from MM Wing giving rise to cause of dispute/grievances.

2) Clause No.1.60 Price Fall

The following is added to the Clause No.1.60 read alongwith its addendum/ corrigendum appearing at Sr. No.5.

The price fall clause will be applicable from the date of opening of price bid of subsequent tender.

**QUALIFYING REQUIREMENTS FOR BIDDERS FOR SUPPLY OF
ALUMINIUM CONDUCTOR STEEL REINFORCED CODE "ZEBRA"
(54+7/3.18mm)**

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 ACSR ZEBRA or higher rating conductor 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 ACSR ZEBRA or higher rating conductor 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 ACSR ZEBRA or higher rating conductor 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 material etc.

2.02 Performance Criteria:

2.02.1 At least 20% of NIT quantity of ACSR 'ZEBRA' or higher rating conductor supplied by the bidder should have been in satisfactory operation on 220KV or higher voltage lines for a continuous period of atleast 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 ACSR ZEBRA or higher rating conductor is in satisfactory operation on 220KV or higher voltage lines 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 ACSR ZEBRA or higher rating conductor is in satisfactory operation on 220KV or higher voltage lines 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 notarized in the prescribed proforma at **Annexure-II**.

In case of those bidders who have supplied the ACSR ZEBRA or higher rating conductor 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.

2.03 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:-

S. No.	Past Supply Criteria	Performance Criteria	Quantity for which bid will be considered qualified.
1	2	3	4
1.	≥ 40% of NIT quantity of ACSR ZEBRA or higher rating conductor 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 ACSR ZEBRA or higher rating conductor should be in satisfactory operation on 220KV or higher voltage lines 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 on 220KV or higher voltage lines, 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 ACSR ZEBRA or higher rating conductor 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 ACSR ZEBRA or higher rating conductor should be in satisfactory operation on 220KV or higher voltage lines 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 on 220KV or higher voltage lines 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 ACSR ZEBRA or higher rating conductor 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 ACSR ZEBRA or higher rating conductor is in satisfactory operation on 220KV or higher voltage lines 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 on 220KV or higher voltage lines, is for less than 10% of NIT quantity, the bids will be considered non responsive.
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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 ACSR ZEBRA as required at Clause No.15 (l) of Section-III of this specification. 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 in respect of such type tests 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 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 some changes in respect of the type test procedure of existing type tests have been introduced in the relevant standard.

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 Poor Record of Performance and Delivery:

5.01 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.

5.02 The bids of existing bidders will not be considered for opening the price bid in case of the following:

(j) 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.

6.0 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 (P.Q.R.), 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.

- f) 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.

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

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.

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 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 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.

BANK GUARANTEE IN LIEU OF FURNISHING TYPE TEST CERTIFICATE

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

To,

The Chief Engineer (MM),
RVPN, MM Building of RVPN,
Old Power House Premises,
Bani Park, Station Road,
Jaipur.

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. _____(Rs. 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.

**REAL TIME GROSS SETTLEMENT (RTGS) / NATIONAL ELECTRONIC FUND
TRANSFER (NEFT)**

Form : M/s _____

The Sr. Accounts Officer (CPC),
RVPNL
Jaipur.

Sub: RTGS / NEFT payments.

We refer to remittance of our payments using RBI's RTGS/NEFT.
Our payments may be made through the above system to our under noted account
at our cost:-

Name of city	
Bank Code No.	
Branch Code No.	
Bank's Name	
Branch Address	
Branch Telephone / Fax No.	
Supplier's Account No.	
Type of Account	
IFSC Code for NEFT	
IFSC Code for RTGS	
Supplier's Name as per Account	
Telephone No. of Supplier	
Supplier's E-mail ID	

Confirmed by Banker.

Signature of supplier with Stamp & Address

SECTION - III

TECHNICAL PARTICULARS FOR ACSR "ZEBRA" CONDUCTOR

1. SCOPE :

This specification provides for the manufacture, testing before despatch, supply and delivery of Aluminium Conductor galvanised steel reinforced code "**ZEBRA**" as per the details given in Appendix-II (A & B) attached with this specification.

2. CLIMATIC CONDITION:

1. Location	Rajasthan State
2. Max . Ambient Air temperature	50 deg.C
3. Min. Ambient Air temperature	-5.0 deg.C
4. Average daily Ambient Air Temperature	32.2 deg.C
5. Max. relative humidity (%)	100
6. Min. relative humidity(%)	50
7. Average rainfall per annum (MM)	100-1000
8. Number of rainy days per annum	70
9. Altitude above mean sea level(Meters)	Less than 1000
10. Isoceraunic level (Days/annum)	40 (thunder storm)
11. Max. wind pressure (Kg per sq.mm)	160
12. Seismic Level (Horizontal acceleration)	0.08 gm.

3. STANDARD SPECIFICATION :

The conductor shall comply in all respects except herein otherwise stated with the Indian Standard Specification IS:398 (Part.II) /1996 with latest amendments, if any.

4. MATERIAL :

4.1 The material offered shall be of best quality and workmanship. The conductor shall be constructed of hard-drawn aluminium and galvanised steel wires. The density of hard drawn aluminium should be 2.703 g/cm³ at a temperature of 20 deg. C. and that of the galvanised steel wire be 7.80 gm/cm³ at 20 deg. C.

4.2 The steel wires shall be evenly and uniformly coated with zinc. The coating of zinc on the steel wire may be applied by the hot process or the electrolytic process. The uniformity of zinc coating and the weight of zinc coating shall be in accordance with IS:4826/1979 (Specification for Hot dipped galvanised coatings on round steel wires) with latest amendments, if any.

5. QUANTITY :

5.1 The quantity required is about **3060** kms for ACSR ZEBRA which indicate only provisional quantity, however the net quantity to be considered shall be determined later on at the time of finalisation of this tender. The purchaser also reserves the right to split the quantity & to entrust the order for the supply on one or more suppliers. The tenderer shall agree to supply part quantity if ordered on him at the rate/ price mentioned in the tender and accepted by the purchaser.

5.2 The total ordered quantity of ACSR ZEBRA conductor ordered on the supplier can be supplied with a quantity tolerance of $\pm 2\%$ (Two percent).

6. NOMINAL SIZES :

The aluminium and galvanised steel wires for the construction of ACSR "ZEBRA" conductor shall have the diameters, resistance and masses as specified in Appendix-II (B).

7. TOLERANCE ON NOMINAL SIZES :

7.1 ALUMINIUM WIRES :

A tolerance of ± 1 (one) percent shall be permitted on the nominal diameter as specified in Appendix-II (B).

7.2 GALVANISED STEEL WIRES :

A tolerance of ± 2 (two) percent shall be permitted on the nominal diameter as specified in Appendix-II (B).

8. TECHNICAL PROPERTIES :

The value of the modulus of elasticity for aluminium conductor galvanised steel reinforced as specified in Appendix-II (A) may be regarded as being accurate to within $\pm 3\text{GN/M}^2$. The coefficient of linear expansion for the aluminium conductor galvanised steel reinforced as specified in Appendix-II (A) has been calculated on the basis of coefficient of linear expansion of 23.0×10^{-6} per degree centigrade for aluminium & 11.5×10^{-6} per degree centigrade for steel.

These values shall, however be given by the tenderer under the guaranteed technical particulars.

9. SURFACE CONDITIONS :

The wires shall be smooth and free from all imperfections such as spills and splits. The surface of conductor shall be free from joints (except those allowed as per ISS), sharp edges, abrasions or other departures from smoothness or uniformity of surface contour that would increase radio interference and corona losses. When subjected to tension upto 50% of the breaking load of the conductor, the surface shall not depart from its cylindrical form nor any part of the component, parts or strands, move relative to each other in such a way as to get out of place and disturb the longitudinal smoothness of the conductor.

10. JOINTS IN WIRES :

10.1 ALUMINIUM WIRES :

In the galvanised steel reinforced aluminium conductor code "ZEBRA", joints in individual aluminium wires are permitted, in addition to those made in the base rod or wire before final drawing as prescribed in relevant clause of IS, but no two such joints shall be less than 15m apart in the complete stranded conductor. Such joints shall be made by cold pressure butt-welding only. The manufacturer shall demonstrate that

proposed method of jointing is capable of meeting the specified strength requirement.

10.2 GALVANISED STEEL WIRES :

No joints of any kind shall be made in the finished coated steel wires.

11. STRANDING :

11.1 The wires used in the construction of ACSR "ZEBRA" shall, before stranding, satisfy all the relevant requirements of IS:398 (Pt.II)/1996 with latest amendments. The lay ratio of the different layers of the galvanised steel reinforced aluminium conductor shall be within the limits given under Appendix-II (A).

11.2 The ratio of the nominal diameter of the aluminium wires to the nominal diameter of the galvanized steel wires in the construction of galvanised steel reinforced aluminium conductor code "ZEBRA" shall conform to the value given in Appendix-II (A).

11.3 In all constructions, the successive layers shall have opposite directions of lay, the outermost layer being right handed. The wires in each layer shall be evenly and closely stranded.

11.4 The lay ratio of any aluminium layer shall be not greater than the lay ratio of the aluminium layer immediately beneath it.

12. PACKING AND MARKING :

12.1 The conductor ACSR "ZEBRA" is required to be supplied in strong non returnable wooden drums worthy for Road Transport. The drums shall be strong enough to ensure the delivery of the conductor in the field without causing any damage or deformation. The drums should be able to withstand all stresses due to handling and stringing operation. The drums should conform to provisions of IS-1778- latest amended.

12.2 The conductor on each drum shall be securely fastened at each end. The outer end of the conductor shall be fastened inside the drum against one of the sides of the flanges while it is under tension. The inner end should be fastened outside the drum against one of the sides of the flanges. The length of the conductor used for fastening the inner end shall not constitute the part of the quantity wound on drum and billed for.

12.3 The conductor shall be tightly and uniformly spooled on the drum. The wrap shall be laid snugly against the side of the Preceding wrap. The first and the last wrap in each layer shall fit snugly against the sides of the flanges. Drums shall be lagged with sufficiently strong wooden laggings to support the full drum without crushing.

12.4 The drums carrying conductor when lagged with strong wooden laggings shall be tied with at least two steel wires of min. 3 mm diameter over the laggings enabling them to remain intact.

12.5 Although the various dimensions of drum such as flanges, stretchers, traverse and barrel diameter shall depend on the quantity of conductor as offered and agreed to on one drum, the manufacturers, while

indicating the various dimensions of the drum shall, ensure that flange diameter shall be such that after winding complete quantity of conductor in a drum, a minimum uniform space of 50 mm (in case of 2 ply flange construction) and 125 mm (in case of 3 ply flange construction) remains left uniformly between the outermost, layer of the conductor and the edges of the drum. This is an essential requirement to ensure that the conductor does not get closer to the edges and get damaged during transportation, reeling/ un-reeling operation or rolling on the undulated grounds/fields.

12.6 The barrel surface and inner surfaces of flanges of the drums shall be painted with bitumen based paint. Before reeling, card board or double corrugated or thick bituminised water proof bamboo paper shall be secured to the drum barrel and inside of flanges of the drum by means of a suitable commercial adhesive material. After reeling the conductor, the exposed surface of the outer layer of conductor shall be wrapped with water proof thick bituminised bamboo paper to preserve the conductor from dirt, grit and damage during transport and handling. The outer surface of drum flanges shall be painted with yellow enamel paint.

12.7 Regarding the marking, the same shall be done with bright black enamel paint on the bright yellow surface already prepared on the outside of the flanges with bright yellow color enamel paint. The marking shall be done completely in bold letters and shall be such that it is clearly visible from the distance. The drum shall carry all such information which are essential. The marking should be permanent which can neither be washed nor erased.

12.8 All the drums shall carry the following particulars and shall be marked clearly to avoid the possibility of goods being lost or wrongly dispatched :

- i) Manufacturer's name or trade mark and place of manufacture in the country.
- ii) Name of the consignee with his full address.
- iii) Destination station.
- iv) Drum number.
- v) Size of the conductor with its code name.
- vi) Number of lengths with quantity of each length.
- vii) Total quantity of the conductor.
- viii) Net weight of the conductor.
- ix) Tare weight of the drum.
- x) Gross weight of the drum.
- xi) ISI certificate mark. (if available)
- xii) An arrow mark indicating the direction in which the drum should be unwound.

As far as possible the first three particulars appearing at S.No. (i), (ii) and (iii) above shall be marked on one side of drum and the remaining particulars on other side of the drum.

13. LENGTHS :

13.1 The conductor ACSR "ZEBRA" shall be supplied in the standard length of 1100 meters with $\pm 5\%$ (five percent) tolerance.

13.2 It shall be permissible to supply not more than 10 percent of the length on any one order in random lengths provided further that none of the random length shall be shorter than 50 percent of the standard length.

13.3 Each wooden drum shall carry only one standard/random length.

14. INSPECTION AND TESTING :

The inspection & testing shall be carried out by the purchaser's representative as per provisions of IS:398(Part-II)/1996 with latest amendment if any. The packing list of the material offered for inspection shall be furnished in duplicate for arranging the inspection. This shall be governed by clause 1.27 entitled "INSPECTION AND TESTING " of Section-2" General Conditions of Contract" except mentioned hereunder:

14.1 Individual wire and finished aluminium conductor galvanised steel reinforced shall be subjected before dispatch from the works, to the tests as specified in the Indian Standard Specification IS:398 (Part.II)/1996 with latest amendments, if any.

14.2 The supplier/manufacturer shall provide all facilities at their works for inspection of at least 5% (five percent) of conductor drums selected at random by the authorised representative of the purchaser for checking/verification of conductor length/manufacturing defects by transferring the conductor from one drum to another empty drum and at the same time measuring the length of the conductor so transferred by means of the meter.

14.3 In case the manufacturer does not have adequate facilities for getting all the required tests conducted in his laboratory, the purchaser at his option may get these tests conducted in any Government approved laboratory. All the expenses for such tests to be conducted outside, shall be borne by the supplier.

14.4 Samples of individual wires (both aluminium and steel) for tests shall be taken before stranding from the outer ends of not less than 10 percent of wire coils. If samples are taken after stranding then they shall be obtained by cutting 1.2 metres from the outer end of the finished conductor from not more than 10 percent of finished reels or drums. The sample length so cut and used/ consumed in testing shall not form part of supply and shall not be billed for.

14.5 Coils offered for inspection shall be divided into equal lots, the number of lots being equal to the number of samples to be selected, a fraction of lot being counted as a complete lot. One sample coil shall be selected at random from each lot.

14.6 The instruments (particularly Tensile Machine, Kelvin Bridge & Weighing Machine) deployed for inspection purpose shall be most accurate and should have been calibrated by the manufacturer or a Govt. approved laboratory. Such calibration certificates in any case, should not be older than one year and shall be furnished to the inspecting officer at the time of inspection/ testing of the material.

14.7 In case shortage in length is found up to 10 meters in a drum during the course of rewinding in pre-dispatch inspection even then the inspection will be carried out by the inspecting officer by reducing this length from each drum of the lot offered for inspection.

The acceptance of any quantity of material shall in no way relieve the Supplier of any of his responsibilities for meeting all requirements of the Specification, and shall not prevent subsequent rejection if such material is later found to be defective.

14.8 The following facilities shall be provided by the supplier at his own costs to the inspecting officer of RVPN, in case the purchase order value is 50 lacs and above.

1. Suitable accommodation: In case of joint inspection single or shared double room accommodation.
2. Local conveyance between arrival point, place of stay, works and departure point.
3. 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.

14.9 In case the supplier fails to deliver the material/ equipment or any part thereof even after 6 months of expiry of schedule delivery period for the total ordered quantity, the order will be cancelled with levy of the maximum penalty as per contract and business relations severed for a period of two years.

15) TESTS : The various tests are as under :-

I) TYPE TESTS :

The bidder shall furnish the following type tests for ACSR ZEBRA along with the offer as per relevant IS: 398 (Part-II) with latest amendments.

- (i) Surface Condition Test
- (ii) Test for ultimate breaking load on stranded conductor
- (iii) Stress-stain test
- (iv) Measurement of diameter of individual aluminium and steel wires
- (v) Measurement of Lay ratio
- (vi) Breaking load of individual wires
- (vii) Ductility test
- (viii) Wrapping test
- (ix) Resistance test
- (x) Galvanizing test

II) ACCEPTANCE TEST :

The following shall constituted acceptance tests.

a) MEASUREMENT OF DIAMETER OF INDIVIDUAL ALUMINIUM AND STEEL WIRE

The test shall be carried out as per IS: 398 Pt.-II with latest amendments.

b) MEASUREMENT OF LAY RATIO :

The test shall be carried out as per IS: 398 Pt.-II with latest amendments.

c) BREAKING LOAD TEST:

This test shall be made on both aluminium and galvanised steel wires.

The breaking load of the specimen cut from each of the sample taken under clause 14.4 above shall be determined by means of a suitable tensile testing machine. the load shall be applied gradually and the rate of separation of the jaws of the testing machine shall be not less than 25 mm/min and not greater than 100 mm/min. The ultimate breaking load of the specimens shall be not less than the appropriate value specified in Appendix-II (B).

d) DUCTILITY TEST :

This test shall be made on galvanised steel wires only by either of the two tests given in clause No.13.4.1 "Torsion Test" or 13.4.2 "Elongation Test" of the IS-398(Part-II)/1996 and latest amendment if any.

The sample has to pass either the torsion test or elongation test i.e. if the conductor is passing any of the two tests, the sample should be considered as passing.

e) WRAPPING TEST :

This test shall be made on both aluminium and galvanised steel wires.

i) ALUMINIUM WIRES :

One specimen cut from each of the samples of aluminium wire taken under clause 14.4 above shall be wrapped round a wire of its own diameter to form a close helix of 8 turns. Six turns shall then be unwrapped and again closely wrapped in the same direction as before. The wire shall not break or show any crack.

ii) GALVANISED STEEL WIRES :

One specimen cut from each of the samples of galvanized steel wire taken under clause 14.4 above shall be wrapped round a mandrel of diameter equal to 4 times the wire diameter to form a close helix of 8 turns. Six turns shall then be unwrapped and again closely wrapped in the same direction as before. The wire shall not break or show any crack.

f) RESISTANCE TEST :

This test shall be made on aluminium wires only. The electrical resistance of one specimen of aluminium wire cut from each of the samples taken under clause 14.4 above shall be measured at ambient temperature. The measured resistance shall be corrected to the value at 20 degree Centigrade by means of the following formula:

$$R_{20} = \frac{R_T}{1 + \alpha(T - 20)}$$

Where R_{20} = resistance corrected at 20 °C .

R_T = resistance measured at T °C .

α = Constant-mass temperature co-efficient of resistance, 0.004 and
T = Ambient Temperature during measurement.

The resistance corrected at 20 °C. shall be not more than the maximum value specified in Appendix 'B'.

g) GALVANISING TEST :

This test shall be made on galvanised steel wires only.

i) This test shall be made on one specimen cut from each of the samples of galvanized steel wires taken under clause 14.4 above.

ii) The uniformity of galvanizing and the weight of the coating shall be in accordance with IS: 4826/1979 "Specification for hot dipped galvanized coating on round steel wires" (first revision) with latest amendments, if any.

iii) ROUTINE TESTS:

The routine tests shall be carried out before and after standing by the manufacturer and shall be shown to the purchaser's representative at the time of inspection.

16. REJECTION & RETESTS:

16.1 Should any one of the test pieces first selected fail to pass the tests, three further samples from the same batch shall be selected for testing, one of which shall be from the length from which the original test sample was taken, unless that length has been withdrawn by the supplier.

16.2 Should all the three test pieces from these additional samples satisfy the requirements of the tests, the batch represented by these samples shall be deemed to comply with the standard. Should the test pieces from any of the three additional samples fail, the batch represented shall be deemed not to comply with the Standard.

17. GUARANTEED TECHNICAL PARTICULARS :

The guaranteed technical particulars shall be furnished strictly in the proforma attached as schedule V.

18. DELIVERY

The desired delivery of the material is indicated at Schedule-VIII of the specification. The bidder is to confirm this delivery requirement in Schedule-VIII.

19. SAG TENSION CHARTS :

The supplier shall supply 6 copies of sag tension charts in respect of the aluminium conductor galvanized steel reinforced code "ZEBRA". The supplier shall also prepare sag template in celluloid which shall be subject to the approval by the purchaser and without involving any extra charges. The design data of the lines on which these conductors will be used, shall be indicated in the detailed purchase order or provided at a later stage. It will, however, be the responsibility of the supplier to get such details obtained timely from the purchaser.

**PRICE VARIATION CALCULATION FOR ACSR "ZEBRA" UNDER
TN-3744**

(1) The supplier should quote variable price only which should be based on the basic cost of E. C. grade Aluminium wire rods and High Tensile Galvanised Steel wire of size 3.18 mm ruling as on **01.08.2011** and as defined in the succeeding paras. The supplier shall also indicate the basic cost of E. C. grade Aluminium wire rods & High tensile galvanised steel wire in his tender.

(2) The basic cost of E.C.Grade Aluminium wire rods shall be the average price of E.C. Grade Aluminium wire rods of four main producers namely NALCO, BALCO, MALCO and HINDALCO, ruling on relevant date i.e. **01.08.2011**, as declared by Cable and Conductor Manufacturer's Association of India. The ED, LST/CST/VAT applicable on the basic average price of EC grade Aluminium will not be added to the basic average price of EC grade Aluminium while calculating the Price Variation, on account of benefit available under MODVAT/VAT scheme. The ED & CST or VAT as applicable, as per provision of P.O. will be allowed on the price variation amount payable on finished ACSR.

(3) The basic cost of high tensile galvanized steel wire shall be the average price of high tensile galvanized steel wire of 3.18 mm dia. ruling on relevant date i.e. **01.08.2011** as declared by Cable and Conductor Manufacturer's Association of India. The ED, LST/CST/VAT applicable on the basic average price of High Tensile Galvanized Steel Wire will not be added to the basic average price of High Tensile Galvanized Steel Wire while calculating the Price Variation, on account of benefit available under MODVAT/VAT scheme. The ED & CST or VAT as applicable, as per provision of P.O. will be allowed on the price variation amount payable on finished ACSR.

(4) The price variation amount shall be determined as under:-

i) **ALUMINIUM** : For every one Rupee increase/decrease per Kg. in the basic cost of E. C. Grade Aluminium wire rod, the price per Km. of finished ACSR "ZEBRA" shall increase/ decrease by Rs. 1186.00 (Rupees One thousand one hundred eighty six only)

ii) **H.T.G. STEEL** : For every one Rupee increase/decrease per Kg in the basic cost of high tensile galvanized steel wire rods, the price per Km of finished ACSR "ZEBRA" shall increase/decrease by Rs. 435.00 (Rupees Four hundred and thirty five only).

(5) The basic cost applicable for claiming price variation shall be the ruling price of E.C. Grade Aluminium Wire Rods and high tensile galvanised steel wire rods as prevailing on the **15th day of the calendar month preceeding the month in which material is delivered**, which shall be determined 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.

(6) (i) The purchaser shall however not bear any extra financial liability on account of supplier's delaying the supplies beyond stipulated/extended delivery schedule.

(ii) The supplier shall furnish relevant CACMAI circulars (duly authenticated) whenever price revision is desired. The supplier shall also furnish the detailed calculations for the revised price.

(iii) In case 'CACMAI' changes the applicable formula for price variation and issue guidelines for adopting the same during pendency of the contract, the new formula and guidelines shall become applicable.

(7) No variation shall be allowed in respect of freight and insurance, packing & forwarding and any other similar charges.

(8) Supplier shall be free to raise the invoice(s) at the price(s) finalised under this tender certifying that there has been no reduction in the basic cost of EC Grade Aluminium wire rods and high tensile galvanised steel wire. Supplementary bills if any, in case of increase in

the cost of EC Grade Aluminium wire Rods/ high tensile galvanised steel wire can then be raised separately provided admissible increase in the cost has not been claimed earlier. The detailed calculations in support of required price variation together with relevant documents shall be furnished to this office for scrutiny and conveying the approval to the paying authority.

(9) The supplier shall also have to furnish an undertaking before claiming first payment against this order, in shape of a indemnity bond duly executed on a non-judicial stamp paper of Govt. of Rajasthan worth Rs.100/- (Rupees one hundred only) that in case of decrease in the basic cost of EC Grade Aluminium wire Rods and high tensile galvanised steel wire, the same shall be immediately brought to the notice of the purchaser to revise the prices accordingly. In case of failure to do so, the purchaser shall be at liberty to recover the excess amount drawn by the supplier, if any, in the manner as may be deemed appropriate and expedient.

**STATEMENT OF GUARANTEED TECHNICAL PARTICULARS AND
OTHER PERFORMANCE DATA FOR SUPPLY OF ACSR ZEBRA'
AGAINST SPECIFICATION NO. TN- 3744.**

PRINCIPAL TECHNICAL PARAMETERS OF ACSR "ZEBRA" CONDUCTOR.

S.No.	Particulars	'ZEBRA'
1.	Nominal Aluminium area (in Sq.mm)	420
2.	No. of strands and nominal diameter (in mm):	
	i) Aluminium	54/3.18
	ii) Steel	7/3.18
3.	Sectional area of aluminium (in sq.mm)	428.9
4.	Total sectional area (in Sq.mm)	484.5
5.	Approximate overall diameter (in mm)	28.62
6.	Approximate total mass (in Kg./Km.)	1621
7.	Calculated resistance at 20 Degree C.(Max. in Ohms/Km)	0.06868
8.	Approximate calculated breaking load (KN)	130.32
9.	Lay ratio :	
	(a) Steel core(six wire layer)	Max. - 28 Min. - 13
	(b) Aluminium wire :	
	i) Outer most layer	Max. - 14 Min. - 10
	ii) Layer immediately beneath outermost layer.	Max. - 16 Min. - 10
	iii) Inner most layer Of conductors with 3 Al. wire layers	Max. - 17 Min. - 10
10.	Final Modulus of Elasticity(GN/sq.m.)	69
11.	Co-efficient of Linear Expansion/Deg.C.	19.3 x 10 ⁻⁶
12.	Ratio of aluminium wire diameter to steel wire diameter.	1.000
13.	Standard Length(Mtrs.)	1100 ± 5%

**DETAILS OF SOLID ALUMINIUM AND GALVANISED STEEL WIRE USED IN
CONSTRUCTION OF ALUMINIUM CONDUCTOR GALVANISED STEEL
REINFORCED CODE "ZEBRA".**

S.No.	Particulars	ACSR "ZEBRA"
1.	ALUMINIUM WIRE : -----	
	i) Nominal diameter	3.18 mm
	ii) Maximum diameter	3.21 mm
	iii) Minimum diameter	3.15 mm
	iv) Cross Sectional area of nominal diameter wire.	7.942 sq.mm
	v) Mass	21.47 Kg/Km
	vi) Breaking load(Min.):-	
	a) Before stranding:	1.29 KN
	b) After stranding :	1.23 KN
	vii) Resistance at 20 Deg.C.(Max.)	3.626 Ohm/KM
2.	GALVANISED STEEL WIRE : -----	
	i) Nominal diameter	3.18 mm
	ii) Maximum diameter	3.24 mm
	iii) Minimum diameter	3.12 mm
	iv) Cross Sectional area of nominal diameter wire.	7. 942 sq.mm
	v) Mass	61.95 Kg/Km
	vi) Breaking load(Min.):-	
	a) Before stranding:	10.43 KN
	b) After stranding:	9.91 KN

SCHEDULE-III

**TECHNICAL SPECIFICATION AGAINST TN-3744 FOR
THE SUPPLY OF ACSR 'ZEBRA' CONDUCTOR**

S.NO.	Technical specification to which material shall confirm.	Name of IS/ other standard specification to which material should confirm	Others particulars if any.
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As per Clause 3. 'STANDARDS' of Section -III of the Specification.

Certified that we agree to all the aforesaid technical specification except at No..... for which our technical specification shall be as under :-

S.NO.	Technical specification to which material shall confirm.	Name of IS/ other standard specification to which material should confirm	Others particulars if any.
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(Signature)

Name and Designation
with seal of the tenderer

SCHEDULE - IVPRICE SCHEDULE

(Must be filled- in by the tenderer and packed separately in smaller size price bid envelope and returned with the tender).

To,
The Superintending Engineer (TLPC),
MM Building of RVPN, Old Power House Premises,
Near Ram Mandir, RVPN,
Jaipur – 302006-02.

Dear Sirs,

With reference to your invitation to the tender against specification No.RVPN/SE/TLPC/TLM/TN-3744 , Our prices are given below:

Sl. No	Particular of item	Tendered Qty. (in Km)	Qty offered (in Km)	Unit Ex-wor-ks price	E.D. including Cess on ex-wor-ks	CST/ VAT per unit	Unit freight Charges	Unit insur - ance Char- ges	Total of (5+6+7 +8+9)	Entry Tax @4% for out side Raj. Firms (10x4%)	FORD Price per unit including Entry Tax	Total FOR Destina- tion Price
1	2	3	4	5	6	7	8	9	10	11	12	13
	ACSR Zebra size 54/3.18mm Al,+7/3.18 mm Steel having a nominal Al. area of 420sq. mm conforming to IS:398(pt-II)/1996 with latest amendments, to be supplied in non returnable strong wooden drums.	3060										

(1) As per notification dated 12.07.2004 Raj. State Entry Tax shall be applicable on the firms having their works outside Rajasthan. The entry tax shall be born by RRVN on FORD price. However same will 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.

(2) The prices are variable with base date as 01.08.2011. Base date for this tender shall be 01.08.2011 irrespective of date of opening of tender.

(3) Bidder shall furnish individual details in respect of all the column of price bid schedule separately. If excise duty including cess charges/CST or VAT indicated as inclusive, the bidder should indicate the present rate of applicable excise duty inclusive of cess & CST/VAT. In case present applicable excise duty inclusive of Cess & CST/VAT is less than the maximum rate, the bidder confirms that they shall absorb the excise duty inclusive of cess and CST/VAT upto the maximum rate during the currency of the contract.

(4) 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.

Yours faithfully,

Signature
Name & designation with seal of firm

SCHEDULE-IV A

(Must be filled in by the tenderer and attach with Technical Bid-Part.I)

The Superintending Engineer (TLPC),
MM Building of RVPN, Old Power House Premises,
Near Ram Mandir, RVPN,
Jaipur – 302006-02.

With reference to your invitation to tender against Specification No RVPN/SE/TLPC/TLM/ TN-3744, we agree to supply the following quantity.

S. NO.	Particulars of material	Tendered quantity Kms	Qty offered kms
1.	2.	3.	4.
1.	ACSR ' ZEBRA ' size 54/3.18 mm Al,+ 7/3.18 mm Steel ,having a nominal Aluminium area of 420 sq. mm conforming to IS:398 (pt-II)/1996 with latest amendments, to be supplied in non returnable strong Wooden drums.	3060 kms	

- The offer is valid for a period of 120 days from the date of opening of this tender.
- The prices are variable with base date as 01.08.2011. Base date for this tender shall be 01.08.2011, irrespective of date of opening of tender.
- It is noted that the quantities as mentioned in the specification are approximate and we agree to supply and quantity as per your requirement.
- The delivery shall strictly be in accordance with our delivery clause as given in Schedule-VIII of this specification. In case, we fail to deliver the material as indicated in Schedule-VIII, we shall pay penalty as per Clause No. 1.24 of section-2 of this specification.
- The material shall conform to your specification No. RVPN/SE/TLPC/TLM/TN-3744 and as per relevant ISS in all respects.
- We confirm that statutory taxes/ duties/ levies quoted by us shall be payable lower of those as applicable during contractual delivery or during actual delivery in case when delivery is delayed/ advanced. Any new taxes/ duties/ levies if applicable during contractual delivery period shall only be payable.
- We confirm that we agree to all the terms and conditions as well as the technical stipulations of your specification No. RVPN/SE/TLPC/TLM/TN-3744 and there are no deviations other than as specified in Schedule-VI (A&B).

Yours faithfully,

(signature)
Name & Designation
with seal of the firm

SCHEDULE -V

**GUARANTEED TECHNICAL AND OTHER PARTICULARS OF ACSR "ZEBRA"
AGAINST SPECIFICATION NO. RVPN/SE/TLPC/TLM/TN.-3744.**

S.No.	Description	ACSR `ZEBRA`
1.	Manufacturer's name and address.	
2.	Type of industry(Small/Medium/Large scale) with their registration No.	
3.	Stranding and nominal wire diameter in mm : a) Aluminium b) Steel.	
4.	Nominal Aluminium area in sq.mm.	
5.	Sectional area in sq.mm: a) Aluminium Strand. b) Steel strand. c) Conductor.	
6.	Overall diameter(Approx) of conductor in mm.	
7.	i) Density of hard drawn aluminium at 20 Deg.C. in g/cm ³ ii) Density of galvanised steel wire at 20 Deg.C.in g/cm ³	
8.	Approximate calculated breaking load of conductor in KN.	
9.	Minimum breaking load in KN for: a) Aluminium strand : i) Before stranding. ii) After stranding. b) Steel strand : i) Before stranding. ii) After stranding.	
10.	Purity of aluminium rods.	

11. Zinc coating of steel strand:
(values before stranding).
 - a) Uniformity of coating, number and duration of dips
(Preece test):
 - i) Number of dips one min.
 - ii) Number of dips half min.
 - b) Minimum weight of coating in gms/m².
12. Maximum working tension in KN.
13. Mass in Kg. per KM (Approx.)
 - a) Aluminium
 - b) Steel
 - c) Conductor.
14. Resistance in ohms/ KM at 20 Deg. C. :
 - i) Aluminium wire.
 - ii) Complete conductor.
15. Modulus of Elasticity in GN/m²
 - a) Aluminium.
 - b) Steel.
 - c) Conductor.
16. Co-efficient of Linear Expansion per degree centigrade of :
 - a) Aluminium
 - b) Steel.
 - c) Conductor.(indicate in initial & final both)
17. Percentage of carbon in steel wire rods.
18. Standard length of each piece in Metres.
19. Tolerance on standard length, if any.
20. No. of standard lengths in one reel.

21. Dimensions of the reel in mms.
 - i) Flange dia.
 - ii) Traverse.
 - iii) Barrel dia.
22. Net weight of the conductor in one reel in Kg.(Approx.).
23. Tare weight of the reel in Kg. (Approx.)
24. Gross weight of the reel including weight of the conductor (Approx.)
25. Standard according to which the conductor will be manufactured and tested.
26. Method of jointing in Aluminium wires (only cold pressure butt welding is permitted as per clause No.8.1 of Section.3 of our specification).
27. Packing details.
28. Other particulars, if any.

Signature of tenderer
with rubber stamp.

SCHEDULE-VI(A)

DEPARTURE/DEVIATION FROM TECHNICAL SPECIFICATION.

The tenderer shall state under this schedule the departures from the purchaser's specification in respect of technical is as under :-

S.No. Deviation from technical specification

Certified that we agree to all Technical Specification of the NIT except for the deviation to the extent indicated above.

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

SCHEDULE-VI(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 including delivery schedule: -

S.No.	Deviation from specification
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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-VII**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 KM	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 Km	Whether still to be executed	Delivery stipulated in purchase order	Remarks
7.	8.	9 .	10.

Note :- Separate schedule are to be furnished by the tenderer for past supply to the RVPN (Erstwhile RSEB), other state electricity Nigam and other department/ organisation.

(Signature)

Name & Designation
with Seal of the firm.

SCHEDULE-VIII**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.	ACSR ZEBRA	From the date of issue of P.O.	(i) 25 % quantity within three months from the date of issue of P.O. (ii) Next 25 % quantity after three months and before six months from the date of issue of P.O. (iii) Next 25 % quantity after six months and before nine months from the date of issue of P.O. (iv) Balance 25 % quantity after nine months and before twelve months from the date of issue of P.O.	Twelve months from the date of issue of P.O.

Note :- (i) The above delivery schedule can be revised by the purchaser at his discretion.
(ii) The contractual formalities shall be got completed prior to commencement of supply.

(Signature)

Name & Designation
with Seal of the firm.

SCHEDULE-IX

LIST OF EQUIPMENTS & 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 alongwith 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 Nigam, if required?
11. Statement of financial resources and Banking reference alongwith 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.