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(MATERIAL MANAGEMENT & CONTRACT)
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TENDER SPECIFICATION NO. JdVVNL/SE(MM&C)/EIIAII/1644

Tenders are hereby invited in e-tender system for purchase of SPECIFICATION FOR SUPPLY OF 11 KV COMPOSITE POLYMER PIN INSULATOR.

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	11 KV Composite Polymer Pin Insulator	112319 Nos.

A	NIT No.	1644
B	Cost of tender specifications	Rs.2950.00 (Two Thousand Nine Hundred Fifty Only) (For MSME of Rajasthan Rs. 1475.00 (One Thousand Four Hundred Seventy Five)
C	Processing fee of RISL	Rs.1000.00 (One Thousand Only)
D	Bid security to be deposited	
		11 COMPOSITE POLYMER PIN INSULATOR.
	General Bidder :	Rs 461226.74
	Sick Unit of Rajasthan:	Rs 230613.37
	SSI unit of Rajasthan:	Rs 115306.69 *
E	Validity	120 days from the next date of opening of techno-commercial bid.
F	Prices	Firm Price

***In case SSI unit of Rajasthan quotes quantity less than the tendered quantity , then they are required to furnish Bid security @ 0.5% of the estimated value of the quantity offered by them, failing which bid shall be considered non-responsive.**

The micro , small & Medium Scale Industries of Rajasthan and sick Industries , other than Small Scale Industries , whose cases are pending before the Board of Industrial and Financial Reconstruction (BIFR) shall furnish self attested documentary evidence duly attested by notary to claim the above.

IMPORTANT DATES

S.N.	Events	Date & Time	Location
1	Date of downloading of tender specifications	Up to 17.08.2020 (06:00 PM)	www.jdvvnl.com & http://eproc.rajasthan.gov.in
2	Deposit of cost of Tender Specifications & Earnest Money and furnishing of Processing fee	Up to 17.08.2020 (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 18.08.2020 (12:00 PM)	http://eproc.rajasthan.gov.in
4	Opening of Technical Bid	18.08.2020 (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

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1. Tender documents will be made available on e-Tendering portal www.eproc.rajasthan.gov.in The bidders, in their own interest are requested to read very carefully the tender document before submitting the bid only through online on website www.eproc.rajasthan.gov.in . The bidders can download bid up to 04:00 p.m. one day prior to schedule date of opening of respective bid mentioned above documents and submit their bids online up to 12:00 p.m. on schedule of respective bid mentioned above.
2. Eligible bidders should submit their bid well in advance instead of waiting till last date JdVVNL will not be responsible for non-submission of bids due to any website related problems.
3. The cost of Tender specification **Rs. 2950/-** (Non-Refundable) to be paid by Demand Draft in Favour of the Sr. Accounts officer(Cash & CPC), JdVVNL, Jodhpur

and tender processing fees Rs. **1000/-** shall be payable by demand draft in favour of The Managing Director RISL, Jaipur (Non- Refundable). The bidders are required to deposit all these payments in the office of the SE(MM&C), JdVVNL, Jodhpur up to 4.00 PM one day prior to date of tendering otherwise their bids are liable to be rejected.

4. The Bid Security amount (as applicable) to be paid by demand draft/banker's cheque in favour of SR.AO(CASH & CPC), JDVVNL, Jodhpur (Payable at jodhpur) 342003 **up to 4.00 p.m upto one WORKING day prior to schedule date of opening** of respective bid or Bank guarantee, in specified format, of a scheduled bank in favour of superintending Engineer (MM&C), JDVVNL, Jodhpur **up to 4.00 p.m. up to one WORKING day prior to schedule date of opening** of respective bid and obtain a receipt/acknowledgement thereof. No other mode of deposit shall be accepted. At the time of depositing the Bid Security amount or Bank Guarantee, the bidder shall also furnish self attested and duly attested by Notary, the documentary evidence of SSI unit of Rajasthan or of sick unit (as applicable). Along with affidavit as per schedule X on non-Judicial stamp of Rs. 100.

The Bank Guarantee against Bid Security be issued by Nationalized / Scheduled Bank. The same may be accepted after confirmation by issuing Bank. If any Bid Security Bank Guarantee is not in proper format / not confirmed by the issuing Bank the same would not be accepted and the bidder would be immediately sorted out from bid process.

SECTION-III**TECHNICAL SPECIFICATION FOR 11KV POLYMER COMPOSITE PIN INSULATORS****3.1 SCOPE :**

This specification covers design, manufacture, testing and supply of Composite Polymer Pin Insulators for use in the 11 KV overhead transmission lines.

The Composite Pin Insulators shall be of the following type : -

Long rod type Pin Insulators intended to be mounted rigidly on a supporting structure to support following size of conductor: -

- (a) For 11 KV AAAC/ACSR Weasel / Rabbit.

3.2 APPLICABLE STANDARDS:

3.2.1 Following Indian/ International Standards, which shall mean latest revision, with amendments/changes adopted and published, unless specifically stated otherwise in the Specification, shall be referred while accessing conformity of insulators with these specifications.

3.2.2 In the event of supply of insulators conforming to standards other than specified, the Bidder shall confirm in his bid that these standards are equivalent or better to those specified. In case of award, salient features of comparison between the standards proposed by the Bidder and those specified in this document will be provided by the Supplier to establish equivalence.

SI. No.	Indian Standard Standard	Title	International Standard
1	-	Definition, test methods and acceptance criteria for composite insulators for a.c. overhead lines above 1000 V	IEC: 61109 : 2008
2	IS: 731	Porcelain insulators for overhead power lines with a nominal voltage greater than 1000V.	IEC: 60383
3	IS: 2071	Methods of High Voltage Testing	IEC: 60060-1
4	IS: 2486	Specification for Insulator fittings for Overhead Power Lines with a nominal voltage greater than 1000V General Requirements and Tests Dimensional Requirements Locking Devices	IEC: 60120 IEC: 60372
5	-	Thermal Mechanical Performance test and mechanical performance test on string insulator units	IEC: 60575

6	IS: 13134	Guide for the selection of insulators in respect of polluted conditions	IEC: 60815
7	-	Characteristics of string insulator units of the long rod type	IEC: 60433
8	-	Hydrophobicity Classification Guide	STRI guide 1.92/1
9	-	Radio interference characteristics of overhead power lines and high-voltage equipment	CISPR:18.2 Part 2
10	IS: 8263	Methods of RI Test of HV insulators	IEC: 60437
11	-	Standard for Insulators Composite-Distribution Dead-end Type	ANSI C29.13-2000
12	IS. 4759	Hot dip zinc coatings on structural steel & other allied products	ISO: 1459 ISO: 1461
13	IS: 2629	Recommended Practice for Hot, Dip Galvanization for iron and steel	ISO-1461 (E)
14	IS: 6745	Determination of Weight of Zinc Coating on Zinc coated iron and steel articles	ISO: 1460
15	IS: 3203	Methods of testing of local thickness of electroplated coatings	ISO: 2178
16	IS: 2633	Testing of Uniformity of Coating of zinc coated articles	
17	-	Standard specification for glass fiber strands	ASTM D 578-05
18	-	Standard test method for compositional analysis by Thermo gravimetry	ASTM E 1131-03
19	IS: 4699	Specification for refined secondary Zinc	

3.3 TECHNICAL DESCRIPTION OF COMPOSITE INSULATORS

3.3.1 Service condition

Maximum ambient temperature	50 °C
Minimum ambient temperature	- 5 °C
Relative humidity	0 to 100%

Isoceraunic level	25
Number of rainy days per year	70 days
Annual rain fall	10 to 100 cm
Wind pressure	195 Kg/sq cm
Altitude	200 M to 1000 M

3.3.2 General Requirement

- (i) The composite insulators shall generally confirm to latest Standards as listed in 3.2
- (ii) **Composite Insulators long rod pin type to support conductor on 11 KV Overhead Power Lines : -**
- (iii) The insulators shall be suitable for 3 , 50 Hz, effectively earthed 11KV overhead distribution system in a heavily polluted atmosphere. The conductor will be ACSR / AAA Weasel / Rabbit Conductor. The insulator should withstand the conductor tension, the reversible wind load as well as the high frequency vibrations due to wind.
- (iv) Bidder must be an indigenous manufacturer and supplier of composite insulators of rating 11 KV or above or must have developed proven in house technology and manufacturing process for composite insulators of above rating or possess technical collaboration/association with a manufacturer of composite insulators of rating 11 KV or above. The Bidder shall furnish necessary evidence in support of the above along with the bid, which can be in the form of certification from the utilities concerned, or any other documents to the satisfaction of the purchaser.
- (v) Insulators shall have sheds with good self-cleaning properties. Insulator shed profile, spacing, projection etc. and selection in respect of polluted conditions shall be generally in accordance with the recommendation of IEC-60815/IS:13134.
- (vi) **The material of housing / Weather sheds shall have minimum 30% Silicon content by weight.**
- (vii) **All parts made of Forged steel or Malleable cast iron /SGI (Spheroidal graphite iron) shall be protected by hot dip galvanizing, confirming to latest edition of IS:4759.** All castings shall be free from blow holes and other casting defects such as cracks etc.
- (viii) All fittings shall be designed so that the harmful bimetallic corrosion is avoided and effects of vibration both on conductors and fittings are minimized. End fittings shall be free from crack, seams shrinks, air holes and rough edges. End fittings should be effectively sealed to prevent moisture ingress; effectiveness sealing system must be supported by test documents. All surfaces of the metal parts shall be perfectly smooth without projecting points or irregularities, which may cause corona. All load bearing surfaces shall be smooth and uniform so as to distribute the loading stresses uniformly.
- (ix) The insulators shall have satisfactory electrical characteristics in outdoor use, and to be free from degradation and cracking of the housing.
- (ix) The insulators shall be free from the penetration of the moisture into the interfaces of the end fitting during long term outdoor use and shall possess long term tensile withstand load characteristics.
- (x) The insulators shall be free from voids and other defects in the core material and be non-igniting and non-flammable when exposed to flame for short periods.
- (xi) The bidder shall furnish evidence in the form of certification from the power utilities that the similar type of product supplied to them had been performing satisfactorily.
- (xii) The design of the insulators shall be such that stresses due to expansion and contraction in any part of the insulator not lead to deterioration.
- (xiii) The core (FRP rod) shall be sound and free of crack and voids that may adversely affect the insulators.

- (xiv) Weather sheds shall be uniform in quality they shall be clean, sound, smooth and free from defects and excessive flashing at parting lines.
- (xv) The design, manufacturing process and material control at various stages shall be such as to give maximum working load, highest mobility, best resistance to corrosion, good finish and elimination of sharp edges and corners.
- (xvi) The size of composite insulator , minimum creepage distance and mechanical strength along with hardware fittings shall be as follows:

Type of Composite Insulator	Nominal system voltage KV (rms)	Highest system Voltage KV(rms)	Visible discharge Test voltage KV (rms)	Wet Power Frequency withstand voltage KV (rms)	Impulse Withstand voltage KV (rms)	Minimum creepage distance (mm) [Heavily polluted 25 mm/KV]	Min. failing load (KN)	Min. Diameter of FRP Rod (mm)
11KV Pin Insulator	11	12	9	35	75	320	5	24

(xvii) The tolerances on all dimensions e.g. diameter, length and creepage distance shall be allowed as follows in line with-IEC 61109:

$$\pm (0.04d+1.5) \text{ mm when } d \leq 300 \text{ mm.}$$

$$\pm (0.025d+6) \text{ mm when } d > 300 \text{ mm with a maximum tolerance of } \pm 50 \text{ mm}$$

Where d being the dimensions in mm for diameter, length or creepage distance as the case may be.

However, no negative tolerance shall be applicable to creepage distance.

3.3.3 Interchangeability

The composite insulators including the end fitting connection shall be of standard design suitable for use with the hardware fittings of any make conforming to relevant IEC/IS standards.

3.3.4 Corona and RI Performance

All surfaces shall be clean, smooth, without cuts, abrasions or projections. No part shall be subjected to excessive localized pressure. The insulator and metal parts shall be so designed and manufactured that it shall avoid local corona formation and not generate any radio interference beyond specified limit under the operating conditions.

3.3.5 Maintenance

The composite insulators offered shall be suitable for use of hot line maintenance technique so that usual hot line operation can be carried out with ease, speed and safety.

3.4.0 TECHNICAL DESCRIPTION OF COMPOSITE INSULATORS

3.4.1 Design and construction:

The composite Pin insulators shall be designed to meet the high quality, safety and reliability and are capable of withstanding a wide range of environmental conditions. Composite insulators shall consists of three parts, at least two of which are insulating parts:

- (a) Core ó The internal insulating part.
- (b) Housing ó The external insulating part.
- (c) Metal and fittings ó For attaching to hardware to support conductor.

3.4.1.1 Core

It shall be a glass-fiber reinforced epoxy resin rod of high strength (FRP rod). Glass, fibers and resin shall be optimized in the FRP rod. Glass fibers shall be Boron free electrically corrosion resistant (ECR) glass fiber or Boron free E -Glass and shall exhibit both high electrical integrity and high resistance to acid corrosion. The matrix of the FRP rod shall be Hydrolysis resistant. The FRP rod shall be manufactured through Pultrusion process. The FRP rod shall be void free.

3.4.1.2 Housing (Sheath)

The FRP rod shall be covered by a seamless sheath of a silicone elastomeric compound or silicon alloy compound of a thickness of 3 mm minimum. **It shall be one piece housing using injection Moulding Principle to cover the core.** The elastomer housing shall be designed to provide the necessary creepage distance and protection against environmental influences, external pollution and humidity. Housing shall confirm to the requirement of IEC 61109/2008 with latest amendments.

It shall be extruded or directly molded on the core and shall have chemical bonding with the FRP rod. The strength of the bond shall be greater than the tearing strength of the polymer. Sheath material in the bulk as well as in the sealing/bonding area shall be free from voids.

3.4.1.3 Weather sheds

The composite polymer weather sheds made of silicone elastomeric compound or silicon alloy shall be firmly bonded to the sheath, vulcanized to the sheath or molded as part of the sheath and shall be free from imperfections. **The weather sheds should have silicon content of minimum 30% by weight.** The strength of the weather shed to sheath interface shall be greater than the tearing strength of the polymer. The interface, if any, between sheds and sheath (housing) shall be free from voids.

3.4.1.4 End Fittings

End fittings transmit the mechanical load to the core. They shall be made of spheroidal graphite cast iron, malleable cast iron or forged steel or aluminum alloy and only Forged MS Steel for Lower Fitting. Hardware of respective specified mechanical load and shall be hot dipped galvanised in Zinc coated with minimum 99.95% purity of electrolytic high grade Zinc in accordance with IS 2629. The material used in fittings shall be corrosion resistant.

Metal end fittings shall be uniform and without sharp edges or corners and shall be free of cracks, flakes, silvers, slag, blow-holes shrinkages defects and localized porosity.

They shall be connected to the rod by means of a controlled compression technique. The material used in fittings shall be corrosion resistant. As the main duty of the end fittings is the transfer of mechanical load to the core fittings should be properly attached to the core by a coaxial or hexagonal compression process & should not damage the individual fibers or crack the core.

The gap between fitting and sheath shall be sealed by a flexible silicone elastomeric compound or silicone alloy compound sealant. System of attachment of end fitting to the rod shall provide superior sealing performance between housing, i.e. seamless sheath and metal connection. The sealing must be moisture proof. The 11KV Pin Insulator shall be provided with GI Pin duly permanent fitted with the 11 KV Pin Insulator. The GI Pin should be confirming to IS:2486-Part-II/1989.

Normal dimensions of the pin insulator shall be accordance with the Specific Techniccal Particulas. No joints in pin will be allowed. Outer portion of pin should be Zinc coated with minimum 99.95% purity of

electrolytic high grade zinc.

The finished surface shall be smooth and shall have a good performance. The surface shall not crack or get chipped due to ageing effect under normal and abnormal service conditions or while handling during transit or erection.

The design of the fittings and the insulators shall be such that there is no local corona formation or discharges likely to cause the interference to either should or vision transmission.

Bottom end metal fitting (Shank) of Pin insulator should be as per IS: 2486. Two number nuts as per IS 1363 (P-III) and 4 mm thick Spring Washer shall be as per IS 3063 with latest amendments if any, Nuts and spring washer shall be hot dip galvanized.

The details of end fittings for fixing the same with V -Cross Arms and top clamps are given below:

Sr. No.	Item	Min. threaded portion of end fittings	Dia. Of bottom end fitting Pin	Length of end fitting to be fixed
1	11 KV	150 mm	20 mm	150

Upper end fittings shall be suitable to hold AAAC/ACSR Weasel / Rabbit for 11 KV. The size of the fittings shall be in such a way that conductor could be bound firmly so that it may not slip from the groove while in service even under adverse conditions.

3.5. Workmanship

3.5.1 All the materials shall be of latest design and conform to the best engineering practices adopted in the high voltage field. Bidders shall offer only such insulators as are guaranteed by them to be satisfactory and suitable for continued good service in power transmission lines.

3.5.2 The design, manufacturing process and material control at various stages shall be such as to give maximum working load, highest mobility, best resistance to corrosion, good finish and elimination of sharp edges and corners.

3.5.3 The design of the insulators shall be such that stresses due to expansion and contraction in any part of the insulator shall not lead to deterioration.

3.5.4 The core shall be sound and free of cracks and voids that may adversely affect the insulators.

3.5.5 Weather sheds shall be uniform in quality. They shall be clean, sound, smooth and shall be free from defects and excessive flashing at parting lines.

3.5.6 End fittings shall be free from cracks, seams, shrinks, air holes and rough edges. End fittings should be effectively sealed to prevent moisture ingress; effectiveness of sealing system must be supported by test documents. All surfaces of the metal parts shall be perfectly smooth without projecting points or irregularities, which may cause corona. All load bearing surfaces shall be smooth and uniform so as to distribute the loading stresses uniformly.

3.5.7 All ferrous parts shall be hot dip galvanized to give a minimum average coating of zinc equivalent to 610 gm/sq.m. or 87µm thickness and shall be in accordance with the requirement of IS: 4759. The zinc used for galvanizing shall be of purity 99.5% as per IS: 4699. The zinc coating shall be uniform, adherent, smooth, reasonably bright continuous and free from imperfections such as flux, ash rust stains, bulky white deposits and blisters. The galvanized metal parts shall be guaranteed to withstand at least four successive dips each lasting for one (1) minute duration under the standard precede test. The galvanizing shall be carried out only after any machining.

3.6.0 Equipment Marking

3.6.1 Each insulator unit shall be legibly and indelibly marked with the following details as per IEC 61109:2008

- (a) Month & Year of manufacture
- (b) Min. failing load/ guaranteed mechanical strength in Kilo Newton followed by the word 'KN' to facilitate easy identification.
- (c) Manufacturer's name/Trade mark
- (d) Voltage and Type
- (e) ~~NAME OF DISCOM~~/ TN No. ___ø

3.7 Bid Drawings

3.7.1 The Bidder shall furnish full description and illustration of the material offered.

3.7.2 The Bidder shall furnish along with the bid the outline drawing (3 copies) of each insulator unit including a cross sectional view of the long rod insulator unit. The drawing shall include but not be limited to the following information :

- (a) Long rod diameter with manufacturing tolerances
- (b) Minimum Creepage distance with positive tolerance
- (c) Eccentricity of the long rod unit
 - i) Axial run out
 - ii) Radial run out
- (d) Unit mechanical and electrical characteristics
- (e) Size and weight of 11 KV GI Pin.
- (f) Weight of composite long rod units
- (g) Materials
- (h) Identification mark
- (i) Manufacturer's catalogue number

3.7.3 After placement of award, the Supplier shall submit full dimensioned manufacturing insulator drawings containing all the details in four (4) copies to purchaser for approval. After getting approval from Purchaser and successful completion of all the type tests, the Supplier shall submit 10 more copies of the drawing to the Purchaser for further distribution and field use.

3.7.4 After placement of award the Supplier shall also submit fully dimensioned insulator crate drawing for different type of insulators for approval of the purchaser.

3.8 Tests and Standards

Insulators offered shall be manufactured with the same configuration & raw materials as used in the insulators for which design & type test reports are submitted. The manufacturer shall submit a certificate for the same. **The design & type test reports submitted shall not be more than 05 years old.**

3.8.1 Design tests

Manufacturer should submit test reports for Design Tests as per Clause No. 10 of IEC 61109 : 2008 along with the bid **from Govt. approved/ a Govt. recognized/ NABL accredited laboratory/ ILAC i.e. International Laboratory Accredited laboratory / ILAC i.e International Laboratory Accreditation Corporation (In case of foreign laboratory)**. The design tests are intended to verify the suitability of the design, materials and method of manufacture (technology). When a composite insulator is subjected to the design tests, the result shall be considered valid for the whole class of insulators, which are represented by the one tested and having the following characteristics:

- É Same materials for the core, and sheds and same manufacturing method;
- É Same material of the fittings, the same design, the same method of attachment;
- É Same or greater layer thickness of the shed material over the core (including a sheath where used);
- É Same or smaller ratio of the highest system voltage to insulation length;
- É Same or smaller ratio of all mechanical loads to the smallest core diameter between fittings
- É Same or greater diameter of the core.

The tested composite insulators shall be identified by a drawing giving all the dimensions with the manufacturing tolerances.

Manufacturer should submit following test reports for Design Tests as per IEC-61109 (clause- 10) along with the bid.

Additionally following tests shall be carried out or reports for the tests shall be submitted after award of contract:

UV test : the test shall be carried out in line with clause 7.2 of ANSI C 29.13.

Design test as per IEC: 61109 (Clause-10) (Report to be submitted by the bidder along with offer): -

Sr. No.	Particular of Design Test Required
A	Test on shed and housing material
1.	Hardness test
2	Accelerated weathering test
3	Tracking and erosion test
4	Flammability test
B	Test on core material
1.	Dye penetration test
2.	Water diffusuion test

Note: If the manufacturer only has facilities to produce insulators shorter than prescribed length of specimen as mentioned in IEC 61109/62217 ,the design test may be performed on insulators of those lengths available to him ,but the results are only valid for up to the length tested.

Additionally following tests shall be carried out and reports for the tests shall be submitted:

- (i) **RIV Test (Dry) :**
- (ii) **Brittle Fracture Resistance Test**
- (iii) **Recovery of Hydrophobicity & Corona Test**
- (iv) **Chemical Composition test for Silicon content**

Manufacturer should submit test reports for design tests as per IEC 61109 a/w the bid

3.8.2 DESIGN TESTS REPORTS :

a) The tenderer should furnish valid design test certificates from **Govt. approved/ a Govt. recognized/ NABL accredited laboratory/ ILAC i.e. International Laboratory Accredited laboratory / ILAC i.e International Laboratory Accreditation Corporation (In case of foreign laboratory)** on similar rating and design of tendered material/equipment . Tests carried out by tenderer in his own R&D units even if

recognized by Govt. shall not be accepted except in case of Govt. undertakings.

- b) Such design test certificates should not be older than **five years** as on the date of bid opening.
- c) In case the bidder is not in a position to furnish test certificate of same rating of offered item and furnish test certificate of higher rating from **Govt. approved/ a Govt. recognized/ NABL accredited laboratory/ ILAC i.e. International Laboratory Accredited laboratory / ILAC i.e International Laboratory Accreditation Corporation (In case of foreign laboratory)** at the time of submission of bid, the bid of the bidders may be considered as responsive **if bidder gives an undertaking along with BG/DD/Pay Order that test of rating offered shall be arranged from first lot** (without asking for any delivery extension) from Govt. approved/ a Govt. recognized/ NABL accredited laboratory/ ILAC i.e. International Laboratory Accredited laboratory / ILAC i.e International Laboratory Accreditation Corporation (In case of foreign laboratory)
- d) The Bank guarantee from a scheduled Bank/DD/Pay Order should be for an amount of **Rs. 5.0 Lacs** for Outside Rajasthan based firms and **Rs. 1.25 Lacs** for Rajasthan based firms, towards furnishing of satisfactory design test reports before the date of opening of technical bid. In case the bidder fails to furnish successful design test certificates from the offered lot(s), their bank guarantee/DD/Pay Order will be invoked/forfeited (Proforma for submitting undertaking a bank guarantee is enclosed as Schedule-III-B). The initial validity of B.G. shall be nine months.

3.8.3 Type Tests: -

The bidder shall furnish detailed type test reports of the offered composite Insulators as per clause of the Technical Specifications at **Govt. approved/ a Govt. recognized/ NABL accredited laboratory/ ILAC i.e. International Laboratory Accredited laboratory / ILAC i.e International Laboratory Accreditation Corporation (In case of foreign laboratory)** to prove that the composite Insulators offered meet the requirements of the specification. These Type Tests should have been carried out within five years prior to the date of opening of this tender. The following type tests shall be conducted on a suitable number of individual insulator units, components & materials and the test report should invariably be submitted with the bid: -

3.8.3.1 The bidder shall submit type test reports, from any **Govt. approved/ a Govt. recognized/ NABL accredited laboratory/ ILAC i.e. International Laboratory Accredited laboratory / ILAC i.e International Laboratory Accreditation Corporation (In case of foreign laboratory)**, as per IEC 61109:2008 along with the bid. Additional type tests as required above shall be carried out by the manufacturer, after award of Contract for which no additional charges shall be payable . In case the tests have already been carried out, the manufacturer shall submit reports for the same.

Additional type tests as required above shall be carried out by the manufacturer, after award of Contract for which no additional charges shall be payable. In case the tests have already been carried out, the manufacturer shall submit reports for the same.

SN	Description of type test	Procedure / Standard
1.	Dry lightning impulse withstand voltage Test	As per IEC 61109 : 2008 (Clause 11.1)
2.	Wet power frequency voltage test	
3.	Mechanical failing load time test(routine test)	As per IEC 61109 : 2008 (Clause 10.4.2)
4	Radio interference test	As per IEC 60437
5.	Chemical composition test for silicon content	Annexure-A Or any other test method acceptable to the owner
6.	Recovery of Hydrophobicity test	Annexure-A (As per STRI guide) This test may be repealed every 3 yrs

3.8.3.2 All the type test given in Clause No. 3.8.3 in addition to routine & acceptance test shall be carried out on insulator along with hardware fittings wherever required.

3.8.4 Routine Tests

Sl.No	Description	Standard
1	Mechanical routine test	As per IEC: 61109:2008 /IS:731
2	Visual Inspection	As per IEC: 61109:2008 Clause 8.2
3	Identification of marking	As per IEC: 61109:2008 Clause 8.1

3.8.5 Acceptance (Sample) Tests

3.8.5.1 The test samples after having withstood routine lists shall be subject to the following acceptance / sampling tests in order indicated below:

a.	Verification of dimensions	Clause 7.2 IEC: 61109 : 2008
b.	Verification of the locking system (if applicable)	Clause 7.3 IEC: 61109 : 2008
c.	Verification of tightness of the interface between end fittings & Insulator housing	Clause 7.4 IEC: 61109 : 2008
d.	Verification of the specified mechanical load	Clause 7.4 IEC: 61109 : 2008
e.	Galvanizing test	IS:2633/IS:6745

Note : SAMPLING & TESTING : Sample procedure for testing of insulators shall be IEC 61109:2008 for Acceptance and Routine tests.

3.8.6 Tests During Manufacture

Following tests shall also be carried out on all components as applicable :

- A) Chemical analysis of zinc used for galvanizing
- B) Chemical analysis, mechanical, metallographic test and magnetic particle inspection for malleable castings.
- C) Chemical analysis, hardness tests and magnetic particle inspection for forgings.

3.8.7 Additional Tests

3.8.7.1 The Purchaser reserves the right at his own expenses, for carrying out any other test(s) of reasonable nature carried out at Supplier's premises, at site, or in any other place in addition to the aforesaid type, acceptance and routine tests to satisfy himself that the material comply with the Specifications.

3.8.7.2 The Purchaser also reserves the right to conduct all the tests mentioned in this specification at his own expense on the samples drawn from the site at Supplier's premises or at any other test center. In case of evidence of noncompliance, it shall be binding on the part of the Supplier to prove the compliance of the items to the technical specifications by repeat tests or correction of deficiencies or replacement of defective items, all without any extra cost to the Purchaser.

3.8.8 Quality assurance plan

1. The successful bidder shall submit following information to the purchaser :
2. Test certificates of the raw materials and bought out accessories.
3. Statement giving list of important raw materials, their grades along with names of sub-suppliers for raw materials, list of standards according to which the raw materials are tested. List of tests normally carried out on raw materials in presence of bidder's representative.
4. List of manufacturing facilities available.
5. Level of automation achieved and lists of areas where manual processing

exists.

6. List of areas in manufacturing process, where stage inspections are normally carried out for quality control and details of such tests and inspections.
7. List of testing equipment available with the bidder for final testing of equipment along with valid calibration reports
8. The manufacturer shall submit Manufacturing Quality Plan (MQP) for approval & the same shall be followed during manufacture and testing.
9. The successful bidder shall submit the routine test certificates of bought out raw materials/accessories and central excise passes for raw material at the time of inspection.

3.9 TYPE TESTS REPORTS :

- a) The tenderer should furnish valid type test certificates from **Govt. approved/ a Govt. recognized/ NABL accredited laboratory/ ILAC i.e. International Laboratory Accredited laboratory / ILAC i.e International Laboratory Accreditation Corporation (In case of foreign laboratory)** on similar rating and design of tendered material/equipment . Tests carried out by tenderer in his own R&D units even if recognized by Govt. shall not be accepted except in case of Govt. undertakings.
- b) Such type test certificates should not be older than five years as on the date of bid opening.
- c) In case the bidder is not in a position to furnish test certificate of same rating of offered item and furnish test certificate of higher rating from **Govt. approved/ a Govt. recognized/ NABL accredited laboratory/ ILAC i.e. International Laboratory Accredited laboratory / ILAC i.e International Laboratory Accreditation Corporation (In case of foreign laboratory)** at the time of submission of bid, the bid of the bidders may be considered as responsive **if bidder gives an undertaking along with BG/DD/Pay Order that test of rating offered shall be arranged from first lot** (without asking for any delivery extension) from Govt. approved/ a Govt. recognized/ NABL accredited laboratory/ ILAC i.e. International Laboratory Accredited laboratory / ILAC i.e International Laboratory Accreditation Corporation (In case of foreign laboratory).
- d) The Bank guarantee from a scheduled Bank/DD/Pay Order should be for an amount of **Rs. 5.0 Lacs** for Outside Rajasthan based firms and **Rs. 1.25 Lacs** for Rajasthan based firms, towards furnishing of satisfactory type test reports before the date of opening of technical bid. In case the bidder fails to furnish successful type test certificates from the offered lot(s), their bank guarantee/DD/Pay Order will be invoked/forfeited (Proforma for submitting undertaking a bank guarantee is enclosed as Schedule-III-B). The initial validity of B.G. shall be nine months.

3.10 TYPE TEST ON SAMPLES SELECTED FROM MATERIAL RECEIVED IN STORES FROM 1ST OFFERED LOT:

Sample selection as per guide line of IEC / as per requirement of Test Lab from the 1st Lot of insulators as received in purchaser's store shall be selected and sealed for getting it Type Tested at any Govt. approved/ a Govt. recognized/ NABL accredited laboratory/ ILAC i.e. International Laboratory Accredited laboratory / ILAC i.e International Laboratory Accreditation Corporation (In case of foreign laboratory). The transportation charges of sample(s) 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 by the supplier with the 1st inspection offer. The name of test house shall be intimated to successful bidder after issue of Purchase Order.

At the option of the purchaser, the material received in the stores may be utilized in the field after receipt of successful test reports from CTL 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).

If the bidder has already got conducted the requisite type test from the first 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 above requirement than requisite nos. of samples of Pin Insulators from the 1st lot received in purchaser's store shall be selected and sealed in the presence of representative of supplier for getting it Type Tested at Govt. approved/ a Govt. recognized/ NABL accredited laboratory/ ILAC i.e. International Laboratory Accredited laboratory / ILAC i.e International Laboratory Accreditation Corporation (In case of foreign 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**. 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..

The bidder shall have to deposit type test charge(s) immediately with the supply of 1st lot . If the type test charge(s) are not deposited then acceptance of 2nd offered lot shall be at the discretion of purchaser.

3.10.3 In case sample(s) from first lot fails in type tests then:

a) Supplier shall have to replace the full quantity of the respective inspected lot supplied to various stores which is lying unused.

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(s) 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 for which the testing charges should be remitted through D.D. in favour of the Test House by the supplier with the 2nd inspection offer.

3.10.4 In case sample again fails in the type test then:

a) The quantity supplied/received in stores and lying unused in stores shall stand rejected and shall be lifted back by the supplier.

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 and order shall stand cancelled.

3.10.5 In case the bidder receives order from more than one Discom, then the Type test form 1st lot shall be conducted by the Discom where material have been received first .

In case sample(s) from first lot fails in type tests then:

a) Supplier shall have to replace the full quantity of the respective inspected lot supplied to various stores which is lying unused.

b) Sample(s) 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 for which the testing charges should be remitted through D.D. in favour of Test House by the supplier with the 2nd inspection offer.

In case sample again fails in the type test then:

- a) The quantity supplied/received in stores and lying unused in stores shall stand rejected and shall be lifted back by the supplier.
- 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 and order shall stand cancelled .

3.10.6. Material should not be issued by ACOS before receipt of successful test report from CTL, In case of urgency it should be got approval from the competent authority .

The various type tests as per relevant standards shall be conducted on insulator.

3.11 PACKING :

3.11.1 All insulators shall be packed in suitable PVC/ plastic tubes/any other suitable packing along with temporary wrap-on shield/shrouds for each insulator unit. The packing shall provide protection against rodent. Further shields/shrouds shall be made of opaque, weather proof material of adequate strength. The Supplier shall furnish detailed design of the packing. For marine transportation, crates shall be pelleted.

3.11.2 The packing shall be of sufficient strength to withstand rough handling during transit, storage at site and subsequent handling in the field.

3.11.3 Suitable cushioning, protective padding, or Dunn age or spacers shall be provided to prevent damage or deformation during transit and handling.

3.11.4 All packing cases shall be marked legibly and correctly so as to ensure safe arrival at their destination and to avoid the possibility of goods being lost or wrongly dispatched on account of faulty packing and faulty or illegible markings. Each case/crate shall have all the markings stencilled on it in

3.11.5 The Supplier shall guarantee the adequacy of the packing and shall be responsible for any loss or damage during transportation, handling, storage and installation due to improper packing indelible ink.

3.11.6 The bidder shall provide instructions regarding handling and storage precautions to be taken at site.

3.12 GUARANTEE:

The supplier of insulators shall guarantee overall satisfactory performance of the insulators for the period of **36 months** from the date of supply.

3.13 GUARANTEED TECHNICAL PARTICULARS:

Full guaranteed particulars should be given in the tender as called for in Schedule-V(a) for **11 KV Polymer Composite Pin Insulators**. Tenders not accompanied by Schedule-V(a), duly filled in are likely to be ignored.

3.15 QUANTITY:

Quantity indicated above is provisional. The purchaser reserves the right to increase/ decrease the same at the time of placing the order.

3.16 PRICES: The prices quoted shall be **FIRM**.

3.17. DELIVERY SCHEDULE

The bidder is required to quote monthly delivery in Schedule-VIII. The delivery of quoted quantity of conductor should be **commenced after 30 days from the date of receipt of purchase order and shall be completed in 9 months thereafter at equal monthly installments.** 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 schedule is not quoted shall be considered as Non Responsive.**

The tenderers are required to indicate the delivery schedule in the schedule attached with the Specification.

3.18 TEST CHECKING OF MATERIAL AT STORES

The material received in the stores of the NIGAM shall be subjected to the test checking at stores before final acceptance of the material, the procedure for the same shall be as under :

i) SAMPLING

One sample out of each sub-lot / lot consisting of following quantities or part thereof each inspected lot received in stores shall be selected from each store for test checking of material and shall be got tested.

11 KV Polymer Composite Pin Insulator ó 3000 Nos.

The sample selection shall be done as soon as the material is received in stores, without calling the representative of supplier. However, testing at CTL or else where as arranged by NIGAM shall be done in the presence of representative of supplier after identification/ confirmation by the supplier's representative that sample(s) so selected belong to them.

ii) TESTING

The following tests shall be carried out on the above items :

a.	Verification of dimensions
b.	Verification of the locking system (if applicable)
c.	Verification of tightness of the interface between end fittings & Insulator housing
d.	Verification of the specified mechanical load
e.	Galvanizing test

However, only those tests shall be conducted at CTL for which facility with CTL is available.

In case if the facility for conducting any of the above test(s) is not available at the NIGAM's CTL, the purchaser reserve the right to get such test (s) conducted at any independent NABL Test House.

For witnessing of the testing, clear 3 days' notice shall be given to the supplier stating date, time & place where the test is to be conducted. The testing shall be started after identification / confirmation of sample by the representative of the supplier that sample selected for testing pertain from the lot supplied by them. In case the supplier does not attend for witnessing the testing ,the test shall be proceeded and completed and action be taken as per contract. The CTL shall send two copies to the purchaser ,consignee and the supplier.

iii) **CRITERIA FOR ACCEPTANCE:-** In case of failure of any of sample(s) in any of the above tests material contained in the lot / sub-lot received in store to which the samples belong, shall be rejected. The

rejected material shall have to be replaced by the supplier free of cost.

iv) TEST CHARGES :

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

3.19 PAYMENT : The Payment shall be governed in accordance with the clause No. 1.42 of GCC with the following modifications :-

A) If bidder have submitted valid type test & design test reports with bid:

The 100% payment shall be released after receipt of successful test reports from CTL.

B) If bidder have not submitted valid type test & design test reports with bid:

- i) The 70% payment shall be released after receipt of successful test reports from CTL 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.
- ii) 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.
- iii) The due dates for payment shall be considered from the date of submission of the bills along with receipted challans to Sr. Accounts Officer (CPC).

The GST will be charge extra at the prevailing rate on all the settlement fees as applicable and amended time to time.

3.20 PLANT, MACHINERY & TESTING EQUIPMENTS;

3.20.1 The bidder should have required plant, machinery and testing equipment for manufacturing & testing of 11KV Polymer Composite Pin Insulator.

3.20.2 The bidders should furnish details of plant, machinery and testing equipment with the bids failing which bids may be ignored.

3.21 QUANTITY TOLERANCE :

Quantity tolerance of plus minus 2% of ordered quantity shall be allowed for completion of supply .

3.22. CHALLENGE TESTING :

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 fees are proposed at least three times the cost of testing. This is likely to deter unnecessary challenges. The challenger would have the opportunity to select the sample from the store of Nigam and any such challenge should be made within the guarantee period. The party challenged, challenger and the utility could witness the challenged 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 . If the values are within limit, the product 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 allowed to ask for fresh selection of two more samples from the store of Nigam and 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 sample does not confirm 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.

3.23. GST:-

GST registration number of Jodhpur Discom is **08AAACJ8578R1ZJ**.

As GST act has been implemented from 01.07.17, therefore, BOQ has been prepared accordingly with applicability of GST. Further, old tax structure wherever appearing in ITB, GCC, and specification may be replaced by GST as per notification.

3.24. ADDITIONAL ORDER

Repeat order for additional quantities upto 50% of original ordered quantities , may be placed by the Nigam on the same rates ,terms and conditions given in the contract.

3.25. Every Micro, Small & Medium enterprises of Rajasthan shall be required to submit an affidavit in schedule-X, along with duly filled bid document.

Annexure-A**Tests on Insulator Units****1 RIV Test (Dry):-**

The insulator string along with complete hardware fittings shall have a radio interference voltage level below 100 micro volts at one MHz when subjected to 50 Hz AC voltage of 10 kV for 11 kV class insulators respectively under dry condition. The test procedure shall be in accordance with IS:326B / I EC : 437/CISPFi 18-2.

2 Brittle Fracture Resistance Test:-

Brittle fracture test shall be carried out on naked rod along with end fittings by applying "1 n HNO₃ acid" (63 g cone, HNO₃ added to 937 g water) to the rod. The rod should be held at 80% of SML for the duration of the test. The rod should not fail within the 96 hour test duration. Test arrangement should ensure continuous wetting of the rod with Nitric acid.

3 Recovery of Hydrophobicity & Corona test:-

The test shall be carried out (4mm thick samples of 5cm x 7cm)

The surface of selected samples shall be cleaned with isopropyl alcohol. Allow the surface to dry and spray with water Record the Hydrophobicity classification in line with STRI guide for Hydrophobicity classification. Dry the sample surface.

- i) The sample shall be subjected to mechanical stress by bending the sample over a ground electrode. Corona is continuously generated by applying 12 kV to a needle like electrode placed 1mm above the sample surface. The test shall be done for 100 hrs.
- ii) Immediately after the corona treatment, spray the surface with water and record the HC classification. Dry the surface and repeat the corona treatment as at clause 7 above. Note HC classification. Repeat the cycle for 1000 hrs. or until an HC of 6 or 7 is obtained. Dry the sample surface.
- iii) Allow the sample to recover and repeat hydrophobicity measurement at several time intervals. Silicone rubber should recover to HC 1 - HC 2 within 24 to 48 hours, depending on the material and the intensity of the corona treatment.

4 Chemical composition test for Silicon content

The content of silicon in the composite polymer shall be evaluated by EDX (Energy Dispersion X-ray) Analysis or Thermo-gravimetric analysis. The test may be carried out at CPRI or any other NABL accredited laboratory.

MANDATORY PARTICULARS FOR 11KV PIN INSULATOR

Type of Insulator	Polymeric composite Pin Insulator
Reference Standard	IEC 61109
Material of FRP Rod	Borrion Free ECR
Material of Sheds	Silicon Rubber
Material of Top End Fittings	SGCI/ MCI/ FORGED/ STEEL
Material of Bottom End Fittings	FORGED STEEL
Material of sealing compound	RTV Silicon
Color of Sheds	Grey
Rated Voltage	11 KV
Highest Voltage	12 KV
Dry Power Frequency Withstand voltage	60 KV
Wet Power Frequency Withstand voltage	35 KV
Dry Power Frequency Flashover Voltage	75 KV
Wet Power Frequency Flashover Voltage	45 KV
Dry Lightning Impulse Withstand Voltage	Positive: 75 KV Negative: 80 KV
Dry Lightning Impulse Flashover Voltage	Positive: 95 KV Negative: 100 KV
RIV at 1 MHz when energised at 10 KV / 30 KV (rms) under dry condition	< 50 microvolt
Creepage Distance (min)	320 mm
Min Failing Load	5 KN
Dia of FRP Rod	24 mm
Length of FRP Rod (min)	165 mm
Min Dia of weather sheds	>90 mm
Thickness of housing	3 mm
Dry arc Distance	150 mm
Method of fixing sheds to housing	Injection moulding
Visible Discharge Voltage (PF)	9 KV
No of weather sheds (min)	Three
Type of Sheds	Aerodynamic
Dia of bottom and fitting	20 mm
Thread length of bottom end fitting	150 mm (Min)
Type of Packing	As per spec requirement
No of insulator in each pack	Thirty

SCHEDULE-I**SCHEDULE OF REQUIREMENT**

The total quantity to be purchased for JdVVNL is as under:

S. No.	PARTICULARS OF ITEM	QUANTITY In Nos.
1.	11 KV Polymer Composite Pin Insulator	112319

The quantity indicated above is provisional and the purchaser reserves the right of revising the same at the time of placing the order.

SCHEDULE-II

PRICES

Prices are %IRM+

SCHEDULE – III**JODHPUR VIDYUT VITRAN NIGAM LIMITED****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.
11 KV Polymer Composite Pin Insulators	IEC-61109/2008, IEC 62217-2012, IEC- 60383 / IS 731, IEC-60060-1/IS:2071 IEC-60120, 60372/IS:2486, IEC-60575, IEC-60815/ IS:13134, IEC:60433, STRI Guide 1.92/, CISPR:18.2 Part2, 1 IEC-60437 / IS:8263, ANSIC29.13-2000, ISO:1459,1461/IS:4759, ISO-1461(E)/IS:2629,ISO:1460/IS:6745, ISO:2178/IS:3203, IS:2633, ASTM D578-05, ASTME 1131-03, IS:4699.REC SPECIFICATION 76/2006	
For galvanization of metallic parts	IS:2633/1972(Latest amendments)	

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.

(Signature)

Name & Designation with seal of the bidder.

SCHEDULE-III (A)
TN-1644**11 KV Composite Polymer Pin Insulator****PRE-QUALIFICATION REQUIREMENT**

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.

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:-**

3.01 The bidder shall furnish valid and authenticated type test certificates from a Govt. approved/ a Govt. recognized/ NABL accredited laboratory/ ILAC i.e. International Laboratory Accredited laboratory / ILAC i.e International Laboratory Accreditation Corporation (In case of foreign laboratory) of similar rating and design of tendered material/ equipment. Such type test certificates should not be older than **5 years** as on the date of bid opening. For this purpose date of conducting type test will be considered.

The type test certificate by 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,

3.03 The type test certificates shall be furnished either in original or copy duly attested by notary.

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

However, in the following cases the bid of the bidder may be considered meeting the type test criteria if the bidder furnishes an undertaking stating that valid type test certificate from a Govt. approved/ a Govt. recognized/ NABL accredited laboratory/ ILAC i.e.

International Laboratory Accredited laboratory / ILAC i.e International Laboratory Accreditation Corporation (In case of foreign laboratory) shall be furnished from first lot (without asking any delivery extension) along with bank guarantee with the technical bid from a Nationalized / Scheduled Bank in prescribed proforma at Schedule-III B or DD/ Pay Order amounting to **Rs.5,00,000/-.(Five Lac Only)**. 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 tests) is/ are older than 5 years.
- iii) Where Rajasthan / outside Rajasthan firm furnishes requisite type test reports of higher rating material.

4.0 POOR RECORD OF PERFORMANCE AND DELIVERY :

The bidders who have been black listed in any of the state Discom or with whom business relations have been severed Jodhpur Discom shall not be considered. Severement 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 severement 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 severement of relations for a period of 2 years from the date of issue of order or in next two bids whichever is later.

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 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.

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.
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.
4. On severment of business, the EMD/SD/vendor registration security will be forfeited.
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 Performa 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.
- 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.
- V) **The date of conducting type test shall be before the date of opening of Technical Bid. The date of issuing of type Test Bank Guarantee in lieu of non-furnishing of Type Test reports shall be before the date of opening of technical bid & the Type Test BG issued on or after opening of technical bid shall not be accepted.**

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

(On Rajasthan Non-Judicial Stamp Paper worth Rs. @ 0.25% of BG amount or Rs. 25,000/-, whichever is less.)

To,

The Superintending Engineer (MM&C),
Jodhpur Vidyut Vitran Nigam Limited,
New Power House Premises,
Industrial Area,
Jodhpur -342003.

Dear Sir,

Whereas Jodhpur Vidyut Vitran Nigam Limited , Jodhpur (hereinafter called the purchaser) has issued a bid enquiry under TN..... for procurement of (Name of material) .

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

Whereas in accordance with the provision of the specification of the afore said TN..... , 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 Vitran Nigam Limited, 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.

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 The Superintending Engineer (MM&C), Jodhpur Vidyut Vitran 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 thereunder. 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)
Executant

Witness:

- 1.
- 2.

Schedule-IV-A

TN-1644

ITEM- 11 KV Composite Polymer Pin Insulator

Must be filled in by the bidder and attached with Technical Bid (Part-I)

To,
The Superintending Engineer (MM&C),
Jodhpur Vidyut Vitran Nigam Limited,
Jodhpur.

Dear Sir,

With reference to your invitation to bid against specification No. **JdVVNL/SE (MM&C) /EIIAII/1644**, we agree to supply the following quantity:

S. No.	Particulars of Items	Bid Quantity (In Nos.)	Qty. Offered (In Nos.)	Justification of quantity offered as per Qualifying Requirement	Status of Type Test certificate
1.	2.	3.	4.	5.	6.
1	11 Composite Polymer Pin Insulator	112319			

1. The offer is valid for a period of 120 days from the next date of opening of Techno-Commercial Bid.
2. The prices are $\text{\textcircled{FIRM}}$
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. **JdVVNL/SE(MM&C)/EIIAII/1644** 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. **JdVVNL/SE(MM&C)/EIIAII/1644** and there are no deviations other than as specified in the Schedule-III, V & VI (A & B).

Yours faithfully,

**Signature of bidder with stamp
Dated**

SCHEDULE V-A**GUARANTEED TECHNICAL PARTICULARS OF 11 KV POLYMER COMPOSITE
PIN INSULATORS**

(To be filled containing Technical Offer)

Sl. No.	Description	11KV POLYMER COMPOSITE PIN INSULATOR
1.	Name of Manufacturer GST NO.	
2.	Address:	
	(a) registered Office	
	(b) Factory	
3.	Type of Insulators	
4.	Standard specification to which the Insulators manufactured and tested	
5.	Name of material used in manufacture of the Insulator (with class / grade)	
(a)	Material of core rod	
	i. E-Glass of ECR Glass	
	ii. Boom Content	
(b)	Material of Housing & weather sheds (silicon content by weight)	
(c)	Material of end fittings : GI Pin	
(d)	Sealing compound for end fitting	
6.	Colour of Insulator	
7.	Electrical Characteristics:	
(a)	Nominal System Voltage (KV rms)	
(b)	Highest System Voltage (KV rms)	
(c)	Dry power frequency withstand (KV rms)	
(d)	Wet power frequency withstand (KV rms)	
(e)	Dry flash over voltage (KV rms)	
(f)	Wet flash over voltage (KV rms)	
(g)	Dry lighting impulse withstand voltage	
	(a) Positive	
	(b) Negative	
(h)	Dry lighting impulse flashover voltage	
	(a) Positive (KV peak)	
	(b) Negative (KV peak)	
(i)	RIV at 1 MHz when energized at 10 kV (rms) under dry condition (microvolt)	
(j)	Creepage distance (min) mm	

k)	Visible Discharge Test	
8.	Mechanical Characteristics:	
	Minimum failing load (KN)	
9.	Dimensions of Insulator:	
i.	Weight (Kg.)	
ii.	Dia of FRP rod (mm)	
iii.	Length of FRP rod (mm)	
iv.	Dia of weather sheds (mm)	
v.	Thickness of housing (mm)	
vi.	Dry arc distance (mm)	
10.	Dimensional drawings of Insulator (including weight with tolerances in weight)	
11.	Method of fixing of sheds to housing specify):- single mould or modular construction (injection moulding)	
12.	No. of weather sheds	
13.	Sectional Length	
14.	Type of sheds	
	(i) Aerodynamic	
	(ii) With under ribs	
15.	Dia of Bottom end fitting	
16.	Thread length of bottom end fitting	
17.	Weight of composite insulator	
18.	Packing details	
	(a) Type of packing.	
	(b) No. of Insulators in each pack	
	(c) Weight of insulator	
	(d) Gross weight of package	
19.	Marking	
20.	Any other particulars which the bidder may like to give.	
21.	E Mail ID	

NOTE: If any particulars of specification which is not covered in requisite GTPs that may be taken from concerned IS/ IEC specification/ standards.

(Signature)

Name & Designation with seal of the bidder.

Schedule – V(B)**JODHPUR VIDYUT VITRAN NIGAM LIMITED****A Govt. of Rajasthan Undertaking**

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

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.
-------	--	--------------------------------------

(Signature)
 Name & Designation
 with seal of the bidder

SCHEDULE – VI (A)
1644



JODHPUR VIDYUT VITRAN 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.

SCHEDULE - VI (B)
1644



JODHPUR VIDYUT VITRAN 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.
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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
1644****JODHPUR VIDYUT VITRAN 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 in Nos.	Order No. & Date	Name & details of purchasing authority	Date of Completion
1	2	3	4	5	6

If executed partially mentioned order	whether still to be executed	Delivery stipulated in	Remarks to be (Qty. in Nos.)
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 /Organizations.

(Signature)

Name & Designation
with seal of the bidder.

SCHEDULE-VIIA
1644

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
With Seal of the Bidder

Signature of C.A
Name & Designation
Name :
Address:

Date _____
Place _____

Membership No:

The above particulars are true and correct based on explanations, records and books of accounts produced before us. Further the above certificate issued on the request of the company.

CA Firm (_____)

NOTE- AN UNDERTAKING FOR THE SAME BE FURNISHED AS DETAILED IN ANNEXURE-I

Note:- The CA Certificate should be furnished on the letter head of CA and must be signed by the bidder and C.A. firm. The details i.e. address of C.A. & membership No. shall clearly be mentioned on C.A. certificate. In case C.A. certificate is not signed by the bidder/furnished without membership No. & address of C.A. then same may not be considered for which responsibility rests with the bidder

SCHEDULE-VIII
1644**JODHPUR VIDYUT VITRAN NIGAM LIMITED****DELIVERY SCHEDULE****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.	11 KV Composite Polymer Pin Insulator as per Specification against 1644.	After 30 Days from the date of receipt of P.O	In equal monthly installment	09(Nine) Months thereafter

Note – In case ordered quantity is different than quoted quantity, then monthly delivery shall be adjusted proportionately. **Tenders in which monthly delivery schedule as above is not indicated, shall be considered as NON-RESPONSIVE.**

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
1644

JODHPUR VIDYUT VITRAN 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 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 along with 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 along with Balance-Sheet for previous two years.
12. Testing facilities available for the manufactured articles in the testing laboratory of works.
13. Whether the Firm is a small/medium/large scale industry.
14. Registration No. with :-
 - i. Small Scale, National/State.
 - ii. DGTD
 - iii. State Industries Department.

(Signature)

Name & Designation
with seal of the bidder.



SCHEDULE-XI

JODHPUR VIDYUT VITARAN NIGAM LIMITED
(MATERIAL MANAGEMENT & CONTRACT)
NEW POWER HOUSE, INDUSTRIAL AREA, JODHPUR -342003
TELEPHONE: 0291-2742223/ FAX: 0291-2746539/E-mail-semmcjdvvn@gmail.com
Corporate Identity Number (CIN)-U40109RJ2000SGC016483 GST No. 08AAACJ8578R1ZJ

**SPECIFICATION FOR SUPPLY OF 11 KV COMPOSITE POLYMER PIN INSULATOR AGAINST
TENDER NOTICE NO: TN-1644**

Last Date & time for down loading of tenders	17.08.2020 to 6.00 PM
Last Date & time for submitting of tenders	18.08.2020 to upto 12.00 PM
Date of opening of tenders	18.08.2020 to at 3.00 PM
Cost of Specification	Rs.2950.00 (Two Thousand Nine Hundred Fifty Only) For MSME of Rajasthan Rs. 1475.00 (One Thousand Four Hundred Seventy Five)
Tender Processing fees	Rs.1000.00 (One Thousand Only)
Validity	120 days from the next date of opening of Techno commercial bid.
BID SECURITY TO BE DEPOSITED	General Bidder : Rs 461226.74 Sick Unit of Rajasthan : Rs 230613.37 SSI unit of Rajasthan: Rs. 115306.69*

***In case of SSI units of Rajasthan quotes less than the tendered quantity then they are required to furnish Bid Security @ 0.5% of the estimated value of quantity of offered item(s) on the basis of estimated unit FOR destination price(s) mentioned hereunder, failing which bid shall be considered non-responsive.**

Estimated unit FOR price of 11 KV Composite Polymer Pin Insulator is Rs. 205.32.

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 XI) 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.

GENERAL

Amendments in GCC & ITB

- 1) **Wherever EMD and Security Bank Guarantee (SBG), are appearing in the ITB, GCC & other Bidding Documents, same is hereby replaced by BID SECURITY as under:-**

BID SECURITY

Bid security shall be 2% **of the estimated value of subject matter of procurement put to bid.** In case of Small Scale Industries of Rajasthan it shall be 0.5% of the **quantity offered** for supply and in case of sick industries, other than Small Scale Industries, whose cases are pending with Board of Industrial and Financial Reconstruction, it shall be 1% of the value of bid. Every bidder, if not exempted, participating in the procurement process shall be required to furnish the bid security as specified in the notice inviting bids.

In case SSI unit of Rajasthan quotes the less than the tendered quantity, then they are required to furnish Bid Security @ 0.5% of the value of the quantity offered by them, failing which bid shall be considered non-responsive.

The Bid Security amount (as applicable) to be paid by Demand Draft/Banker's Cheque in favour of SR. AO (CASH & CPC), JDVVNL, Jodhpur (payable at Jodhpur) 342003 **upto 4.00 p.m. upto one WORKING day prior to schedule date of opening** of respective bid or Bank Guarantee, in specified format, of a scheduled bank in favor of Superintending Engineer (MM&C), JDVVNL, Jodhpur, be deposited to the Sr. Accounts Officer (MM&C), JDVVNL, New Power House, Industrial Area, Jodhpur-342003 **upto 4.00 p.m. upto one WORKING day prior to schedule date of opening** of respective bid and obtain a receipt/acknowledgement thereof. No other mode of deposit shall be accepted. At the time of depositing the Bid Security amount or Bank Guarantee, the bidder shall also furnish self attested and duly attested by Notary, the documentary evidence of SSI unit of Rajasthan or of sick unit (as applicable). along with affidavit as per schedule X on non-Judicial stamp of Rs. 100/-

The Bank Guarantee against Bid Security be issued by Nationalized / Scheduled Bank. The same may be accepted after confirmation by issuing Bank. If any Bid Security Bank Guarantee is not in proper format / not confirmed by the issuing Bank the same would not be accepted and the bidder would be immediately shorted out from bid process.

The Micro, Small & Medium Scale Industries of Rajasthan and sick industries, other than Small Scale Industries, whose cases are pending before the Board of Industrial and Financial Reconstruction (BIFR) shall furnish self-attested documentary evidence duly attested by Notary to claim the above.

- 2) **Wherever Performance Bank Guarantee (PBG) and Composite Bank Guarantee (CBG) are appearing in the ITB, GCC & other Bidding Documents, same are hereby replaced by PERFORMANCE SECURITY as under:-**

PERFORMANCE SECURITY

- (i) Performance security shall be solicited from all successful bidders except the department's of the State Government and undertakings, corporations, autonomous bodies, registered societies, co-operative

societies which are owned or controlled or managed by the State Government and undertakings of the Central Government. However, a performance security declaration shall be taken from them. The State Government may relax the provision of performance security in particular procurement or any class of procurement.

- (ii) Performance security from the successful bidder shall be taken **5%** (of the amount of supply order in case of established suppliers)/ **1%** (of the amount of supply order in case of Micro, Small & Medium scale industries of Rajasthan)/**2%**(of the amount of supply order in case of sick industries)/**10%** (of the amount of supply order in case of other suppliers). In case of successful bidder , the amount of bid security may be adjusted in arriving at the amount of the performance security, or refunded if the successful bidder furnishes the full amount of performance security.

3) VENDOR REGISTRATION

The relaxation/exemption given to the registered vendors of the Nigam in respect of EMD/SBG, wherever appearing in the ITB, GCC & other Bidding documents, are hereby WITHDRAWN.

- 4) The indirect taxes i.e. Excise Duty, Service Tax, VAT/CST, Entry Tax etc. mentioned in G.C.C., ITB and other bidding document may now be read as G.S.T.**

- 5) The following amendment is hereby made in GCC Clause No. 1.43 (Due Date of Payment):**

Payment shall be due and payable by the purchaser in accordance with the provision of the contract within a reasonable period from the date of receipt of each invoice by the contractor / supplier duly supported by a certificate of the Engineer. The purchaser will take all possible efforts to make payment to the contractor / supplier generally on **45th day** after receipt of duly verified challans / receipts / bill in the office of paying authority (Sr. Accounts Officer (Cash &CPC) Jodhpur Discom, Jodhpur / Concerned Circle Accounts Officer) and completion of contractual formalities. But in case of delay in payment the purchaser shall not be liable to pay any interest on the outstanding amount to the contractor / supplier.

- 6) G.S.T. will be charged extra at the prevailing rate on all the Settlement Fees as applicable and amended time to time.**
- 7) In case the terms & conditions mentioned in the PO, ITB & GCC are modified/differ from RTPP Act, then RTPP Act shall supersede.**
- 8) The following Addendum is hereby made in Instruction to bidder (ITB) Clause No. 1.12.2 (quantity allocation as per award criteria of purchase manual in accordance to the clause no. 74 of RTPP rules):-**

1.12.2(A) for quantity allocation

- (i) Trial order under Para No. 22.17 (a) & (b) of purchase manual**

- (a) 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 out side India, the C.A. certificate furnished by firm shall be considered.

Note: - The material supplied and accepted for same/higher rating for turnkey project(s) 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.

- (b) (i) The trial order for a particular item shall not generally exceed 10 % of the total quantity considered for placement of order. This ceiling may, however, be relaxed by the corporate level purchase committee up to the extent of 30 %, to take the advantage of lower price where situation of differential prices offering is arising.
- (ii) The capacity & capability assessment of a bidder located outside state of Rajasthan who otherwise qualifies but is participating for the first time shall not be carried out. Similarly, For the tendered item(s) where the valid BIS license is an essential qualification requirement and the bidder possesses the valid BIS but new to the utility. The capacity/capability assessment of such a bidder shall also not be carried out.

(iii) Award criteria under Para No. 10.2 (iii) of purchase manual

(a) In case of distribution transformers of rating 40 KVA and below, LT cables & conductors and fabricated steel items, order quantity may be distributed in the following manner: -

20% to L1
15% to L2
10% to L3
05% to L4

50% to be distributed equally among other firms subject to the condition that not more than 5% of the quantity to be purchased will be allotted to any one of such firms. The balance, if any will be distributed in the same proportion as indicated above among the first four firms.

(b) In case of other items except poles, order quantity may be distributed in the following manner:

40% to L1
20% to L2
10% to L3
06% to L4

The balance quantity may be equally distributed among other firms subject to the condition that not more than 4% of the quantity to be purchased will be allotted to any such firm. The balance, if any, will be distributed in the same proportion as indicted above the first four firms.

(c) In case of poles, the order may be awarded on the basis of landed cost (material and transportation taken together). The allocation of quantity location/destination wise may be made among the eligible firms in equal proportion as far as possible.

APPENDIX-A

Bank Guarantee No. _____.
 Security Amount : _____.
 Issued on dated : _____.
 Valid upto : _____.
 Claim upto / Grace period: _____.

PERFORMA OF BANK GUARANTEE FOR BID SECURITY

(Bank Guarantee in lieu of bid Security on non-judicial Stamp Paper of Rajasthan State of 0.25% of the B.G. value or Rs.25,000/-, whichever is less)

To,
 The Superintending Engineer (MM&C),
 Jodhpur Vidyut Vitaran Nigam Limited,
 Jodhpur.

1. Whereas _____ (name of the Bidder) (hereinafter called "the Bidder") has submitted its bid dated _____ (date of submission of bid) for _____ (name of contract/ name of the material with Bid no. / TN No. _____) (hereinafter called "the Bid").
2. KNOW ALL PEOPLE by these presents that WE _____ (name and address of branch of Bank) of _____ (name of country), having our registered office at _____ (addresses of bank) (hereinafter called "the Bank"), are bound unto _____ (name of Purchaser) (hereinafter called "the Purchaser") in the sum of Rs. *_____ for which payment well and truly to be made to the said Purchaser, the Bank binds itself, its successors, and assigns by these presents sealed with the Common Seal of the said Bank this _____ day of _____ 20_____.
3. THE CONDITIONS of this obligation are :
 - i. If the bidder withdraws its Bid during the period of bid validity specified by the Bidder in the Bid Form; or
 - ii. If the bidder refuses to accept the correction of error in his Bid; or
 - iii. If the bidder, having been notified of the acceptance of its Bid by the purchaser during the period of bid validity:
 - a. Fails or refuses to execute the Contract Agreement within the time specified in purchase / work order, if required, or
 - b. Fails or refuses to furnish the performance security within the time specified in purchase / work order in accordance with the GCC, or
 - c. Fails to commence supply of goods or services or execute work as per purchase / work order within time specified.

- iv. If the bidder breaches any provision of the Code of integrity specified in the RTPP Act and Chapter VI of the RTPP Rules.
4. We undertake unconditionally and irrevocably to guarantee as primary obligator and not as surety merely to pay to the purchaser a sum of Rs. _____ (in words Rs. _____) upon receipt of its first written demand, without the purchaser having to substantiate its demand, provided that in its demand the Purchaser will note that the amount claimed by it is due to it owing to the occurrence of one or all of the above three conditions specifying the occurred condition or conditions.
 5. The decision of the Superintending Engineer (MM&C), Jodhpur Vidyut Vitaran Nigam Limited, Jodhpur shall be final whether breach has been committed on the right to demand the amount of guarantee from us which has accrued to the purchaser.
 6. This guarantee shall not cease or determine, if the purchaser grants time or indulgence or vary the terms of the contract with the Contractor or without our consent or knowledge.
 7. The guarantee herein contained shall not be affected by any change in the constitution of the Contractor.
 8. We _____(Bank Name) further undertake not to revoke this guarantee during its currency except with the previous consent of the Superintending Engineer (MM&C), Jodhpur Vidyut Vitran Nigam Limited, Jodhpur.
 9. All disputes arising under the said guarantee between the Bank and the Nigam or between the Contractor and the Nigam pertaining to the guarantee, shall be subject to the jurisdiction of the Courts in Jodhpur, Rajasthan alone.
 10. This guarantee will remain in force up to and including one hundred eighty (180) days after the date of the opening of bids, i.e. upto _____, with a further grace period of Ninety (90) days and any demand in respect thereof should reach the Bank not later than the above date.

Yours faithfully,
Bankers (EXECUTANT)
Signed by the above named Bank in presence of :
(signature with full Name and Address)

Witness :

1. _____.
2. _____.

Attested by Notary Public, First Class Magistrate or directly confirmed by the executing Bank.

* The Bidder should insert the amount of the guarantee in words and figures denominated in the currency of bid.

Note : In case the bid is submitted by a Joint Venture, the Bid Bank guarantee shall be in the name of Lead partner or in the name of joint venture partners submitting the Bid covering all the partners of the joint venture.

ANNEXURE-A**SELF ATTESTED UNDERTAKING TO BE GIVEN ON FIRM'S LETTER HEAD**

We, the undersigned declare that:

- 1. Our firm, its affiliates of subsidiaries including any subcontractor or suppliers for any part of the contract have not debarred by the state government or the procuring entity or a regulatory authority under any applicable law.**
- 2. We declare that we have complied with and shall continue to comply with the provision of the code of integrity including conflict of interest as specified for bidders in the RTPP Act 2012, RTPP Rules 2013 and the bidding document during the procurement process and execution of contract till completion of all our obligation under contract.**
- 3. I/We possess the necessary professional, technical, financial and managerial resources and competence required by the bidding document issued by the procuring entity.**
- 4. I/We have fulfilled my/ our obligation to pay such of the taxes payable to the Union and the State Government or any local authority as specified in the bidding document.**
- 5. I/We are not insolvent, in receivership, bankrupt or being wound up, not have my/ our affairs administered by a court or a judicial officer, not have my/ our business activities suspended and not the subject of legal proceeding for any of the foregoing reasons.**
- 6. I/We do not have, and our directors and officers not have, been convicted of any criminal offence related to my/ our professional conduct or the making of false statements or misrepresentations as to my/ our qualifications to enter into a procurement contract within a period of three years preceding the commencement of this procurement process, or not have been otherwise disqualified pursuant to debarment proceedings.**
- 7. I/We do not have a conflict of interest as specified in the Act, Rules and the bidding document, which materially affects fair competition.**

**Firm's Name
Seal & Signature**

ANNEXURE-I

**UNDERTAKING FOR CA CERTIFICATE (TO BE FURNISHED ON NON-JUDICIAL STAMP WORTH
Rs.100/- & DULY NOTARIZED)**

I/WE UNDERTAKE THAT THE CA CERTIFICATE SUBMITTED AS PER THE REQUIREMENT OF PRE-QUALIFICATION REQUIREMENTS, FOR ADJUDGING THE PAST SUPPLIES ,UNDER THE SUBJECT TENDER, TN-_____ , IS CORRECT AND I, UNDERSIGNED WILL BE SOLELY RESPONSIBLE FOR ANY DEVAITION/ DISCREPANCY/ IN-CORRECT INFORMATION , IF EVER NOTICED IN THE CA CERTIFICATE.

FURHER, IN CASE, IF ANY DEVAITION/DISCREPANCY/IN-CORRECT INFORMATION IS NOTICED IN THE CA CERTIFICATE FURNISHED WITH THE BID, AT ANY STAGE DURING PROCESSING/ CURRENCY OF TENDER, DISCOM CAN TAKE THE ACTION AGAINST THE FIRM
M/s_____

_____AS PER THE RULES & REGULATIONS.

(SIGNATURE)
NAME & DESIGNATION
WITH SEAL OF THE BIDDER

ANNEXURE-II

Bidders are requested to furnish following details:

1. **Name of Firm :**
2. **Office Address :**
3. **Work's Address :**
4. **Email Address :**
5. **Phone / Mobile No. :**
6. **Fax No. :**
7. **Name of Firm's representative :**
8. **Contact No. of Firm's representative:**
9. **GST IN:**
10. **For releasing Payment through NEFT/RTGS provide following details :-**
 - (i) **Name of Account Holder:**
 - (ii) **Name of Bank & Branch Address:**
 - iii) **Account No. :**
 - iv) **IFSC Code:**
11. **Whether the firm has been black listed or business relation with the firm has been severed with AVVNL/ JdVVNL/ JVVNL under any Tender. If yes, provide the details.**