

JODHPUR VIDYUT VITARAN NIGAM LIMITED
(MATERIAL MANAGEMENT & CONTRACT CIRCLE)
NEW POWER HOUSE, INDUSTRIAL AREA, JODHPUR-03

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Tenders are hereby invited in e-tender system for purchase of **33 KV XLPE Insulated Armoured Cable of size 3C x 300 Sq.mm. under TN-1313.**

Tenders are to be submitted online in electronic format on website <http://eproc.rajasthan.gov.in>.

The details are as under-

S. No.	Name of Item	Quantity
1	33 KV, 3CX300 Sq.mm XLPE Armoured Cable	75 Kms

A	NIT No.	TN-1313
B	Cost of tender specifications	Rs. 2500.00 (Two Thousand Five Hundred Only)
C	Processing fee of RISL	Rs.1000.00 (One Thousand Only)
D	Earnest money	Rs. 5.00 Lakhs /Exemption Certificate / Vendor Registration of Class A
E	Validity	120 days from the next date of opening of techno-commercial bid.
F	Base date for price variation	1st day of month prior to the date of opening of technical bid.

IMPORTANT DATES

S.N.	Events	Date & Time	Location
1	Date of downloading of tender specifications	Up to 05.04.2017 (6:00 PM)	www.jdvvn.com & http://eproc.rajasthan.gov.in
2	Deposit of cost of Tender Specifications & Earnest Money and furnishing of Processing fee	Up to 05.04.2017 (04:00 PM)	Office of Sr. A.O (Cash & CPC) / SE (MM&C), JdVVNL , New Power House, Industrial Area, Jodhpur
3	Last Date & time of submission of electronic bid	Up to 06.04.2017 (12:00 PM)	http://eproc.rajasthan.gov.in
4	Opening of Technical Bid	06.04.2017 (03:00 PM)	http://eproc.rajasthan.gov.in
5.	Opening of Price Bid	To be intimated separately to the qualified bidders	http://eproc.rajasthan.gov.in

Note:

The bidders, in their own interest are requested to read very carefully Section-I (Instruction to Bidders), Section-II (General Condition of Contract) & Section-III (Technical Specification) before filling the bid. The Bid documents can be downloaded from website of Jodhpur Discom www.jdvvn.com, & www.sppp.rajasthan.gov.in & <http://eproc.rajasthan.gov.in> & can be uploaded on the website <http://eproc.rajasthan.gov.in>. No hard copy of the bidding documents will be provided to the bidders through this office. In case of any discrepancy found in the bidding documents downloaded from the website and appended with the bid (as a bid document) and the original copy of such document available in the office of Superintending Engineer (MM&C), Jodhpur Discom, Jodhpur then the copy available with Superintending Engineer (MM&C), Jodhpur Discom, Jodhpur will be considered as final document for all purposes. The scheduled date and time to deposit the cost of Bid document, EMD or Valid Vendor Registration Certificate (if applicable) and furnishing of tender processing fee, be as stated/mentioned in published Notice Inviting Tender/tender document.

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SECTION – III

TECHNICAL SPECIFICATION AND SCHEDULE OF REQUIREMENT FOR SUPPLY OF 33KV CROSS-LINKED POLYETHYLENE (XLPE) INSULATED POWER CABLES AGAINST TN-1313

1. SCOPE:

1.1 This section provides for manufacture, testing before dispatch, supply and delivery F.O.R. destination of **ISI Marked** 33 KV Aluminium conductor Screened, Cross linked Polyethylene (XLPE) Insulated Armoured Shielded PVC Sheathed cable of rated voltage 33KV (earthed system) conforming to **IS:7098 (Part-II/1985)** with latest amendment. The requirement of 33 KV Power XLPE Armoured Cables shall be as per schedule of requirement Annexed with this section at **Schedule-I**. It may be noted that the requirement indicated in the schedule is tentative & may vary at the time of placement of order.

The 33 KV Aluminium Conductor, Screened CROSS-LINKED POLYETHEYLENE (XLPE) INSULATED Armoured Shielded PVC Sheathed Power cable shall be **ISI marked**. **The bidder should be a manufacturer of tendered item. The offers from Sole Selling Agents / Authorised Dealers shall not be entertained.**

NOTE:-

The Manufacturer shall manufacture the 33 KV **Power Cable with CCV Line** Process only and offer from other type of manufacturing process (Syoplas) shall not be considered.

The bidder must possess valid ISI License for the bid item. **The technical bid of the bidder shall be considered for opening in the absence of non-furnishing of above required ISI License along with the bid. However, Price bid of the responsive bidder shall only be opened if bidder furnishes above valid BIS License up to the official working hours of one working day prior to the schedule / notified date of opening of price bid along with undertaking on NJS of Rs. 100.00 duly notarised that BIS License so furnished is valid till date and same has not been withdrawn/cancelled by Bureau of Indian Standard, failing which price bid of the bidder shall not be opened.. Similar undertaking of validity of BIS License be also furnished by the bidder who furnishes BIS License along with Technical Bid. The firm must possess ISO-9001 or above certification.**

2. STANDARDS:

Unless otherwise stipulated in this specification the following standards with latest amendments shall be applicable. Any departure from the Standards be indicated in **Schedule-III**.

- i) IS:7098(Part-II) : Cross linked Polyethylene Insulated PVC sheathed cable for voltage from 3.3 KV upto & Including 33 KV.
- ii) IS:8130 : Conductors for Insulated Cables.
- iii) IS:5831 : PVC insulation and sheath of Electric cables.
- iv) IS:3975 : Mild steel wires, strips and tapes for armouring cables.
- v) IS:10810 : Methods of test for cables.

vi) IS:10418 : Drums for Electric Cables

3. CLIMATIC CONDITIONS:

i)	Peak ambient temperature in shade.	50 Deg.C
ii)	Maximum average ambient temperature in a 24 hours period in shade.	40 Deg.C
iii)	Min. ambient air temperature in shade	(-)5 Deg.C
iv)	Maximum temperature attainable by an object exposed to sun.	60 Deg.C
v)	Maximum relative humidity	100%
vi)	Average number of thunder storm days per annum	40
vii)	Average number of rainy days per annum.	100
viii)	Average annual rainfall	10 to 100 cm
ix)	Number of months of tropical monsoon conditions	4 months
x)	Maximum wind pressure.	100 Kg/ Sq. mm
xi)	Altitude not exceeding	1000 M

4. GENERAL REQUIREMENT:

4.1 The 33 KV power cable shall be **ISI Marked** Aluminium conductor screened cross linked polyethylene insulated armoured shielded and over all PVC sheathed. The 33 KV XLPE Cable shall conform to IS: 7098 (Part-II)/1985 with latest amendments **shall bear ISI Certification mark**. The cable shall be capable of withstanding the normal stresses associated with transportation, erection, reeling and unreeling operations without getting deformed.

4.2 The 33KV XLPE Cable shall be suitable for the following conditions of laying:

- i) Laid directly in ground.
- ii) Installed outdoor in free air in vertical position.
- iii) Drawn into underground ducts.

4.3 The 33 KV XLPE Power Cable shall be suitable for use where combination of ambient temperature and temperature rise due to load results in conductor temperature not exceeding 90 degree C. under normal operation and 250 degree C under short circuit conditions.

4.4 The cable shall be used on 33 KV earthed system. The cables shall be suitable for continuous operation at a power frequency voltage 10% higher than rated voltage.

5.0 MATERIAL:

5.1 CONDUCTOR:

The conductor shall be composed of aluminium wires complying with the requirement of **Class-2 of IS: 8130/1984 with latest amendment** .

The bidder must guarantee the minimum weight of Aluminium in Kg/Km corresponding to nominal cross sectional area of conductor as mentioned in the G.T.P.

5.2 INSULATION:

The insulation shall be cross linked polyethylene conforming to the requirement given in Table-1 of **IS:7098(Part-II)/1985 with latest amendment**.

5.3 SCREENING:

The screening shall consist of one or more of the following:

- i) Non-Metallic semi conducting tape.
- ii) Non-Metallic semi conducting compound and
- iii) Non-Magnetic Metallic tape wire, strip or sheath.

5.4 FILLERS AND INNER SHEATH:

5.4.1 The filler and inner sheath shall be of the following:

- a) Vulcanized or Un-vulcanized rubber or
- b) Thermoplastic material.

5.4.2 Vulcanized or Un vulcanized rubber or Thermoplastic material used for inner sheath shall not be harder than **XLPE and PVC** used for insulation and outer sheath respectively. The filler and inner sheath material shall be chosen to be compatible with the temperature rating of the cable and shall have no deleterious effect on any other components of the cable.

5.4.3 The Central hole / void, if any, of the cable shall be invariably filled with suitable filler material so that there is no gap in the centre.

5.5 ARMOURING:

5.5.1 The Armouring shall be of Galvanized Steel Strip.

5.5.2. Galvanized steel strips shall comply with the requirements of IS:3975/1979 with latest amendments.

5.6 OUTER SHEATH:

5.6.1 The outer sheath shall be of Poly Vinyl Chloride (PVC) compound conforming to the requirement of type **ST-2 of IS:5831/1984 with latest amendment.**

6. CONSTRUCTION:

6.1 CONDUCTOR:

The Conductor shall be of stranded construction complying with Class-2 of IS:8130/1984 with latest amendments. The aluminium shall be reasonably uniform in size and shape and its surface be free from any sharp edges.

6.2 CONDUCTOR SCREENING:

The conductor screening shall be provided over the conductor by applying non-metallic semi conducting tape or by extrusion of semi conducting compound or a combination of the two.

6.3 INSULATION:

The Conductor (with screen) shall be provided with cross linked polyethylene (XLPE) insulation applied by extrusion. The insulation shall be so applied that it fits closely on the conductor (or conductor screening) and it shall be possible to remove it without damaging the conductor. The thickness of insulation and tolerance of thickness of insulation shall be as per Clause No.11 of **IS:7098 (Part-II)/1985** with latest amendments.

6.4 INSULATION SCREENING:

6.4.1 The insulation screening shall consist of two parts namely metallic and non-metallic.

6.4.2 Non-metallic part shall be applied directly over the insulation of each core and shall consist of either a semi conducting tape or extruded semi conducting or a combination of the two or either material with a semi conducting coating.

6.4.3 Metallic part shall consist of either tape or braid or concentric serving of wires or a sheath should be non-magnetic and shall be applied over the non metallic part.

6.5 CORE IDENTIFICATION:

The core identification shall be done as per Clause-13 of IS:7098 (Part-II)/ 1985 with latest amendments.

6.6 LAYING UP OF CORES:

The Cores (with screening) shall be laid together with a suitable right hand lay. Wherever, necessary the interstices shall be filled with non-hygroscopic material.

6.7 INNER SHEATH (COMMON COVERING):

The laid up core shall be provided with inner sheath applied either by extrusion or by wrapping. **However, application of inner sheath by EXTRUSION shall be preferred.** It shall be ensured that the shape is as circular as possible. The inner sheath shall be so applied that it fits closely on the laid up cores and it shall be possible to remove it without damage to the insulation. The thickness of inner sheath shall be as per **Clause No.15.3** of IS: 7098 (Part-II)/ 1985 (with latest amendments).

6.8 ARMOURING:

The armouring shall be applied over the inner sheath. The Galvanized Steel Armoured strips shall be applied as closely as possible with a coverage of not less than 90%.

The direction of lay of the Armour shall be left hand. A binder tape may be applied on the armouring. The dimensions of the galvanized steel strips shall be as specified in Table-4 of IS:7098 (Part-II)/1985 with latest amendments. The joints in Armour strips if any shall be made by brazing or welding and the surface irregularities shall be removed. A joint in any strip shall be at least 300 mm. from the nearest joint in any other armour strips in the completed cable.

6.9 OUTER SHEATH:

6.9.1 The outer sheath shall be applied by extrusion over the armouring. The colour of outer sheath shall be black.

6.9.2 The thickness of the outer sheath shall be as per **Clause No.17.3** of IS: 7098 (Part-II)/1985 with latest amendments.

7. TYPE TESTS:

7.1 The material offered, shall be fully type tested as per relevant standard of specification of IS:7098 (Part-II/1985) amended up to date. **The bidder must furnish type test reports of similar rating & design of tendered material along with bid as detailed at Schedule-IIIA “Pre-Qualification Requirement”.** The following shall constitute type tests:

- a) Tests of Conductor:
 - i) Annealing test (for copper)
 - ii) Tensile test (for aluminium) **(N/A, as per IS)**
 - iii) Wrapping test (for aluminium) **(N/A, as per IS)**
 - iv) Conductor Resistance Test
- b) Tests for armouring wires/strips.
- c) Tests for thickness of insulation and sheath.
- d) Physical tests for insulation:
 - i) Tensile strength and elongation at break.
 - ii) Ageing in air oven.
 - iii) Hot set test.
 - iv) Shrinkage test.
 - v) Water absorption (gravimetric).

- e) Physical test for outer sheath:
 - i) Tensile strength and elongation at break.
 - ii) Ageing in air oven.
 - iii) Shrinkage test.
 - iv) Hot deformation.
- f) Partial discharge test.
- g) Bending test.
- h) Dielectric power factor test:
 - i) As a function of voltage.
 - ii) As a function of temperature.
- i) Insulation resistance (volume resistivity test).
- j) Heating cycle test.
- k) Impulse withstand test.
- l) High voltage test.
- m) Flammability test.

7.2 However, the purchaser reserves the right to demand repetition of same or all the type tests in presence of purchaser's representative.

7.3 The bidder must also clearly indicate various testing facilities available at their works for testing the material as per relevant standards. In case of otherwise particulars of the place where such testing is proposed to be conducted during the course of inspection shall be indicated with the offer.

8. INSPECTION (TEST BEFORE DISPATCH):

8.1 The inspection may be carried out by the purchaser at any stage of manufacturer. The Inspection & Testing shall be governed by Clause No. **1.27 of Section-II** (General Conditions Of Contract). Acceptance of any equipment / material under this specification by the purchaser shall not relieve the supplier of his obligation of furnishing equipment in accordance with the specification and shall not prevent subsequent rejection if the equipment/material is found to be defective. The following **Acceptance tests** as per Clause No.18.2 of IS:7098(Part-II)/1985 shall be conducted in presence of the purchaser's authorized representative /agency on each lot of offered cables:

- i) Tensile Test.
- ii) Wrapping Test.
- iii) Conductor Resistance Test.
- iv) Test for thickness of insulation & sheath.
- v) Hot Set Test for insulation.
- vi) Tensile strength & elongation at break test for insulation and sheath.
- vii) Partial Discharge Test (for screened cables only).

- viii) High voltage test and
- xi) Insulation resistance (Volume resistivity) Test.
- x) Test for Armour:
 - a) Verification of Dimension of Strip.
 - b) Tensile Strength & elongation at break.
 - c) Uniformity of Zinc Coating.
 - d) Weight of Zinc Coating.
 - e) Winding Test on Armour.
 - f) Resistivity Test on Armour.

Cold impact test for outer sheath (IS:5831/1984) shall constitute the optional test and shall be conducted on first lot of the offered cables of each size as per Clause No.18.4 of S:7098(Part-II)/1985 with latest amendments.

8.2 ROUTINE TEST:-

The following shall constitute routine tests:

- a) Conductor resistance test
- b) Partial discharge test
- c) High voltage test.

8.3 The bidder shall furnish Packing list mentioning serial Nos. of Drums, length in each drum, gross weight of drum without lagging alongwith inspection offer duly signed by the authorized representative of the firm. The purchaser reserves the rights to insist for witnessing the acceptance / routine tests of the bought out items.

8.4 At least 5% of total numbers of drums subject to minimum of two (2) in the lot put up for inspection shall be selected at random to ascertain the length of cable by the following method.

“At the works of manufacturer of the cable shall be transferred from one drum to another for checking any manufacturing defects in the cable, at the same time measuring its length with the help of the graduated pulley and cyclometer. The difference in average length thus obtained from the declared length by the supplier in the packing list shall be applied to all the drums if the cable is found short during checking the sample lot (s).”

8.5 The supplier shall present the latest Calibration Certificate(s) of testing instruments / equipments to be used for the testing of the material covered in the Purchase Order to the authorized inspecting officer/ inspecting agency of the purchaser. The testing instruments/ meters/ apparatus etc. should be got calibrated by the supplier from time to time from Govt. Laboratory or any independent test laboratory/house having valid accreditation from National Accreditation Board for Testing and Calibrating Laboratories for the testing equipments / original manufacturer having trace ability to NABL/NPL or equivalent.

8.6 The calibration certificate(s) should not in any case be older than one year at the time of presenting the same to the inspecting officer/ inspecting agency of the purchaser. The testing instruments/ equipments should be duly sealed by the Calibrating Agency and mention thereof shall be indicated in the calibration certificate(s).

8.7 TYPE TESTS ON SAMPLE(S) TO BE SELECTED FROM MATERIAL RECEIVED IN STORE:

The first offered lot shall not be less than 10% of ordered quantity of each size of HT Power Cable or minimum quantity of 1 Km. of each size of HT Power Cable whichever is higher.

If the bidder has already got conducted the requisite type test from the 1ST lot of material received in Nigam's Store against any previous / earlier tender of JdVVNL and such Type Test reports are valid i.e. not older than **5 Years** on the date of opening of Techno-Commercial Bids, then the requirement of conducting Mandatory Type Test on the sample selected from 1st lot of supply received in Nigam's Store is RELAXED. For this purpose date of conducting type test will be considered.

ALTERNATIVELY

In case the bidder do not meet the above requirement then One sample of 15 Mtr. Length from the 1st Lot of each size of HT POWER Cable as received in purchaser's store shall be selected and sealed in the presence of representative of supplier for getting it Type Tested at Govt. / Govt. approved / Govt. Recognized / NABL accredited Laboratory / ILAC Accredited Laboratory.”

However, suppliers own lab shall not be considered for the purpose of type test reports. **The selected and sealed sample for type test shall be identified by providing Polycarbonate Seals on both ends of cable and two stickers seals provided along the length of the cable.** The transportation charges of sample from store to test house shall be borne by NIGAM, whereas the charges incurred towards type test of the material at test house shall be borne by the Supplier. **The testing charges should be remitted through D.D. in favour of Test House. The name of the Test House shall be intimated separately.**

In case sample from first lot fails then:

- a) Supplier shall have to replace the full quantity of the respective inspected lot supplied to various stores and lying unused at stores.
- b) For the quantity already utilized against the order in field a deduction of @ 30% (Thirty Percent) of f.o.r. destination price of the material supplied shall be made.
- c) Sample from next lot shall be selected again for type test. All test charges incurred towards type test of the material for second time shall be borne by the Supplier.
- d) The supplier shall have to pay the type test charges again for testing of fresh sample for which the testing charges should be remitted through D.D. in favour of Test House.

In case sample again fails in the type test then:

- a) The quantity lying unused at various stores shall be rejected.
- b) For the quantity already utilized against the order in field a deduction of @ 30% (Thirty Percent) of F.O.R. destination price of the material supplied shall be made.
- c) Further supplies shall not be accepted.

“At the option of purchaser, the material received in the stores may be utilized in the field after receipt of successful test report from CTL, Jodhpur for the mandatory test checking on the samples selected from the material received at stores against first lot and subsequent lot(s) in anticipation of successful type test report(s).”

NOTE:

1. The 70% payment shall be released after receipt of successful Test reports from CTL, Jodhpur for the mandatory test checking on the samples selected from the material received at stores against first lot and subsequent lot(s) in anticipation of successful type test reports.

2. The balance 30% payment shall be released after receipt of successful type test reports on the samples selected from the material received in the stores.

8.8 TEST CHECKING OF MATERIAL AT STORES:

i) Sample drums from the material received at stores shall be selected for testing at CTL as per sampling plan given hereunder in presence of firm’s representative. The selected sample drum / drums shall be transported to CTL by concern S.S. / ACOS of Nigam.

ii) The selected sample drum for CTL testing shall be identified by the seals provided by Inspecting Officer / Inspecting Agency during pre-dispatch inspection at firms works and these sealing details shall be invariably mentioned in the selection Memo by the nominated officers of Nigam.

iii) The tests in the Nigam Testing laboratory (CTL) shall be conducted in the presence of representative of supplier for which a 7 days notice shall be issued through Fax / Speed Post stating Date & Time to the firm, so that supplier can depute their representative to witness the test . In case the supplier or his representative does not turn up the testing shall be proceeded & completed. **The payment shall be released only after receipt of successful test reports for the samples selected at purchaser’s stores for mandatory test checking on the samples to be selected from material received at Nigam’s stores by officers to be nominated by Circle SE’s for testing at CTL.**

iv) SAMPLING:

One number Drum out of each lot / sub-lot of 25 Nos. Drums or part thereof for the material received in Stores of Nigam.

v) TESTS: The following tests shall be carried out as per relevant clause of latest IS on each selected drum by drawing sample of 10 Mtr. at CTL from random distance during re-winding:

- a) Rewinding test (Measurement of Length) & Checking of Manufacturing defects.
- b) Measurement of Resistance of conductor.
- c) Tensile strength & Elongation at Break Test for Insulation & Sheath.
- d) Test for Thickness of Insulation & Sheath.
- e) Hot Set Test.
- f) Test for Armour:
 - i) Verification of Dimension of Wire / Strip.
 - ii) Tensile Strength & elongation at break.
 - iii) Uniformity of Zinc Coating.

- iv) Weight of Zinc Coating.
- v) Winding Test on Armour.
- vi) Resistivity Test on Armour.
- g) Verification of Marking.

In addition to above tests remaining acceptance tests as per relevant IS shall also be conducted at CTL provided the testing facility is available at CTL for these tests time to time. Only those tests shall be conducted for which testing facilities are available in NIGAM's Lab.

vi) CRITERIA FOR ACCEPTANCE:

a) If the measured conductor resistance of the sample(s) exceeds beyond 2% as per the resistance specified in the contract, the material shall be rejected and the same shall have to be replaced by the supplier.

b) If the measured conductor resistance of the sample(s) exceeds the value specified in the contract but does not exceed by more than 2% of the resistance value specified in the contract, the material contained in the lot / sub-lot to which the sample belongs shall be accepted with a deduction @ 1.5% of the cost of cable for increase in resistance for every 1% or part thereof.

c) If the sample(s) fails in any other test, the material shall be rejected and shall have to be replaced by the supplier.

d) If the contractor / supplier fails to lift the material declared rejected or any part thereof from the consignee within a period of 15 days from the date of dispatch of information from the purchaser, the purchaser shall be entitled to effect recovery along with other actions as per Clause No. 1.62 of Section-II (General Condition of Contract).

e) The results of measurement of length test shall be made applicable to all drums contained in each lot / sub lot by making deduction of less length of cable in a Sample Drum.

8.9 TEST CHARGES :

All test charges incurred towards test checking of the material received in our stores shall be borne by the NIGAM.

9. CHALLENGE TESTING CLAUSE :

The other manufacturer can also request challenge testing for any test based on specification. The challenger would request for testing with testing fee. The challenge test fee are proposed at least three time cost of testing. This is likely to deter un-necessary challenges. The challenger would have the opportunity to select the sample from the store and any such challenge should be made within the guarantee period. The party challenged, the challenger & the utility could witness the challenge testing. The challenged testing would cover all the type tests as per relevant IS.

The challenge test could be conducted at NABL Accredited Laboratory like ERDA, CPRI, Bangalore / Muradnagar / Bhopal. If the values are within limit the products gets confirmed else not confirmed. If the product is not confirmed the manufacturer would

pay the challenge fee and challenger would get the fee refunded. However, as a redressal system the challenger would be asked for fresh selection of two more samples from the stores and the same be tested in a NABL Laboratory (which shall be other than previously selected NABL Accredited Lab) at the cost of supplier in presence of party challenged, challenger and the utility. If any one or both samples does not confirmed the tests then the product is said to have failed the tests. In such cases, the manufacturer will be declared as unsuccessful manufacturer for the said product and balance supply shall not be availed and the order shall be cancelled with levy of maximum penalty.

10 IDENTIFICATION:

10.1 The manufacturer shall be identified throughout the length of cable as per Clause No.20.1 of IS:7098(Part-II)/ 1985 with latest amendment .

10.2 The cable code employed shall be as per Clause No.20.3 of IS:7098 (Part-II) /1985 with latest amendment.

10.3 EMBOSSING:

The cable shall also be required to be embossed with the word `Name of manufacturer or Trade name, ELECTRIC/ Voltage Grade/ NAME OF DISCOM/ TN-____ cable code, size of cable & year of manufacture at every meter length for which no extra charges shall be paid. **The cable should be ISI marked & same should be embossed on the outer sheath of every meter length of HT Cable.**

11. MARKING:

The progressive length of cable in meter shall be marked on the outer sheath of every meter length of HT Cable.

12. PACKING AND MARKING:

12.1 The cable shall be wound on a non returnable wooden drum conforming to IS: 10418/1982 of suitable size. The ends of cables shall be sealed by means of non-hygroscopic material. Only one cable length shall be supplied on a drum. The cable can also be supplied on M-Steel Drums as per relevant ISS as applicable.

12.2 The cable drums shall carry the following information either stenciled or painted.

- i) Manufacturer's name, Brand or trade mark.
- ii) Type of cable and voltage grade.
- iii) Number of cores.
- iv) Nominal cross-sectional area of the Conductor.
- v) Cable Code.
- vi) Length of cable on the drum.
- vii) Direction of rotation of drum (by means of an arrow).
- viii) Gross mass.
- ix) Year of manufacture.
- x) ISI Certification mark.
- xi) Purchase order/bid No. and

xii) Name of Consignee.

13. STANDARD LENGTH:

The cable shall be supplied in standard length of 250 Mtrs in one Drum for size 33 KV, 3CX300 Sq.mm.

13.1 A tolerance of (+/-) 5% shall be allowed on standard length.

14. QUANTITY:

- a) The quantities as mentioned in the schedule of requirement are tentative & these may increase/decrease as per the requirement of the Nigam (**Schedule-I**).
- b) Details of offered quantity alongwith justification with reference to Qualifying Requirement shall be furnished in **Schedule-IVA**.

15. QUANTITY TOLERANCE:

The ordered quantity of the cable(s) can be supplied with quantity tolerance of (+/-) 2% in each size.

16. DETAILS OF PAST EXPERIANCE:

The details of past orders executed by the bidder may be indicated in the relevant **Schedule- VII & VII A** . The bidder must furnish the documentary evidence like copy of purchase order placed for detailing of past supplies.

17. GUARANTEED TECHNICAL PARTICULARS :

The bidder shall furnish guaranteed technical particulars in the relevant **Schedule VA & VB**. Any departure from the G.T.P be indicated in **Schedule-V**.

18. DRAWINGS & DOCUMENTATIONS:

The bidder is required to furnish the detailed constructional drawing of cable clearly showing shape of core, type, size of fillers/ interstices along with Center Filler etc. **The calculations of weights of different components of the cable along with weight of armouring and calculation of number of armour strips indicating Lay Ratio & Lay Factor shall also be furnished. In absence of this, the bids are likely to be ignored. The drawing of drums shall also be furnished as per relevant applicable ISS.**

19. DELIVERY SCHEDULE:

The bidder is required to quote monthly delivery in **Schedule-VIII**. **The delivery of quoted quantity should be as under:**

- Commencement** : After 30 days from the date of receipt of purchase order.
- Completion** : In five months thereafter at equal monthly rate of each size of cable.

In case of ordered quantity is different than the quoted quantity, then monthly delivery shall be adjusted proportionately. **Bids of bidders in which monthly delivery rate is not quoted shall be considered as Non-Responsive.**

20. PRICES :

- a) The bidder shall quote the Prices in **Schedule-IV/BOQ (Price-schedule)** strictly in the manner prescribed in Clause No. 1.09 of Section-I (Instruction to Bidders) & Clause No. 1.33 of Section-II (General Conditions of Contract).
- b) The **prices** quoted shall be **variable as per PV formula** given in the specification at **Schedule-II** without any ceiling with **Base Date** as **1st day of one month prior to the date of opening of technical bid**. The Price Variation shall be governed by Clause No. 1.10 of Section-I (Instruction to Bidder).

SCHEDULE- I**SCHEDULE OF REQUIREMENT**

33 KV ISI MARKED ALUMINIUM CONDUCTOR SCREENED CROSS LINKED POLYETHYLENE (XLPE) INSULATED ARMoured SHIELDED & PVC SHEATHED CABLE SUITABLE FOR WORKING VOLTAGE 33KV (EARTHED SYSTEM) CONFORMING TO IS:7098 (PART-II)/1985 AMENDED UPTO DATE OF THE FOLLOWING SIZE :

S.No	ITEM	QUANTITY
1	33 KV, 3CX300 Sq.mm HT Power Cable	75 Kms

NOTE: The quantities as mentioned in the schedule of requirements are tentative and may increase/decrease as per the requirement of the Nigam.

SCHEDULE-II**PRICE VARIATION FORMULA FOR 33KV XLPE ARMOURED CABLE**

$$P = P_o + ALF (A_l - A_{lo}) + CCFAI (C_c - C_{co}) + FeF (Fe - Fe_o)$$

P = Up-Dated Ex-Works price per Km.

P_o = Ex-Works price quoted per Km.

ALF = Variation Factor for Aluminium.

A_{lo} = Price per MT of EC grade Aluminium rods (properzi rods). **This price is as on 1st day of one month prior to the date of opening of technical bid (Base Date).**

A_l = Price per MT of EC grade Aluminium rods (properzi rods). This price is applicable on first working day of month, one month prior to date of delivery.

CCFAI = Variation factor for PVC compound / polymer for Aluminium Conductor cable.

C_{co} = Price of PVC compound. **This price is as on 1st day of one month prior to the date of opening of technical bid (Base Date).**

C_c = Price of PVC compound. This price is applicable on first working day of month, one month prior to date of delivery.

FeF = Variation factor for Steel

Fe_o = Price of Steel Strip. **This price is as on 1st day of one month prior to the date of opening of technical bid (Base Date).**

Fe = Price of Steel Strip. This price is applicable on first working day of month, one month prior to date of delivery.

BASE DATE : **This price is as on 1st day of one month prior to the date of opening of technical bid (Base Date).**

The date of delivery (i.e. date of readiness of material) is to be considered as per Clause No. 1.10 of Section-I (Instruction to Bidders).

NOTE: 1. IEEMA prices will be exclusive of excise duty and other taxes.

2. No variation shall be allowed on labour, packing, forwarding, freight and insurance charges.

3. Any statutory variation on ED and CST / VAT on the finished Cable shall be payable according to Clause No.1.09.15 of section-I 'Instructions to Bidder'

Size of cable	Alf	CCFAI	FeF
33 KV, 3CX300 Sq. mm	2.635	5.029	1.758

SCHEDULE-III**JODHPUR VIDYUT VITARAN NIGAM LTD., JODHPUR****A Govt. of Rajasthan Undertaking
Prescribed technical specification for supply of**

(Name of Material/Equipment/Machinery/T&P etc.)

S.No.	Technical specification to which material/equipment/ Machinery/ T&P shall confirm	Name of IS/other standard specification to which material should confirm	Other particulars if any.
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As per clause no. 2 of section –III of attached Specification

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

S.No.	Technical specification to which material/equipment/ Machinery/ T&P shall confirm	Name of IS/other standard specification to which material should confirm	Other particulars if any.
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(Signature)Name & Designation
with seal of the bidder.

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SCHEDULE-III-A**PRE- QUALIFICATION REQUIREMENT (PQR) FOR PURCHASE OF ISI MARKED 33 KV ALUMINIUM CONDUCTOR SCREENED CROSS-LINKED POLY ETHYLENE (XLPE) INSULATED ARMoured SHIELDED & OVERALL PVC SHEATHED CABLE CONFORMING TO IS 7098(Pt-2) / 1985 WITH LATEST AMENDMENT AGAINST TN- 1313.**

The bidder should fulfill following qualifying requirements for successful participation in the tender along with relevant documentary evidence supporting each qualifying requirement without which the offer shall be considered non-responsive & rejected.

1.0 STATUS OF BIDDER:-

- a) The bidder should be a Manufacturer of offered items. The offers from sole selling agent/ authorized dealers shall not be entertained.
- b) Old/ New suppliers:- Any bidder located within or outside the state of Rajasthan has participated for the first time in a particular Discom & meeting minimum qualification requirement and has supplied the tendered material/or of higher rating in other utility shall be treated as an old supplier. Rajasthan's firms although supplied in past but not meeting minimum quantity supplied criterion including altogether new units which have not supplied any quantity but having adequate & required manufacturing and testing facility and technical know-how of the tendered material shall be considered as new firms and would be eligible for trial order only. In case of supply made to the licensed power utility outside India, the C.A. certificate furnished by firm shall be considered.

Note:-The material supplied and accepted for same/higher rating for Turnkey projects to a licensed power utility/Govt. shall be considered for the purpose of evaluating criteria. The certificate given by C.A. shall indicate above quantity separately.

2.0 PAST SUPPLY & PERFORMANCE CRITERIA :-

The bidder shall meet both past supply and performance criteria as detailed below for opening of tenders:-

2.01 PAST SUPPLY:-

- 2.01.1 The bidder is required to quote for minimum 10% of tendered quantity failing which their offer may be considered Non-Responsive.
- 2.01.2 The bidder should have designed, manufactured / fabricated, tested and supplied to utility / Discoms / Govt. Departments at least 2 X QQ (QQ being the quoted quantity) of similar item / higher rating of tendered material / equipment in last 3 financial years from the date of opening of technical-commercial bid.

Note: Requirement of quantity manufactured, minimum quantity to be offered and amount of Bank Guarantee to be furnished in absence of test certificate shall be reduced to 25% for Rajasthan based units.

- 2.01.3 In support of fulfillment of the past supply criteria, the bidder shall furnish documentary evidence in the form of certificate from Chartered Accountant in the enclosed prescribed proforma only. This prescribed proforma should be furnished 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. Certificate should clearly indicate the quantity supplied, period of supply, voltage Class, Rating of the Transformer etc. in the format prescribed, any deviation to format or information diverted format, will not be considered and rejected.

Note:-The material supplied and accepted for same/higher rating for Turnkey projects to a licensed power utility/Govt. shall be considered for the purpose of evaluating criteria. The certificate given by C.A. shall indicate above quantity separately.

2.02 PERFORMANCE CRITERIA:-

- 2.02.1 i) If a bidder has supplied up to 50% of ordered quantity in previous tender up to date of opening of subsequent tender and scheduled delivery period expired, the bid of such bidder will not be opened in the Discom for that item.
- ii) However, if the supplies have been completed for a quantity more than 50% but not completed up to date of opening of subsequent tender and scheduled delivery period expired, the quantity equal to the quantity pending in previous tender for that item shall be reduced from the subsequent tender quantity to be allocated to the bidder.

3.0 TYPE TEST CRITERIA

- 3.0.1 The bidder shall furnish valid and authenticated type test certificate from a Govt. approved/ a Govt. recognized/ NABL accredited laboratory/ ILAC i.e. International Laboratory Accredited laboratory / ILAC i.e International Laboratory Accrediation Corporation (In case of foreign laboratory) of similar rating and design of tendered material.

The bid of the bidders be also considered for meeting the Type Test criterion if the bidder have the requisite type test conducted successfully on the samples selected from the 1st Lot (**If Applicable**) supplied to JdVVNL against previous tenders and its report are available with the Nigam & furnish certified copy of such Type Test Reports with the bid or reference of order / tender be mentioned in Bid document for verification purpose . Such type test certificates should not be older than **five years** as on the date of bid opening. For this purpose date of conducting type tests will be considered.

The type test certificates by in house laboratory of bidding firm even if it is a Govt approved/ Govt recognized/ NABL accredited Laboratory / ILAC accredited, shall not be accepted, in case of their own bid. This will not apply if bidding firm is Govt. Company/ Public Sector Undertaking.

- 3.0.2 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)
- 3.0.3 The type test certificates shall be furnished either in original or duly attested by notary.

3.0.4 The bids of only those bidders shall be considered to be meeting the type test criteria who furnishes complete type test certificates with the bid as per above provision.

3.0.5 However, in 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. approved / Govt. recognized / NABL Accredited laboratory / ILAC Accredited laboratory shall be furnished from first lot received in Nigam store (without asking any delivery extension) along with bank guarantee with the technical bid from a Nationalized / Scheduled Bank in prescribed proforma at Schedule-III C or DD / Pay Order amounting to **value as detailed below**. The initial validity of bank guarantee shall be nine months with claim period of three months in addition

- i) Where a new Rajasthan based firm is participating & is technically competent.
- ii) Where one or more type test(s) is/ are older than **5 years**.
- iii) Where Rajasthan/outside Rajasthan firm furnishes requisite type test report of higher rating material.

Amount of Bank Guarantee in lieu of type test	
For Rajasthan based firms	For Outside Rajasthan based firms
1.25 Lacs	5.0 Lacs

4.0 POOR RECORD OF PERFORMANCE AND DELIVERY:

The bidder who has been black listed in any of the state Discom or with whom business relations have been severed in Jodhpur Discom shall not be considered. Severment of business relations will be done in case of following circumstances for the period and with the recovery mentioned against each:

i) When vendor does not accept order awarded on its accepted price and terms and conditions or does not comply with contractual formalities.	Forfeiture of EMD/cancellation of vendor registration to recover amount of EMD along with severment of business relations for three years from the date of issue of order.
ii) When vendor complies with contractual formalities but does not commence supplies.	Levy of maximum recovery on account of delay in delivery along with severment of relations for a period of 2 years from the date of issue of order or in next two bids whichever is later along with forfeiture of EMD / cancellation of vendor registration.

5.0 (A) Black listing of a firm:

After having given Show Cause Notice of 30 days, and having established & cogent reasons for blacklisting of the firm as given below, the firm should immediately be blacklisted for a period of 5 years indicating reasons of doing so, in the letter itself, and a copy of such blacklisting should be given to the firm, with the approval of CLPC:-

- (i) There are sufficient and strong reasons to believe that the supplier or his employee has been guilty of malpractices such as manhandling/misbehavior with Government official by supplier or his partner/employee, bribery, corruption or abatement of such a offence in a position where he could corrupt Nigam's official, fraud, vitiating fair tender process

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including substitution of or interpolation in tender, mis-representation, pilfer-aging or unauthorized use or disposal of Nigam's material issued for specific work etc.

- (ii) Where a supplier or his partner or his representative has been convicted by a court of Law for offences involving moral turpitude in relation to the business dealing or where security considerations including suspected disloyalty to the Nigam/state so warrant the blacklisting.
- (iii) If the State Bureau of Investigation or any other authorized investigating agency recommends for blacklisting after completing the investigation.

Note:1 If a supplier after having tendered for a supply or after negotiations gives application voluntarily vitiating the fair tendering process, it shall also tantamount to malpractice.

Note:2 A register containing the reasons for blacklisting the supplier as also the names of all the partner of the suppliers and the allied concerns coming within the effective influence of the blacklisted supplier will be maintained.

Note:3 A register of black listed supplier will be maintained which will not only include suppliers enlisted with the Enlisting Authority but also black listed suppliers in Nigam.

Note:4 A Black listed supplier (i) shall not be entitled for registration in any of the Discom (ii) shall not be awarded any supply order in future in any Discom during the notified period.(iii) his registration if any shall stand cancelled immediately and his registration security /EMD/S.D. shall stand forfeited. (iv) In case of blacklisting of the firm by any one of Discom for the cogent prescribed reason(s) as stipulated above, the same shall be applicable to all the three Discoms and as a consequence of blacklisting, all the pending orders to that firm, will be cancelled in all three (3) Discoms with immediate effect. However in respect of completed/executed contract G.P. obligations as well as other liabilities shall be fulfilled by the supplier.

(B) Severment of Business relation:

- (a) After having given Show Cause Notice of 30 days, and having established & cogent reasons for Severment of business relation as given below, the firm should immediately be severed the business relations for a period of 2 to 3 years indicating reasons of doing so, in the letter itself, and a copy of such severment should be given to the firm, with the approval of CLPC:-
 - (i) The supplier continuously refuses to pay Nigam dues without showing adequate reasons and where the purchasing authority is satisfied that no reasonable dispute attracting reference to Settlement Committee or Court of Law exists for the supplier's action of non-supply.
 - (ii) When vendor does not accept LOI/detailed purchase order awarded on its accepted prices and terms & conditions or does not comply with the contractual formalities.
 - (iii) When vendor/supplier who otherwise completed contractual formalities but does not commence supplies on the date of opening of technical bid of the fresh tender/completion of schedule delivery period whichever is later.

Note.1 In case supplier does not deposit outstanding dues towards Nigam, even after completion of severment period, the period of severment will continue.

Note.2 Severment done purely/ mainly on account of non-deposition of dues against the supplier/vendor/contractor could be lifted by CLPC, if the dues are deposited prior to the expiry of such severment period.

Note 3 Severment done by one Discom for non-supply of material and /or corresponding non-recovery of dues will not be effective in other Discoms except in respect of common purchase cases of three Discom.

Note 4 On severment of business, the EMD/SD/vendor registration security will be forfeited.

Note 5 The orders in execution satisfactorily will not be cancelled other than the order on which severment have been done.

(C) Debarment

Reasons on which Debarment can be made:-

- (i) The competent authority may debar the supplier on account of his performance or other disabilities, if it is no longer considered fit to remain under vendor registration as per his obligation under vendor registration.
- (ii) If at any subsequent stage of inspection of firms after award of contract, it is found that firm does not have sufficient tech. staff or required/necessary technical equipments, the purchasing authority can debar the firm for one year or next tenders whichever is later. The debarment will be lifted only on re-inspection of firm's works; the defects noticed earlier are fully rectified to the satisfaction of Nigam.
- (iii) When contract agreement executed and supplies commenced but could supply only up to 50% of ordered quantity and scheduled delivery period expired, then the firm can be debarred for one year or next tender whichever is later in that Discom only for that particular item/rating/ capacity/size etc.
- (iv) The suppliers who have been awarded contract for supply of material is not adhering to the periodic delivery schedule, the contract awarding authority reserve the right to terminate the contract and may debar the firm in participating in tender for a period of 2 to 3 years.

Note.1. On debarment, the EMD/ SD/Vendor Registration security shall be forfeited.

Note.2 If the firm is debarred in one Discom for any reasons then the same should not be applicable in other Discom subject to exception that in case of common Discoms purchases such debarment of a firm would be applicable to all three Discoms for that particular item and rating/capacity/size etc.

6.0 Appeals and Applications:-

Appeal against the order of blacklisting, severment and debarment can be filed before BOD within a period of 3 months from the date of intimation. The letter of appeal will be addressed to the order placing authority. Who will process the case for placing the matter in B.O.D. with in a period 60 days. The BOD may reduce or waive the penalty, if sufficient reasons/supporting documents are furnished by the supplier.

General Conditions: - (All Conditions be Duly Signed & Sealed)

- I) The bidder shall clearly indicate the deviations such as 'Technical Deviation & Commercial Deviations' in the prescribed proforma only. The deviations indicated elsewhere in the bid shall not be accepted.**
- II) The bidder must clearly fill up each and every particular of guaranteed technical particulars annexed with Technical Specifications otherwise he will be responsible for Technical Non-responsiveness.**

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- III) All documents required in the prescribed format are to be furnished along with the bid itself only except an attested copy of BIS license (wherever it is required), failing which the bid will be summarily rejected.**

- IV) However, a copy of BIS License may be submitted by the bidder up to the official working hours of one working day prior to the schedule / notified date of opening of price bid alongwith undertaking on NJS of Rs. 100 duly notorised that BIS License so furnished is valid till date and same has not been withdrawn/cancelled by Bureau of Indian Standard.**

Signature of bidder
With stamp
Dated

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SCHEDULE-III-B**BANK GUARANTEE IN LIEU OF FURNISHING OF TYPE TEST CERTIFICATE**

(On Rajasthan Govt. Non-Judicial Stamp Paper worth Rs.0.25% of BG value or Rs. 25000/- whichever is less)

To,

The Superintending Engineer (MM&C),
Jodhpur Vidyut Vitaran Nigam Limited,
New Power House ,
Jodhpur.

Dear Sir,

Whereas Jodhpur Vidyut Vitaran Nigam Limited, Jodhpur (hereinafter called the purchaser) has issued a bid enquiry under TN-1313 for procurement of

(Name of material)
Whereas M/s(hereinafter called the bidder) has furnished a bid for supply of to The Superintending Engineer (MM&C), Jodhpur Vidyut Vitaran Nigam Limited, Jodhpur or his Nominated officer (s) .

Whereas in accordance with the provision of the specification of the afore said TN-1313, the bidder can deposit a bank guarantee in lieu of the requirement of furnishing the type test certificates.

Whereas M/s (the bidder) have requested us (Name of the Bank) to furnish the bank guarantee in lieu of the type test certificate 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 obligator 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 to 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 bid, makes default in furnishing the required type test certificates. Also whether the occasion or ground has arisen for such demand the decision of The Superintending Engineer (MM&C), Jodhpur Vidyut Vitaran Nigam Limited, Jodhpur, shall be final.

The liability of the Bank shall not at any time exceed Rs.....(Rupees.....).

The undertaking 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 this guarantee.

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The guarantee herein contained 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 bidder or between the bidder and the purchaser pertaining to the guarantee shall be subject to the jurisdiction of Courts only at JODHPUR in Rajasthan.

The bank further undertake not to revoke this guarantee during its currency except with the previous consent of The Superintending Engineer (MM&C), Jodhpur Vidyut Vitaran Nigam Limited, Jodhpur

Notwithstanding anything contained herein before, the Bank's liability under this guarantee i.e restricted to Rs..... (Rupees) and the guarantee shall remain in force upto Unless demand or claim in writing is presented on the Bank within three months from that date, the bank shall be released and discharged from all liabilities there under. However, the validity of the bank guarantee shall be extended as and when required by the purchaser.

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

Yours faithfully,

(Bankers)
Executants

Witness:

- 1.
- 2

SCHEDULE-IV A**ITEM - 33 KV 3C x 300 sq. mm XLPE Armoured Cable****Must be filled in by the bidder and attached with Technical Bid**

To,

The Superintending Engineer (MM&C),
Jodhpur Vidyut Vitaran Nigam Limited,
New Power House,
Jodhpur.

Dear Sir,

With reference to your invitation to bid against specification No.JD/SE/MM&C/XENIIAIII/ TN- 1313, we agree to supply the following quantity:

S.No.	Particulars of Items	Bid Quantity (KMS.)	Qty. Offered (KMS.)	Justification of quantity offered as per Qualifying Requirement
1.	2.	3.	4.	5.
	33 KV, 3CX300 Sq.mm XLPE Armoured Cable	75		

1. The offer is valid for a period of 120 days from the next date of opening of Tecno-Commercial Bid.
2. The prices are variable are in all respect as per specification.
3. It is noted that the quantity 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 schedule as given in Schedule – VIII of this specification. In case we fail to deliver the materials as indicated in the clause No.1.23 of GCC (Schedule-II), we are liable to pay recovery for delay in delivery as per clause No.1.24 of this Schedule-II of this specification. The material shall conform to your specification No. JD/SE/MM&C/XENIIAII/ TN- 1313 and as per relevant ISS in all respect.
5. We confirm that we agree to all the terms & conditions as well as the technical stipulation of your specification No. JD/SE/MM&C/XENIIAII/ TN- 1313 and there are no deviations other than as specified in the Schedule-VI (A & B).

Yours faithfully,

Signature of bidder with stamp & Date

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SCHEDULE – V

JODHPUR VIDYUT VITARAN NIGAM LIMITED

A Govt. of Rajasthan Undertaking

Statement of guaranteed technical particulars and other performance data for supply of
..... (Name of material) against specification
no.....

S. No. Particulars of technical & other performance data guaranteed.

Certified that we agree to all the aforesaid technical particulars and other performance data
except following:-

S.No.	Particulars of technical & other Performance data	Reasons for deviations/departure.
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(Signature)
Name & Designation
with seal of the bidder.

SCHEDULE-VA**GUARANTEED TECHNICAL AND OTHER PARTICULARS FOR THE SUPPLY OF THREE CORE 33 KV XLPE CABLES AGAINST TN-1313**

S. No.	PARTICULARS	UNIT	33 KV XLPE Cable 3C x 300 sq. mm.
1	Name of manufacturer and address of Works	-	
2	Manufacturing process (Please specify any one of following): a) CCV Line Process (Dry curing) b) Syoplas process)		
3	Standard specification to which the material shall Confirm	-	IS: 7098 (Part-II)/1985 with up-to-date amendments
4	Type of cables and voltage grade	-	----- Type-A2XFY----- - 19/33 KV
5	Power frequency withstand voltage	KVrms	To be furnished by the tenderer.
6	Permissible voltage and frequency variation for the satisfactory operation		To be furnished by the tenderer
(i)	Voltage	%	
(ii)	Frequency	%	
(iii)	Combined Voltage & Frequency	%	
7	Conductor details:		
	a) Aluminum grade	-	H2/H4 grade Class-2 conforming to IS: 8130/1984 or latest version
	b) Nominal cross sectional area	Sq.mm	300
	c) Shape of the stranded conductor.	-	Compact Stranded
	d) Number of strands in each conductor. (Min.)	Nos.	30
	e) Nominal diameter of each inlet wire before	Mm.	To be furnished by the tenderer
	f) Max. permissible resistance of conductor at 20 Deg. C	Ohms/Km	0.100
8	Diameter over laid up cores	mm	To be furnished by the tenderer
9	Conductor screening:		To be furnished by the tenderer
	a) Type and material	-	
	b) Continuous working temperature	° C	
	c) Max. Allowable temperature at Termination of short circuit	° C	
10	Insulation:		
	a) Material	-	Cross linked Polyethylene confirming to IS: 7098(Part-II)/1985 with latest version

	b) Nominal thickness of insulation	mm	8.8
	c) Minimum thickness of insulation	mm	7.82
	d) Approx. diameter of core over insulation	mm	To be furnished by the tenderer
11	Insulation screening:		
	a) Material	-	To be furnished by the tenderer
	b)-(i)-Approx. thickness of semi-conducting part	mm	To be furnished by the tenderer
	(ii)- Thickness of metallic part	mm	To be furnished by the tenderer
	c) Approx. diameter of cable over screening	mm	To be furnished by the tenderer
12	Whether Binder Tape provided	mm	To be furnished by the tenderer
13	Inner Sheath:		
	a]- Type of material	-	To be furnished by the tenderer
	b]- Process of application	-	By Extrusion
	c]- Min. Thickness of sheath	mm	0.7
	D]- Diameter of cable over inner	mm	To be furnished by the tenderer
14	Type of Filler Used		To be furnished by the tenderer
	a) Material		
	b) Shape & Size	mm	
	c) Central filler (Shape & Size)	mm	
15	Armouring:		
	a) Material & type of Armouring	-	Galvanized Steel Strip
	b) Nominal dimensions of Armour	mm	4.0 x 0.8
	c) Whether galvanized	-	Galvanized
	d) Total no. of Armour Strips	Nos.	To be furnished by the tenderer
	e) Diameter of cable over Armouring	mm	To be furnished by the tenderer
16	Outer sheath:		
	a) Material	-	PVC Type ST-2 confirming to IS: 5831 latest version
	b) Nominal thickness of outer sheath	mm	As per Table-5 of IS:7098(Part-2)/1985 with latest amendment
	c) Colour of sheath		Black
17	Approximate over all diameter of cable	mm	To be furnished by the tenderer
18	a) Minimum Weight of Aluminium in Kg./Km corresponding to nominal cross sectional area of conductor (guaranted)	Kg/Km	2432
	b) Total weight of armouring	Kg/Km	To be furnished by the tenderer
	c) Total weight of PVC contents (Inner/Outer sheath/filler)	Kg/Km	To be furnished by the tenderer
	d) Total weight of XLPE including weight of conductor screening & Insulation screening (Non-metallic)	Kg/Km	To be furnished by the tenderer
	e) Total weight of Insulation screening (metallic)	Kg/Km	To be furnished by the tenderer
	f) Total weight of finished cable.	Kg/Km	To be furnished by the tenderer
19	a) Standard length of cable	Mtrs.	250
	b) Tolerance on standard length	Mtrs.	(+/-) 5%

20	Length(s) of cable in each drum	Mtrs.	One
21	Approximate gross mass of each drum including cable	Kg.	To be furnished by the tenderer
22	(i) Drum Size (as per IS: 10418/1982)	Kg.	To be furnished by the tenderer
	(ii) Details of Drum		To be furnished in the enclosed Schedule –V(B)
	(iii) Approximate net weight of each empty drum	Kg.	To be furnished by the tenderer.
23	Max. Continuous AC current carrying capacity:		
	a) When laid directly in ground	Amps.	To be furnished by the tenderer
	b) When laid in covered trenches	Amps.	To be furnished by the tenderer
	c) When laid vertically in air	Amps.	To be furnished by the tenderer
24	Recommended depth of laying	cm	To be furnished by the tenderer
25	Short circuit current carrying capacity and duration of short circuit.	KA-sec.	To be furnished by the tenderer
26	Allowable/attainable max. Conductor temp. When carrying continuous rated current.	° C	90 ° C
27	Allowable/attainable max. Conductor temp. At the termination of short circuit current.	° C	250 ° C
28	Voltage drop per 1000 meters length of Cable at rated current.		
	a) When laid directly in ground	Volts	To be furnished by the tenderer
	b) When laid in covered trenches	Volts	To be furnished by the tenderer
	c) When laid vertically in air	Volts	To be furnished by the tenderer
29	Maximum conductor temperature:		
	a) When laid directly in ground	° C	90 ° C
	b) When laid in covered trenches	° C	90 ° C
	c) When laid vertically in air	° C	90 ° C
30	Impulse strength	KV	As per IS:7098(Part-2)/1985 with latest amendment
31	a) DC resistance of each conductor at 20 ° C (Max.)	Ohms/Km	As per IS:7098(Part-2)/1985 with latest amendment
	b) AC resistance of each conductor at 90° C (Max.)	Ohms/Km	To be furnished by the tenderer
	c) Approximate reactance of each conductor	Ohms/Km	To be furnished by the tenderer
	d) Approximate capacitance of each conductor	Micro F KN	To be furnished by the tenderer
	e) Insulation resistance (min.) :	Ohm-cm.	
	I) At 27 ° C		To be furnished by the tenderer
	II) At 90 ° C		To be furnished by the tenderer
	f) Loss tangent		To be furnished by the tenderer
	(i) As a function of voltage		
	(ii) As a function of temperature		
	g) Dielectric constant		To be furnished by the tenderer
32	Charging current at normal operating voltage	Amps./Km	To be furnished by the tenderer

33	Derating factor		To be furnished by the tenderer
	Furnish charts showing derating factors for:		
	i) Variation in ambient temp. From 30 ° C Up to 70 ° C. In steps of 5 ° C		
	ii) Variation in ambient temp. From 25 ° C Up to 60 ° C. In steps of 5 ° C		
	iii) Different specing of cables n horizontal single row formation for 3 core cables under the following conductions of laying : a)Cables laid on cable trays in concrete cable trenches with removable covers. b)Cables laid on cable trays in air c)Cables laid in ground. d)Cables laid in pipes or ducts. e)Variation in depth of laying for cables laid direct in ground. f)Variation in Thermal resistively of soll for cables laid in ground		
34	Quantity tolerance		----- (+/-) 2%
35	Recommended min. bending radius	mm	To be furnished by the tenderer
36	Embossing		As per Specification TN-1313
37	BIS license No. & Validity	-	To be furnished by the tenderer
38	ISO: 9001 Certification		
39	Any other particulars		To be furnished by the tenderer

NOTE: SPECIFIC VALUES MAY BE INDICATED IN ABOVE SCHEDULE. USE OF “DO” OR AS PER “ IS” IS TO BE AVOIDED.

FILE : GTP-DRUM-33 KV

SCHEDULE-VB

**GUARANTEED TECHNICAL AND OTHER PARTICULARS OF DRUM FOR SUPPLY
OF 33 KV, 3CX300 SQ. MM XLPE CABLES AGAINST TN-1313**

S. No.	PARTICULARS	33 KV XLPE CABLES
		3CX300 SQ. MM
A	Drum Size (in mm)	As per IS 10418/1982 with Latest Amendments
B	Flange Diameter(d1) (mm)	
C	Barrel Diameter(d2) (mm)	
D	Centre hole Diameter(d3) (mm)	
E	Overall width (L1) (mm)	
F	Traverse (L2) (mm)	
G	Thickness of Flange	
H	Barrel End (supporting disc or core segment)	
a)	Diameter (mm)	
b)	Thickness (mm)	
I	Stretchers(Core Carrier Planks)	
a)	Number (Min)	
b)	Thickness x width (mm)	
J	Barrel Battens thickness (Core Filler Planks)	
K	Barrel Middle Supports (Middle Core discs)	
L	Thickness of External Laggings.(mm)	
	DETAILS OF METAL COMPONENTS:	
M	Clamping Studs with Hexagonal Nuts	
a)	Numbers	

	b) Diameter (mm)	
N	Square or Round Washers	
	a) Numbers	
	b) Diameter (mm)	
O	M.S. Bushes	
	a) Numbers	
	b) Thickness of Sleeve (mm)	
	c) Dimension of Sleeve (mm)	
	d) Number of Bolts	
	e) Diameter of Bolts	
P	M.S./ C.I. Centre Plate	
	a) Numbers	
	b) Dimensions of Square/ Triangular equal sides (mm)	
	c) Centre Plate Bolts.	
Q	Numbers	
	i) Diameter of bolts (mm)	
	ii) Centre Hole Diameter (mm)	

SCHEDULE – VI (A)
TN-1313

JODHPUR VIDYUT VITARAN NIGAM LIMITED

A Govt. of Rajasthan Undertaking

DEPARTURE/DEVIATION FROM TECHNICAL SPECIFICATION

The bidder shall state under this schedule the departure from the Purchaser's specification in respect of technical is as under:-

S.No.	Main Deviations from Technical Specification.
-------	---

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

(Signature)
Name & Designation
with seal of the bidder.

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SCHEDULE – VI (B)
TN-1313

JODHPUR VIDYUT VITARAN NIGAM LIMITED

A Govt. of Rajasthan Undertaking
DEPARTURE FROM COMMERCIAL TERMS & CONDITIONS OF THE
SPECIFICATION

The bidder shall state under this schedule the departure from the Purchaser's specification in respect of Commercial terms & conditions:-

S.No.	Main Deviations from Specification.
-------	-------------------------------------

Certified that we agree to all the commercial terms & conditions as laid down in General Conditions of Contract to the specification except for the deviation to the extent indicated above.

(Signature)
Name & Designation
with seal of the bidder.

SCHEDULE – VII
TN-1313**JODHPUR VIDYUT VITARAN NIGAM LIMITED****A Govt. of Rajasthan Undertaking**
LIST OF PAST SUPPLIES

The bidder shall state under this schedule whether material 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 information regarding the names of purchasing organizations, quantities supplied and when the supplies were effected. This list should be in form given below:-

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

If executed partially to be mentioned (Quantity)	whether still to be executed	Delivery stipulated in order	Remarks
7	8	9	10

Note: Separate schedules are to be furnished by the bidder for past supply to the JDVVNL, JODHPUR other State Electricity Boards and other Departments /Organisations.

(Signature)
Name & Designation
with seal of the bidder.

SCHEDULE-VIIA
TN-1313

TO WHOMSOEVER IT MAY CONCERN

This is to certify that M/s. _____ (Complete with address) have manufactured and supplied the goods / equipments / material during the following financial year(s) to the Electrical Utilities / Government Departments / Discoms/ SEBs as detailed out below:

S. No	Financial year in which material supplied	Detailed Particulars of item(s) supplied	Name and particulars of purchasing authority	Order No. & date against which item(s) supplied	Unit	Ordered		Actual Supplied up to		Remarks
						Quantity	Value (Rs)	Quantity	Value (Rs)	
1	2	3	4	5	6	7	8	9	10	11

Signature,
Name & Designation
With Seal of the Bidder
Date _____
Place _____

Signature of C.A.
Name:
Address:

Membership No.

SCHEDULE-VIII**JODHPUR VIDYUT VITARAN NIGAM LIMITED****DELIVERY SCHEDULE****TN-1313****PART – A**

The delivery Schedule of the material by the Purchaser Officer is as mentioned hereunder:-

S.No	Particular Of Material	Commencement Period	Rate Of Supply per Month	Period for Completion of delivery of Entire material
1	33 KV XLPE INSULATED POWER CABLE	After 30 Days from the date of receipt of detailed Purchase Order.		In Five Months thereafter at equal monthly rate of each size of cable.

Note – In case ordered quantity is different than quoted quantity, then monthly delivery shall be adjusted proportionately. Bids, in which monthly delivery schedule is not indicated, shall be ignored.

PART - B

In case bidder deviates from the delivery schedule mentioned by the purchaser in Part-A , then the delivery Schedule of the material by the bidder shall be indicated / mentioned as under:-

S.No	Particular Of Material	Commencement Period	Rate Of Supply per Month	Period for Completion of delivery of Entire material

Note: (i) During the commencement period, the process of model assembly and submission of B.O.M. for approval shall be got completed.

(ii) During the commencement period the contractual formalities shall be got completed.

**Signature
Name & Designation
With Seal of the Bidder**

SCHEDULE - IX
TN-1313**JODHPUR VIDYUT VITARAN NIGAM LIMITED****A Govt. of Rajasthan Undertaking**

List of Equipments and Technical Hands Available with the Firm

(To be filled in by the bidders & enclosed with the bid)

Manufacturers and / or their authorized agents who are quoting against this bid are requested to furnish the following information along-with the bid. The Purchaser will have the discretion to ignore the bid without the under noted particulars and/or ignore the bid 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 alongwith the names of organization 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 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. DGTD
 - iii. State Industries Department.

(Signature)
Name & Designation
with seal of the bidder.

SCHEDULE-X

**JODHPUR VIDYUT VITARAN NIGAM LIMITED
(MATERIAL MANAGEMENT & CONTRACT CIRCLE)
NEW POWER HOUSE, INDUSTRIAL AREA, JODHPUR-03**

TELEPHONE: 0291-2742223

FAX: 0291-2746539

**BID DOCUMENTS FOR PURCHASE OF ISI MARKED 33 KV ALUMINIUM
CONDUCTOR SCREENED CROSS-LINKED POLY ETHYLENE (XLPE) INSULATED
ARMOURED SHIELDED PVC SHEATHED POWER CABLE UNDER TN-1313**

Tenders are to be submitted online in electronic format on website <http://eproc.rajasthan.gov.in>.
The details are as under-

S. No.	Name of Item	Quantity
1	33 KV, 3CX300 Sq.mm XLPE Armoured Cable	75 Kms

LAST DATE AND TIME FOR
DOWNLOAD OF BID DOCUMENT : 05.04.2017 UPTO 6.00 P.M.

LAST DATE AND TIME FOR
SUBMISSION OF BID DOCUMENT
(ONLINE) : 06.04.2017 UPTO 12.00 P.M.

DATE AND TIME FOR
OPENING OF BID : 06.04.2017 AT 03.00 P.M.

EARNEST MONEY TO BE
DEPOSITED : RS.5,00,000.00 OR EXEMPTION
CERTIFICATE OR VENDOR
REGISTRATION OF CLASS 'A'
CATEGORY.

COST OF THE SPECIFICATION : RS.2,500/- (non refundable)

TENDER PROCESSING FEE : RS.1,000/-(non refundable)

VALIDITY : 120 DAYS FROM THE NEXT DATE
OF OPENING OF TECHNO COMMERCIAL BID.

1. The bids not accompanied with qualification requirement , technical requirement indicated in the specification and other requirement given here under will be considered as incomplete offer and sufficient grounds for offer to be passed over:
- i) Capacity, capability and competency proofing documents.
 - a) Capacity /orders of similar and higher rating of tendered equipment booked as on date of bidding with type and rating and construction details of equipment for which order received be indicated.

- b) Copy of purchase orders of Erstwhile RSEB /SEB`S / Electric Utilities / Govt. Departments / Discoms for similar or higher rating equipment latest executed.
 - ii) Year wise past experience for last 5 years of similar or higher rating of tendered equipment.
 - iii) The details of testing facilities available at the works and copies of latest type test certificates, carried out on similar ITEM.
 - iv) Quality assurance plan.
 - v) Complete guaranteed technical particulars, out lines and general arrangement drawings along with Bill of Material.
2. Bids without Section-I, II, III & Schedules (I to X) shall be rejected.
 3. Bids shall be furnished in single copy.
 4. JDVVNL 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 Techno-Commercial bid.
 5. JDVVNL reserves the right to accept minor deviations in standard terms and conditions and also in technical and constructional features as specified in the technical specification (Section-III).
 6. Deviation of any kind shall not be quoted in BOQ (Bill of quantity) , if found quoted, the same shall be ignored.
 7. The following facilities are to be provided by the supplier at his own cost to the inspecting officer of Nigam (JDVVNL).
 - i) Suitable accommodation.
 - ii) Local conveyance between arrival point, place of stay, works and departure point.
 - iii) The supplier shall 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. In case of joint inspection, single or shared double room accommodation shall be provided.

(Signature)
Name & Designation with seal
of the bidder.