



**JODHPUR VIDYUT VITARAN NIGAM LIMITED**  
**OFFICE OF THE SUPERINTENDING ENGINEER (MM&C)**  
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**SPECIFICATION NO.JDVVNL/SE/MM&C/TN-1560**

**Tenders are hereby invited in e-tender system for purchase of 12 KV outdoor Vacuum Circuit Breaker Kiosks are to be submitted online in electronic format on website <http://www.eproc.rajasthan.gov.in>. The details are as under-**

S.No	Name of Item	Quantity (Approx)
1.	12 KV outdoor Vacuum Circuit Breaker Kiosks	966 Nos.

NIT No.	TN-1560
<b>Last date for receipt of tenders</b>	<b>29.08.2019 upto 12:00 PM</b>
<b>Date &amp; time of tender opening</b>	<b>29.08.2019 at 3:00 PM</b>
Cost of Specification	Rs. 2,950.00 (Two Thousand Nine Hundred & Fifty only) For MSME Of Rajasthan: Rs. 1,475 (One Thousand Four Hundred & Seventy Five only)
Processing of RISL	Rs. 1,000.00 per set (One Thousand only)
Bid security to be deposited	i) General Bidder : Rs. 47,47,828.00 ii) Sick Unit of Rajasthan : RS 23,73,914.00 iii) SSI unit of Rajasthan: Rs 11,86,957.00 *
Validity	120 days from the next date of opening of techno-commercial bid.

**\*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 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 attest documentary evidence duly attested by notary to claim the above.

**IMPORTANT DATES**

S.N	Events	Date & Time	Location
1.	Last Date of downloading of tender specifications	Up to 28.08.2019 (04:00 PM)	<a href="http://www.jdvvn.com">www.jdvvn.com</a> & <a href="http://www.eproc.rajasthan.gov.in">http://www.eproc.rajasthan.gov.in</a>
2.	Last Date of Deposit of cost of Tender Specifications, Processing fee & Bid Security	Up to 28.08.2019 (4:00 PM)	Office of Sr. A.O (Cash & CPC), JdVVNL , New Power House, Industrial Area, Jodhpur
3.	Last Date & time of submission of electronic bid	Up to 29.08.2019 (12:00 PM)	<a href="http://www.eproc.rajasthan.gov.in">http://www.eproc.rajasthan.gov.in</a>
4.	Opening of Technical Bid	29.08.2019 (03:00 PM)	<a href="http://www.eproc.rajasthan.gov.in">http://www.eproc.rajasthan.gov.in</a>
5.	Opening of Price Bid	To be intimated separately to the qualified bidders	<a href="http://www.eproc.rajasthan.gov.in">http://www.eproc.rajasthan.gov.in</a>

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1. Tender documents will be made available on e-Tendering portal [www.eproc.rajasthan.gov.in](http://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](http://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/-/ 1475/-**(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 favours 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 be deposited to the Sr. Accounts Officer (MM&C), JdVVNL, New Power House, Industrial Area,Jodhpur-342003 **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 XI 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 not is 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

**SECTION-III(Part-A)****TECHNICAL SPECIFICATION FOR 12 KV OUTDOOR VACUUM CIRCUIT BREAKER KIOSKS AGAINST TN-1560.****1.0 SCOPE**

This specification is intended to cover the design manufacture, assembly, testing at manufacturer's works, supply, delivery of 12 kV Vacuum Circuit breaker Kiosks with current transformers, Potential transformers, protection relays, metering instruments etc. Complete with all accessories and Installation & commissioning by the supplier as per Schedule-III (Part-B) for efficient & trouble free operation (Separate price for Installation & Commissioning and Civil works).

1.1 It is not the intent to specify completely herein all details of the design and construction of equipments. However, the equipment shall conform in all respects to high standards of engineering, design and workmanship and shall be capable of performing in continuous commercial operation upto the Bidder's guarantee in a manner acceptable to the Purchaser, who will interpret the meanings of drawings and specifications and shall have the power to reject any work or material which in his judgment is not in accordance therewith. The offered equipment shall be complete with all components necessary for its effective and trouble free operation along with associated equipments, interlocks, protection schemes etc. Such components shall be deemed to be within the scope of supply, irrespective of whether those are specially brought out in this specification and/or the commercial order or not.

**2.0 STANDARDS**

The 12 KV vacuum circuit breaker Kiosks shall conform to latest revisions with amendments of standards as under unless specified otherwise. Equipment meeting any other authoritative standard which ensure equal or better quality than the standard mentioned above will also be acceptable. In such cases a copy of standard (English version) adopted, should be enclosed with the tender.

IEC62271/100-200	High Voltage Switchgear & Control gears.
IS:13118/IS-3427	Circuit Breaker/ metal enclosed Switchgear and control gear.
IS: 3156	Voltage transformers.
IS: 2705	Current transformers.
IS: 3231	Electrical Relays for power system.
IEC: 60255	Electrical Relays
IS:1248	Meters and Instruments
IS:14697-1999	Specification for AC static transformer operated watt hour and VAR hour meters class 0.2 S & 0.5 S.
IEC-62053-22-2003 IEC-62052-11-2003	Specification for AC Static Watt hour Meters, class 0.2 S & 0.5 S.
CBIP Technical Report No.88 revised July, 1996 read with amendment issued (April,99, September,99 and also any other amendment thereafter).	Specification for AC Static Electrical Energy Meter.
IEC 60255:	Measuring relays and protection equipment
IEC61000:	Electromagnetic compatibility (EMC)
IEC 60068:	Environment testing
IS:13703-1	LV Fuses for voltages not exceeding 1000 volt AC or 1500 Volt DC
IEC:60279	Low Voltage Power Fuses
IS-2147 or IS-13947 Part-1 or IEC 60947-1-2004 (with latest amendments)	Verification of degree of protection IP-55 of enclosure/cubicle/control cabinet

(Other relevant IS/IEC with latest amendments)

### 3.0 CLIMATIC CONDITIONS:

Equipment to be supplied against this specification shall be suitable for satisfactory continuous operation under the following tropical conditions :-

i) Peak ambient air temperature in shade.	50 DEG C
ii) Minimum ambient air temperature in shade	(-) 5 DEG C
iii) Maximum relative humidity.	95 %
iv) Minimum relative humidity	10 %
v) Dust storms are liable to occur from the period	March to July
vi) Height above mean sea level	less than 1000M
vii) Average number of thunder storms days per annum.	40 DAYS
viii) Average annual rainfall	10-100 cm (Depending on area)
ix) Number of months of tropical monsoon conditions p.a.	4

### 4.0 PRINCIPAL PARAMETERS OF CIRCUIT BREAKERS

4.1 TYPE AND RATING	12 kV
4.1.1 Type	Vacuum circuit breaker
4.1.2 Service	Outdoor
4.1.3 Pole	3
4.1.4 Rated voltage (nominal/max.)	11/12 kV
4.1.5 Rated frequency	50 HZ
4.1.6 System Neutral earthing	Effectively grounded
4.1.7 INSULTATION LEVEL	
4.1.7.1 Impulse withstand	75 kVp
4.1.7.2 One minute power frequency withstand voltage.	As per relevant standards.
4.1.8 Rated Current	
4.1.8.1 Continuous at 50 C.	630 A
4.1.8.2 Short time current for 3 Sec.	16 kA
4.1.9 Rated Breaking Capacity	
4.1.9.1 Symmetrical	16 kA
4.1.9.2 Asymmetrical	As per relevant standard
4.1.10 Rated making capacity	2.50X16 KA
4.1.11 Rated short time withstand current 3 secs.	16 KA
4.1.12 Total break time Closing time	3 cycles(Max.) 4 cycles (Max.)
4.1.13 Creepage distance	300 mm or more
4.1.14 Protection class of kiosk	IP-55 as per IEC 529

<b>4.1.15 Operating duty For gang operation</b>	<b>O-0.3 Sec-CO-3min-CO</b>
<b>4.1.16 Operating Mechanism</b>	<b>motor operated spring charged closing mechanism or Magnetic Actuator.</b>
<b>4.1.17 Spring charging Motor</b>	<b>220V-240V</b>
<b>4.1.17.1 Heater/Lamp/Socket.</b>	<b>240V AC</b>
<b>4.1.18 Terminal Connector</b>	
<b>4.1.18.1 Type</b>	<b>Bimetallic clamp type/ Al. alloy.</b>
<b>4.1.18.2 Suitable for ACSR conductor</b>	<b>10% Panther and 90% Dog Conductor</b>
<b>4.2 System details</b>	
<b>4.2.1 H.V. System Voltage (Nominal/Max.)</b>	<b>11/12 kV</b>
<b>Phases</b>	<b>3</b>
<b>System Neutral</b>	<b>Effectively earthed.</b>
<b>Fault level</b>	<b>16 KA r.m.s. Symmetrical</b>
<b>4.2.2 Auxiliary power Supply</b>	
<b>4.2.2.1 A.C. Supply</b>	<b>1. 415 volts 3 ph 4 W 50 Hz 2. 240V 1 Ph 2 W 50 Hz</b>

## 5. GENERAL TECHNICAL REQUIREMENTS:-

### 5.1 DESIGN CRITERIA

**The bidder shall quote 12 KV Outdoor VCB Kiosks conforming to M-2 class only.**

The equipment will be used in high voltage system having characteristics as listed in the specification. The equipment will be installed outdoor in a hot, humid and tropical atmosphere. All equipment, accessories and wiring shall have tropical protection, involving special treatment of metal and insulation against fungus, insects and corrosion.

The maximum temperature in any part of the equipment at specified rating shall not exceed the permissible limits as stipulated in the relevant standards.

The equipment shall be capable of withstanding the dynamic and thermal stresses of listed short circuit current without any damage or deterioration.

The safety clearances of all live parts of the equipment shall be as per relevant standards.

The cowling provision shall be provided on the roof of 12 KV outdoor VCB Kiosk to avoid direct inception of water at any joint.

### 5.2 SPECIFIC REQUIREMENTS

5.2.1 The vacuum circuit breaker kiosk shall be for outdoor installation. The duty of the circuit breaker shall involve satisfactory interruption of short circuit currents as listed in the specification. The breaker shall be capable of interruption of low reactive current (lagging/leading) without undue over voltage.

#### 5.2.2 CONSTRUCTIONAL FEATURE

##### 5.2.2.1

a) The circuit breakers shall be triple pole horizontal fixed type enclosed in Kiosk of CRCA sheet steel of 3 mm thickness for load bearing members and 2 mm thickness for non-load bearing

members and shall comply with latest edition of IS:13118/3427/IEC-56. The Kiosk shall be vermin proof and dust tight. The switchgears and Control gears shall be complete with all necessary supporting frame works, Nuts and bolts etc. for securing the same to the floor. The operating mechanism shall operate (close/open) all the three phases simultaneously. The operating mechanism links etc. should be accessible for maintenance. The circuit breakers and its operating mechanism shall be fully interlocked to prevent mal-operation. All the breakers shall be supplied with necessary clamps and connectors suitable for appropriate current ratings. Rigid type bimetallic/Al.alloy terminal connectors of 630 Amps. Current rating form part of supply. Suitable arrangement of earthing the switchgears shall be provided. All the connecting bus bars shall be made of copper.

- b) Hinges of door shall be concealed type to avoid rusting and obstructive opening of the door.
- c) The quality of welding shall be good and there should not be any lumps and splatters on the panel.
- d) All the connecting bus bar and current carrying parts shall be made of copper.
- e) All the gasket shall be of chemically treated neoprene.
- f) Hole & Pin locking (Check nut) arrangement should also be provided while fixing the vacuum interrupter at bottom side.

5.2.2.2 Switchgear (Vacuum Circuit breakers etc.)and control gear (CTs.,PTs, relays etc.) Shall be mounted on the same Kiosk. Bus bars shall be air insulated with PVC insulation/sleeves on electrostatic powder coating. The bus bars should be of electrolytic copper with permissible limits of current density. Size of the bus bars and current density should be specified in the tender. The bus bars conductor shall conform to Indian standard 8084 and 3427 and shall be rated for 630 A,STC 16 KA for 3 sec.

5.2.2.3 All the meters, instruments, relays etc. shall be mounted on the switchgear kiosk. The outdoor circuit breakers Kiosk shall be suitable for AC shunt tripping arrangement.

5.2.2.4 The Kiosk shall have an arrangement for emergency shunt tripping from remote place in addition to arrangement for local emergency tripping(Mechanical). The kiosk shall also have a system to check the "Trip circuit healthy check" in all the three phases. Necessary trip and closing coils shall be provided for operation of the breakers.

5.2.2.5 All the six terminals shall be brought out through appropriate class bushings.

5.2.2.6 The arcing contacts shall be made of homogeneous special alloy so that surge voltage are reduced to negligible level & multiple reignition is eliminated.

5.2.2.7 The circuit breaker kiosk shall be electrically and mechanically trip free under various conditions.

5.2.2.8 The provision shall be kept on the kiosk roof and roof bushing assembly to adopt arcing horns.

5.2.2.9 The lifting arrangement shall not cause any effective loss of creepage distance/ phase to earth clearances as specified in the ISS/IEC.

### 5.2.3 MAIN CONTACTS

The main contacts shall have adequate area and contact pressure for carrying rated continuous and short time current without excessive heating liable to cause pitting and welding.

The breakers may be provided with silver plated contacts, if necessary, to meet the requirement of IS:13118/IEC56 where higher temperature rise is permitted with silver plated contacts. The quantity of silver facing shall be such that after carrying out one tenth of total number of operations specified for mechanical endurance tests, there is still continuous layer of silver on contacts.

### 5.2.4 NUMBER & TYPE OF SPARE, AUXILIARY CONTACTS/ SWITCHES :

Adequate number of spare auxiliary switches/contacts both of normally open & normally close type but not less than four each shall be provided on the circuit breaker for use in the indication and controlling scheme of circuit breakers.

### 5.2.5 INTERLOCK

All electrical and mechanical interlocks which are necessary for safe and satisfactory operation of the circuit breaker shall be provided .

### 5.2.6 BUSHINGS FOR CIRCUIT BRAKER KIOSK

a) The out door circuit breakers shall be metal enclosed fitted with weather proof/ suitable type bushing conforming to IS:2099 and shall be designed to have the necessary mechanical strength and rigidity required and shall be free from objectionable interference and external and internal corona. The porcelain shall be of the wet process type, homogeneous, free from laminations and cavities or other flaws which could effect its chemical & mechanical strength and shall not be injuriously stressed by temperature change. The porcelain shall be thoroughly vitrified tough and impervious to moisture and shall be evenly glazed. The glazing shall be free from blisters or burrs. The bushing shall be designed manufactured & tested in accordance with latest edition of IS:2099. The type and characteristic data bushing shall be clearly specified.

b) The bushing shall not be subjected to direct point loading. They shall be provided with neck around clamps for evenly distributed pressure.

c) The bushing shall be mounted using suitable clamps and gasket arrangement to provide required degree of protection.

d) The bushing assembly shall be provided with lock nut and check nut which will be non-magnetic and non-corrosive.

### 5.2.7 OPERATING MECHANISM

Characteristics of Operating mechanism of circuit breaker and associated equipments :

Method of operation: The circuit breaker shall be equipped with power operated mechanism to operate all three phases simultaneously using 220/240 VAC Motor operated spring closing mechanism or magnetic actuator type. It shall be electrically & mechanically trip free under various conditions. Kiosk shall also be provided with hand operated spring charging closing mechanism. Operation counter and mechanically ON-OFF indicator shall be provided.

### 5.2.8 VACUUM CIRCUIT BREAKER

The three phase vacuum circuit breaker will have three vacuum interrupters (one interrupter per phase) mounted on same carriage. The interrupters shall be air insulated with epoxy resin / insulated phase barriers. Each interrupter shall have fixed and moving contacts in sealed envelops having vacuum below  $10^{-6}$  torr. The metallic bellow shall permit axial movement of moving contact and act as vacuum seal. The contacts shall have requisite mechanical strength and good electrical and thermal conductivity and shall be made of copper chromium alloy. Complete literature of vacuum bottles shall be furnished with the tender.

In order to have safe operation under fetal conditions, the vacuum interrupter should be housed in epoxy pole unit and make of Vacuum Interrupter will be as "BEL, CGL, SIEMENS, ABB, ALSTOM/AREVA/MEGAWIN".

Any other equivalent make of V.I. shall also be acceptable subject to prior approval of S.E. (MM&C), JdVVNL,Jodhpur.

### 5.2.9 VOLTAGE TRANSFORMERS

- i) **Highest equipment voltage** : 12 KV
- ii) **No. of phases.** : 3 Nos. single phase VTs
- iii) **Insulation level.**
  - a) **Impulse withstand voltage** : 75 KVP
  - b) **One minute power frequency withstand voltage on :**
    - i) **Primary winding** : As per relevant standard.
    - ii) **Secondary winding** : 2 KV rms
    - iv) **Frequency.** : 50 Hz.
    - v) **Transformation ratio.** : 11000/110 V
    - vi) **Rated output.** : 100VA/Phase

- vii) Accuracy class. : 0.5
- viii) Rated voltage factor. : 1.2 continuous & 1.5 for 30 sec.
- ix) Type of insulation : Resin cast.

VTs, shall be provided with HRC type fuses on the secondary side. The VT fuses on primary side shall also be provided with all safety precautions. One of the secondary terminals of the VTs, shall be solidly earthed. Three numbers single phase voltage transformer of this rated output will be required for each circuit breaker kiosk. Voltage transformers shall be fixed type and shall be suitable for single phasing.

#### 5.2.10 CURRENT TRANSFORMERS

- i) Rated voltage. : 12 KV
- ii) Insulation level.
  - a) Impulse withstand voltage : 75 KVP
  - b) One minute power frequency withstand voltage on :
    - i) Primary winding : As per relevant standard.
    - ii) Secondary winding : 2 KV rms
- iii) Frequency. : 50 Hz.
- iv) Rated continuous thermal current: 120% of rated primary current
- v) Short time thermal rating and its duration. : 16 KA for 3 sec.
- vi) Transformation ratio of : Core-I Core.II  
 CTs 400-200-100/5-5A -----  
 a) Rated output 15 VA 15 VA  
 b) Class of accuracy 5 P 0.5S  
 c) Accuracy limit factor. 15 -  
 d) Purpose Relaying Metering
- vii) Max.instrument security factor. : - 5

12 KV current transformers shall be single phase. The core shall be of grade non ageing laminated silicon steel of low hysteresis loss and high permeability to ensure high accuracy at both normal and fault current.

5.2.11 The rating of secondary winding shall be 5 Amps. Required transformers ratio can be achieved in any manner, However, the current transformers will have to satisfy the requirement of rated VA burden, Class of accuracy, accuracy limit factor and short time thermal rating as have been specified above at all transformation ratio.

The rating of current transformers of all classes regarding ratio error, knee point voltage, resistance of secondary winding etc. shall have to be co-ordinate with the requirement of protective relays and protection scheme without any extra cost.

5.2.12 The tenderer shall also furnish along with the tender, complete general arrangement, schematic and outline diagrams indicating the mounting arrangement and position of current transformers, potential transformer, terminal block etc. Type of current transformers and potential transformers employed shall also be clearly stated.

#### 5.2.13 INDICATING AND INTERGRATING METERS/INSTRUMENTS:

All indicating instruments shall be of switch board type, back connected suitable for flush mounting and provided with dust and vermin proof cases for tropical use and finished in suitable color. All instruments shall have practical laboratory means of adjustment of accuracy. The limits of errors for ammeters/voltmeter shall be permissible for class 1.5 instruments as per IS:1248. The ammeters and voltmeters shall be suitable scaled to indicate the current for all the ratings of current/voltage transformers. A phase selector switch with four/six positions shall be used to measure the current/voltage of each phase. The meter shall be located at eye level to facilitate observation of readings correctly.

Any alarm scheme shall have both audio-visual annunciations in redundancy of each other and appropriate accept and reset push buttons shall be part of alarm scheme.



#### 5.2.14 RELAYS :

The circuit breaker shall be fitted with numerical relay having shunt trip coil for operation on 3 over current & one earth fault element. The numerical relay to be provided with the 12 KV Outdoor VCB Kiosk, should be so designed so as to operate/ trip on earth fault as well as on over current faults but should not operate on unbalance load conditions during single phasing (which can be achieved through residual voltage control or otherwise).

The circuit breaker shall have suitable arrangement for power supply of relay and breaker operation through shunt trip coil using power pack. The power pack should be suitable for 6 Nos. closing/tripping operations and for future remote communication as well as breaker testing during long time power failure. The output voltage may be as per manufacturer's design. The charging of Power pack shall be through 230 V A.C. supply available at Sub-Station.

The make, model No., type and Technical specification of the relay as well as power pack are required to be mentioned in the bid.

The Relay & Power Pack arrangement system should be warranted for 5 years (in line with warranty of breaker).

The numerical relays shall have following features:-

- a. Self Diagnosis
- b. Minimum last five abnormal events recording (over current & earth fault) including fault level and phase along with date & time.
- c. On-line display of current.
- d. Communicable with open Protocol having RS-485 port.
- e. The relay should contain four shots, three phase, programmable & auto reclose control feature.

Relay should be numerical in design and flush mounted on the panel board. The relay should be rated for 110V AC as well as DC & 5 Ampere CT secondary. The relay should conform to latest IEC specifications. The tenders shall furnish the detailed type test in this regard along with the offer.

Relay TTB shall have trip bypass arrangement.

All the relays shall be provided with test blocks in panel so designed that the relays may be tested at site. The relays should have provision of testing either through test block or test plug easily accessible by injecting the voltage / current/frequency (as applicable) from external testing instruments /source without first disconnecting/ re-energizing the primary electrical circuit protected by the relays. Facilities for isolating the tripping circuit during such testing shall also be provided.

The requirement of test block shall not be applicable in case of drawout type relays which can be tested by using test plug without removing the relay from its casing.

The testing facilities provided in the relays shall be specifically stated in the bid. Necessary test plug etc. as may be required for proper testing shall be included in the contractor's scope of supply. One test plug with five panels or part thereof are to be supplied.

The technical suitability of relays/schemes may also be examined by Protection Wing of Discoms & acceptability will be judged appropriately.

Relay should have following additional features in addition to above mentioned protections:

1. Relay should have two group settings. Group switching (From 1st group (Three phase condition) to 2nd group (Single phase) and vice versa) based on single phase and three phase load condition. E.g. If three phase load detected then relay should be in 1st group and when single phase load detected, there should be auto switching from 1st group to 2nd group.
2. Neutral displacement protection (NDR) blocking should be available during single phase load conditions. Relay should only trip on earth fault if actual value of NDR voltage increases beyond pre-set value till time earth fault should be block.

The bidder must furnish type test reports as per relevant ISS/ IEC along with bid to suit the environmental conditions of our State, in respect of the relay (of the type and design offered) which should have been type tested in NABL accredited test laboratory in respect of such tests for which the lab has been accredited (for Indian make Relays)/ CPRI/ Nationally accredited testing laboratory (for Foreign make Relays). These type test reports should not be older than **Five years** from the date of opening of bid.

The Following makes of Relays are acceptable:-

- a. Areva
- b. ABB
- c. Easun Reyrolle
- d. C&S
- e. JVS
- f. SEL
- g. ASHIDA
- h. MEGAWIN
- i. STELMEC
- j. CGL

Any other equivalent make of relays shall also be acceptable subject to prior approval of S.E. (MM&C), JdVVNL, Jodhpur.

#### 5.2.15 WIRING :

All wiring shall be of switch board type consisting of copper conductor of 2.5 sq.mm cross section insulated with polyvinyl chloride insulation suitable for 660V service and in accordance with relevant IS:732. Polyvinyl chloride used shall have excellent resistance against burning, moisture, oil and vermin and shall be finished with clear colour. Rubber insulated wiring shall not be acceptable. Tenderers shall furnish the details of method being adopted by them for joint/connections.

All instruments and panel wiring shall be of heat resisting and self extinguishing type in compliance with British Standard Practice/IS. Plastic or porcelain cleats of the limited compression type shall be used for holding wiring runs. All wires shall be suitable for bending to meet the terminal studs at right angles. Metal cases of all apparatus mounted on kiosk shall be separately earthed by means of copper wire or strips. The following colour schemes of the wiring shall be used as per IS:375.

- a) AC three phase circuits :
  - i) No.1 phase : Red
  - No.2 phase : Yellow
  - No.3 phase : Blue
  - ii) Neutral conductor : Black
  - iii) Connection to earth : Green

#### 5.2.16 TERMINAL BLOCKS :

Terminal blocks shall be 650 V grade, box clamp type ELMEX 10 sq.mm or approved equal. Not more than two wires shall be connected to any terminal. Spare terminals equal in number to 20% of active terminals shall be furnished.

Terminal blocks shall be located to allow easy access. Wiring shall be so arranged that individual wires of an external cable can be connected to consecutive terminals.

#### 5.2.17 TEST TERMINAL BLOCK :

Two Nos. test terminal blocks shall be provided one for testing of relays and other for testing meters. They shall be of switch board type back connected for front of panel mounting. The test blocks shall provide complete isolation of meters, instruments etc. and the arrangement shall be such that testing power could be connected at the test block from any external source or may be

taken from the instrument transformers. Provision shall be made for short circuiting current transformers. Suitable sealing arrangement shall be provided in test terminal blocks.

#### 5.2.18 INDICATING LAMPS :

Indicating lamps shall be provided on the control board to indicate the following:

- i) Visual indication of ON and OFF position of each circuit breaker.
- ii) PT supply indication.

Each lamp body shall be of moulded insulation and shall be able to withstand a high voltage test of appropriate value. All lamps shall be suitable for 240 V AC supply and shall have low power consumption and shall provide a wide angle of illumination of sufficient intensity for comfortable viewing. A glass of appropriate colour shall be screwed into the front of lamp body. The design of indication lamp shall be such as to facilitate replacement of burnt lamps. An engraved label indicating the purpose of the lamp shall be provided with each lamp.

#### 5.2.19 FERRULES :

Ferrules engraved/printed with the same numbers, of symbols as indicated in the connections and wiring diagram shall be provided on the terminal ends of all wires for identification of circuits for inspection and maintenance. Ferrules shall be of strong and flexible insulating material with glossy finish to prevent adhesion. They shall be engraved/ printed and clearly marked and shall not be effected by dampness. Ferrule numbering shall be in accordance with IS:375. The same ferrules number shall not be used on wires in different circuits on a panel.

#### 5.2.20 HT TVM:-

3 phase 4 wire A.C. Static H.T. Trivector meter of accuracy class 0.5S for measurement of energy as per latest specification of JdVVNL, shall be provided on each Outdoor VCB Kiosks.

Following makes of HT TVMs are acceptable:

- i) Secure
- ii) L&T
- iii) ABB/Elster
- iv) Schlumberger
- v) Genus Infra
- vi) Genus Power
- vii) HPL

Any other make being procured by Nigam shall also be acceptable.

5.2.21 All interiors and exteriors of switchgear enclosure, breaker mechanism etc shall be finished and painted to produce a neat, fire resistant and durable surface which would prevent rusting and corrosion. Sheet metal component shall be pre-treated using 7 tank phosphating process consisting of de-greasing, acid pickling, de-rusting, phosphating and passivation including repeated rinsing in between. On completion of the passivation of the components, they shall be preheated and then epoxy powder coated or treated with one coat of primer & zinc chromate and finished with two coats of light gray enamel paint of shade 631 of IS 5 and stoved to achieve excellent anti-rusting and scratch resistance properties. The thickness of painting shall be around 60 microns.

### 5.3 SCHEDULE OF EQUIPMENTS, FITTING & ACCESSORIES :

12 KV 630 Amps Vacuum circuit breakers kiosks for outdoor installation:

5.3.1 1 No. - 12 KV 630 Amp. Vacuum Circuit Breaker horizontal fixed type with provision of manual tripping by means of push button and emergency shunt tripping.

Electrically operated through 230 V AC. A lockable Local/ Remote switch shall be provided, apart from Trip-Neutral-Close (TNC switch) control switch to select local/ remote operation of the switchgear. The breaker control switch shall have Trip-Neutral-Close position spring return sequence locking mechanism. The breaker control switch and selector switch shall be mounted on the front side of cubicle and located at a convenient height for easy operation.

- 5.3.2 1 No. - AC Motor charged spring operated closing mechanism or magnetic actuator type closing mechanism.
- 5.3.3 1 No. - Shunt tripping arrangement/ Coil for operation on over current (load) and earth fault by relays along with emergency shunt tripping from remote place in addition to local emergency tripping(Mech.) One additional shunt trip coil, fitted very near to the original coil (which will be unwired) is also required to be provided.
- 5.3.4 3 Nos. - Single phase 12 KV Current Transformer ratio 400-200-100/5-5A suitable for metering and protection. The class of accuracy shall be 0.5 for metering and 5P15 for protection. Rated burden (output) shall be 15 VA for each secondary winding and it should not be less than suitable for tripping arrangement provided. Instrument security factor for metering core shall not be exceed 5.
- 5.3.5 6 Nos. - Rigid type bimetallic/ aluminium alloy terminal connector suitable for ACSR (10% Panther and 90% Dog Conductor) for both horizontal/ vertical take-off.
- 5.3.6 1 No. - Mechanical ON/OFF indicator.
- 5.3.7 1 No. - Operating handle for independent manual closing mechanism.
- 5.3.8 1 No. - Red indicating lamp for ON indication.
- 5.3.9 1 No. - Green indicating lamp for OFF indication.
- 5.3.10 Spare auxilliary contacts/switch having minimum 4 NO + 4 NC
- 5.3.11 1 No. - Flush mounting pattern 96x96 sq.mm Moving Iron ammeter of class 1.5 accuracy suitable scaled for 5 Amps. CT secondary.
- 5.3.12 1 No. - Ammeter selector switch to indicate phase current in all three phases and with OFF position.
- 5.3.13 1 No. - Numerical 3 O/C + E/F relay.
- 5.3.14 1 No. HT TVM of accuracy class 0.5S as per latest specification of JdVVNL.
- 5.3.15 2 Nos. - 240 V AC single phase 80 or 100 watt anti condensation heaters with thermostat and switch.
- 5.3.16 1 No. - Automatic door illumination lamp with switch.
- 5.3.17 3 Nos. - 11000/110 V single phase voltage transformers each having 100 VA/phase burden & class of accuracy 0.5 suitably connected to meters and indicating instruments etc.
- 5.3.18 1 No. - Flush pattern switch board mounting pattern 96x96 sq. mm moving iron AC voltmeter of class 1.5 accuracy suitable for 110 V phase to phase secondary suitably scaled.
- 5.3.19 1 No. - Voltmeter selector switch to indicate phase to phase & phase to neutral voltage of all the three phases.
- 5.3.20 3 Nos. - Indicating lamps coloured Red, Amber Blue for PT supply.
- 5.3.21 2 Nos. - Test terminal blocks to test meters and relays with sealing arrangement.
- 5.3.22 1 No. - Blank label on the front of kiosks at the top.
- 5.3.23 Door locks with keys for all doors.
- 5.3.24 Pair of base channel for grouting in floor.
- 5.3.25 Arrangement to check healthy trip circuit in all three phases (separate lamps for R phase, Y phase and B phase) be provided.
- 5.3.26 1 set - Self auxiliary plug and socket.
- 5.3.27 1 No. - ground bus system, size 50x6mm copper may be provided and the earthing stud shall be capable of withstanding rated short circuit current and stud design shall be as per IS-133427 or IEC -200.
- 5.3.28 1 No. - Audio-Visual Annunciations.
- 5.3.29 1 No. - Operation counter.
- 5.3.30 1 No. - Name plate at front and back of each kiosk.

5.3.31 1 set - 3 phase air insulated main copper bus bar of 630 amp. continuous current rating having maximum current density 1.5 Amp./ MM<sup>2</sup> with minimum cross sectional area 600 MM<sup>2</sup> with PVC insulation or sleeves, STC rating 16 KA for 3 sec.

5.3.32 1 Set-Power Pack arrangement system as specified in cl. No. 5.2.14.

5.3.33 1 No. -Spring Charge Indication Lamp.

The busses within the cubical shall be of high conductivity electrolyte grade copper. The Bus bar joints shall be silver plated and bolted in such a manner that initial contact pressure around the square headed high tensile bolt will remain substantially undiminished at all temperature upto rated full load temperature. The Bus support and bushings shall be of epoxy resin cast type. All drop off from main bus to VCB and VCB to bushing terminations shall be suitable for current rating of circuit breaker . All the bus bar shall be sleeved with heat shrinkable sleeves of 12 KV voltage level (Insulated for a service voltage of 12 KV) and bus bar shall be shrouded wherever possible. All the bus bar joints shall be shrouded and where shrouding is not possible, it shall be taped with HV self amalgamation tape. All the tap off bus bar connections inside panel and PT jumpers shall be sleeved with HT heat shrinkable sleeves. Special care shall be taken in the design of bus bar system to provide for thermal expansion and to minimize the chances of bus fault. Bimetallic washers shall be provided at the joints of two different metal surfaces.

The bus supports and bushings shall be non hygroscopic non aging glass reinforced polymer.

#### 5.4 MAKE AND TYPE OF BOUGHT OUT ITEMS :

Make / type of each relay, indicating instruments, integrating instruments, control switch for Circuit Breaker/Trip Transfer, selector switch for Voltmeter/Ammeter, Semaphore Indicator, indicating lamps, annunciator, Push Button, A.C. Hooter/Bell, D.C. Hooter, Heater, Link Type Test Terminal Block for testing of TVM, CFL Tube, 2/3 Pin Socket with Switch etc. shall be clearly and invariably indicated in the GTP (Guaranteed Technical Particulars), bill of material and unit price list. Only specific make accessories shall be indicated. The word "EQUIVALENT/REPUTED MAKE" will not be given for consideration.

The other makes of all bought out items shall be acceptable if it is of "ISI Marked" or type tested for which bidder shall furnish attested Photostat copies of ISI Certificate/type test reports not older than **Five years** for the respective make offered, subject to prior approval of SE(MM&C), JdVVNL, Jodhpur.

Other standard accessories which are not specifically mentioned but are required to be supplied with circuit breaker kiosk of similar type and rating for efficient and trouble-free operation.

#### 5.5 TEMPERATURE RISE :

The max. temperature rise of various parts of the circuit breakers when tested under rated condition shall not exceed the specified values at a peak ambient temperature of 50 deg.C . The breaker may be provided with silver plated contacts if necessary to meet the requirement of IS:13118/IEC:56 where higher temperature rise is permitted with silver plated contacts. The quantity of silver facing shall be such that after carrying out one tenth of the total number of operations specified for mech. Endurance test, there is a still continuous layer of silver on the contacts. The temperature rise of CTs and PTs shall also not exceed the permissible values as per relevant Indian standards when corrected for max. ambient temperature at site.

#### 6.0 TESTS :

6.1 TEST BEFORE DESPATCH: The 12 KV vacuum circuit breakers and accessories shall be subjected at maker's works before dispatch, to the following tests as per relevant IS/IEC.

##### A) ROUTINE TESTS ON EACH UNIT AS PER RELEVANT STANDARDS :

- (i) One minute power frequency voltage withstand dry test on main circuit.
- (ii) Voltage withstand test on control & auxiliary circuits.
- (iii) Measurement of the resistance of main circuit.
- (iv) Mechanical operating test.
- (v) Design and visual checks.

**B) The following type tests shall be conducted on the material as per relevant standards:**

- (i) Dielectric tests.
  - a) Lightning Impulse Voltage Test.
  - b) One Minute Power Frequency Test (Wet & Dry).
- (ii) Short time withstand current and peak withstand current test.
- (iii) Basic short circuit duties test.
- (iv) Single phase short circuit test.
- (v) Mechanical Operation test as per M-2 class.
- (vi) Out of phase making & breaking test.
- (vii) Capacitive Current Switching Test.
  - a) Cable Charging Test.
  - b) Single Capacitor Bank Current Switching Test.
- (viii) Measurement of resistance of main circuit.
- (ix) Temp. Rise test.
- (x) IP-55 Test (For cubicle/control cabinet).
- (xi) Any other type tests not specified above but Covered as per amendment/latest edition of relevant IS/IEC.

**C) The type test reports of Circuit Breakers, Current Transformers, Potential Transformers, Relays, Meters etc. shall be complete in all respect as per relevant IEC/ISS.**

## **6.2 TYPE TESTS :**

The 12 KV vacuum circuit breaker kiosk offered shall be fully type tested as per relevant standards.

The bidder must furnish type test reports along with bid as per the qualification requirement of the Tender Specification.

Where permitted in the relevant standard, a test specimen for type test may be a representative sub-assembly/ a representative functional unit. An individual type test is acceptable for a change of constructional detail, for any change in the design/type of type test report and the design/type of offered against this specification, if the manufacturer can demonstrate and purchaser is satisfied that this change does not influence the result of the individual type test. The bidder may bring out in their offer all such changes made in components, materials, design etc. as the case may be. The purchaser will interpret the meanings of drawings and specifications and shall have the power to accept/reject any type test report which in his judgment is/is not in a manner acceptable to him. **The decision of Purchase Committee in this matter shall be final and binding to all.**

However, the purchaser reserves the right to demand repetition of some or all the type tests in presence of purchaser's representative. For this purpose, the bidder should indicate unit rates for carrying out such type tests. These test charges shall not be taken into consideration for bid evaluation.

**Further, Type and Make for Vacuum Interrupter as well as for Breaker should be same for all type tests and same shall be in the supply.**

## **6.3 TEST ON BOUGHT OUT ITEMS:**

Tests are not required to be performed on bought out equipments/items like motor, terminal connector, etc. at the works of manufacturer. Furnishing Test Certificate of these items from the original equipment manufacturers shall be deemed to be satisfactory evidence. Inspection of the tests at Sub-contractors works will be arranged by the supplier whenever required.

## **6.4 ROUTINE/ACCEPTANCE TESTS :**

- (i) The following acceptance and routine tests shall be got conducted in presence of purchaser's representative as per stipulation of the relevant standards, on each unit.
  - a) One minute power frequency voltage withstand dry test on main circuit.
  - b) Voltage withstand test on control & auxiliary circuits.
  - c) Measurement of the resistance of main circuit.
  - d) Mechanical operating test.
  - e) Design and visual checks
- (ii) Inspection & tests on control gear.

In addition to the above tests at 6.4 (i) above specified by IEC, the following shall also be performed at manufacturer's works in presence of purchaser's representative after completely assembling the kiosk.

- a) Checking wiring of circuits and their contacts.
  - b) Insulation resistance of complete wiring, circuit by circuit with all equipment mounted on the panels.
  - c) Checking of operational protective schedule, instruments and meters.
  - d) Checking of phase faults between R&Y, Y&B and B&R phases. Kiosk should trip under all three conditions.
- (iii) **Temp. rise test on one No. Kiosk in the first offered lot shall also be done in the presence of the purchaser's representative.**
- (iv) Any other tests not specified above but covered as per amendment/latest edition of relevant IS/IEC.

#### 6.5 TOLERANCE ON TEST RESULTS :

As per relevant standards/specification.

#### 6.6 TEST AT SITE :

The purchaser reserves the right to conduct all tests on 12 KV circuit breakers after arrival at site and the contractor shall guarantee test certificate figures under actual service conditions.

#### 7.0 INSPECTION :

All the tests (as mentioned at Clause 6.4) and Inspection shall be made at the place of manufacturer unless otherwise especially agreed upon by the bidder and purchaser at the time of purchase. The bidder shall afford the inspection officer(s) representing the purchaser all reasonable facilities without charges, to satisfy him that the material is being furnished in accordance with this specification. The purchaser has the right to have the tests carried out at his own cost by an independent agency whenever there is a dispute regarding the quality of supply.

The Inspection may be carried out by the purchaser at any stage of manufacture/ before despatch as per relevant standard.

Inspection and acceptance of any material under the specification by the purchaser, shall not relieve the bidder of his obligation of furnishing material in accordance with the specification and shall not prevent subsequent rejection if the material is found to be defective. The Bidder shall keep the purchaser informed in advance, about manufacturing programme so that arrangements can be made for inspection.

The purchaser reserves the right to insist for witnessing the acceptance/ routine testing of the bought out items.

The Bidder shall give 15 days advance intimation to enable the purchaser to depute his representative for witnessing the acceptance and routine tests.

#### 8.0 QUALITY ASSURANCE PLAN

**1) The Bidder shall invariably furnish following information along with his offer, failing which the offer shall be liable for rejection. Information shall be separately given for individual type of equipment offered.**

- i) Statement giving list of important raw materials, names of sub-suppliers for the raw materials, list of standards according to which the raw material are tested, list of tests normally carried out on raw material in the presence of Supplier's representative, copies of test certificates.
- ii) Information and copies of test certificates as in (i) above in respect of bought out items.
- iii) List of manufacturing facilities available.
- iv) Level of automation achieved and list of areas where manual processing exists.
- v) List of areas in manufacturing process, where stage inspections are normally carried out for quality control and details of such tests and inspections.
- vi) Special features provided in the equipment to make it maintenance free.

vii) The bidder should have adequate facilities to carry out accurately all required tests during manufacturing and routine/acceptance tests as per relevant ISS/IEC standards at the final end routine/acceptance. The supplier will ensure that all testing/measuring instruments/apparatus are calibrated at regular periodicity from reputed test house as per relevant standards and a certificate of testing authority is made available to purchaser's inspector at the time of inspection. Such calibration certificates, in any case shall not be older than one year on the date of such tests".

viii) List of testing instruments and apparatus along with their last date of calibration, available with the Bidder for testing of equipment specified and test plant limitation, if any, vis-a-vis the type, special, acceptance and routine tests testing during manufacture specified in the relevant standards. These limitations shall be very clearly brought out in "Schedule of Deviations".

**2) The Supplier shall also submit the following information to the Purchaser, along with drawings/GTPs/BOM of ordered material, within 15 days of placement of order for purchaser's approval:-**

- i) Name of the raw material as well as bought out accessories and the names of sub-suppliers selected from those furnished along with the offer.
  - ii) Type test certificates of the raw material and bought out accessories/items.
  - iii) Quality Assurance Plan (QAP) withhold points for Purchaser's inspection. The QAP and Purchaser's hold points shall be discussed between the Purchaser and the Supplier before the QAP is finalized.
- 3) The Supplier shall submit the routine test certificates of bought out items and raw material at the time of routine testing of the fully assembled equipment.

## 9.0 DOCUMENTATION

9.1 All drawings shall conform to International Standards Organization (ISO) 'A', series of drawing sheet/Indian Standards specification IS:13118/IEC-56. All drawings shall be in ink and suitable for micro filming. All dimensions and data shall be in S. I Units.

### 9.2 List of drawings and documents

The bidder shall furnish four sets of following drawings along with his offer.

- a) General outline and assembly drawings of the equipment i.e. breaker, CTs,PTs etc.
- b) Graphs showing the performance of equipments in regard to magnetization characteristics.
- c) Sectional views showing -
  - i) General Constructional features.
  - ii) The materials/ gaskets /sealings used.
  - iii) The insulation, the winding arrangements, method of connection of the primary/secondary winding to the primary /secondary terminals etc.
- iv) Porcelain used and its dimensions along with the mechanical and electrical characteristics.
  - d) Arrangement of terminals and details of connection studs provided.
  - e) Name Plate
  - f) Schematic drawing
  - g) Type test reports in case the equipment has already been type tested.
  - h) Test reports, literature, pamphlets of the bought out items, and raw material.

9.3 The successful tender shall, within 2 weeks of placement of order, submit three sets of final versions of all the above said drawings for purchaser's approval. The purchaser shall communicate his comments/approval on the drawings to the supplier within four weeks. The supplier shall, if necessary, modify the drawings and resubmit three copies of the modified drawings for owner's approval within two weeks from the date of owner's comments. After receipt of owner's approval, the supplier shall within two weeks, submit 12 prints and two good qualities reproducible of the approved drawings for purchaser's use.



9.4 Six sets of the type test reports, duly approved by the purchaser, shall be submitted by the supplier for distribution before commencement of supply. Adequate copies of acceptance and routine test certificate, duly approved by the purchaser shall accompany the dispatch consignment.

9.5 The manufacturing of the equipments shall be strictly in accordance with the approved drawings and no deviation shall be permitted without the written approval of the purchaser. All manufacturing and fabrication work in connection with the equipment prior to the approval of the drawing shall be at the supplier's risk.

9.6 16 sets of nicely printed and bound volumes of operation, maintenance and erection manuals in English language, for each type and rating of equipment supplied shall be submitted by the supplier for distribution, prior to the dispatch of the equipment. The manual shall contain all the drawings and information required for erection, operation and maintenance of the circuit breaker. The manual shall also contain a set of all the approved drawings, type test reports etc.

9.7 Approval of drawings/work by purchaser shall not relieve the supplier of his responsibility and liability for ensuring correctness and correct interpretation of the drawings for meeting the requirement of the latest revision of applicable standards, rules and codes of practices. The equipment shall conform in all respects to high standards of engineering, design, workmanship and latest revisions of relevant standards at the time of ordering and purchaser shall have the power to reject any work or materials which, in his judgment is not in full accordance therewith.

## 10. PACKING AND FORWARDING

10.1 The equipments shall be packed in crates suitable for vertical/horizontal transport as the case may be, and suitable to withstand handling during transport and outdoor storage during transit. The supplier shall be responsible for any damage to the equipment during transit, due to improper and inadequate packing. The easily damageable material shall be carefully packed and marked with the appropriate caution symbol. Wherever necessary, proper arrangement for lifting, such as lifting hooks etc. shall be provided. Any material found short inside the packing cases shall be supplied by supplier without any extra cost.

10.2 Each consignment shall be accompanied with a detailed packing list containing the following information :

- a) Name of the consignee.
- b) Details of consignment
- c) Destination
- d) Total weight of consignment.
- e) Sign showing upper/lower side of the crate.
- f) Handling and unpacking instructions.
- g) Bill of material indicating contents of each package.

10.3 The supplier shall ensure that the packing list and bill of material are approved by the purchaser before dispatch.

## 11.0 Optional Spares

The bidder shall also recommend optional spares that will be required for breakers along with their total and unit prices. However, the prices of operation spare will not be considered for bid evaluation.

## 12.0 PERFORMANCE GUARANTEE/ WARRANTY PERIOD :

The Guarantee / warranty period of each 12 KV outdoor VCB kiosks along with all accessories shall be for the period of **5 (Five) years** from the date of receipt of material (at Nigam's store).

The amount of performance security shall be **five percent** of the amount of supply order in case of procurement of goods and services. In case of Small Scale Industries of Rajasthan it shall be **one percent** of the amount of quantity ordered for supply of goods and in case of sick industries, other than Small Scale Industries, whose cases are pending before the Board of Industrial and Financial Reconstruction (BIFR), it shall be **two percent** of the amount of supply order, which is required to be valid for 5 years.

Successful bidder shall attend the complaint including spare parts within 30 days from the date of receipt of complaint. The date of receipt of complaint shall be treated as the date of email / FAX of

complaint by the field officer/ stores/ Purchaser. If the supplier fails to attend the complaint within 30 days from the date of receipt of complaint intimated first time by the field officer/ purchaser then penalty @1/4% per week or part thereof for first 4 weeks in case delay is exceeds more than 4 weeks then @1/2% per week or part thereof shall be charged for entire delay, subject to a maximum of 5% of the breaker. This penalty will be in addition to the penalty leviable delay in delivery of material as per GCC clause. No. 1.24.

In case firm fails to attend the complaint within 120 days from the date of intimation, the cost of the VCB shall be withheld from firm's financial hold.

. Further to this, in case of emergency, 12 KV VCB kiosks can be get rectified by the sub divisional officer / M&P officers ( as authorized by Nigam) at the risk & cost of the supplier firm, by obtaining quotation from three firms, for same item/ equipment, meeting the general requirement of the specification. The rectification of 12 KV VCB kiosks means satisfactory performance report duly signed by sub divisional officer / M&P officers (as authorized by Nigam) i.e. in charge of 33/11 KV Sub-Station.

### **13.0 Delay in Delivery of Inspected Material at Store:**

If the material are not delivered within 7 days at same station, 14 days for station within State and 20 days by the suppliers situated outside the State from the date of receipt of the Dispatch Instructions. Charges shall be recovered @ Half Percent per week or part thereof (for actual delay in receipt), maximum upto 3% of the Dispatch Instructions consignment value (Ex-works). This will be in addition to Clause No 1.24(1) of GCC.

### **14.0 PAYMENT:-**

100 % (Hundred percent) payment of each consignment shall be made along with taxes & duties by the concerned Sr. Accounts Officer/ Accounts Officer (CPC), subject to furnishing of SBG, PBG in terms of relevant clause of GCC and Bank Guarantee of 10% cost of breaker towards satisfactory installation & commissioning of 12 KV Outdoor VCB Kiosks. The Bank Guarantee of 10% cost of breaker shall be released on production of satisfactory Installation & Commissioning certificates from the Nodal Officer and deposition of penalty towards delay in Installation & Commissioning of Breaker.

However, successful bidder may furnish Bank Guarantee equivalent to 10% amount of breakers towards successful Installation & Commissioning and in such case, no payment from the supply bills shall be deducted.

However, if intimation of site is not conveyed to the supplier by the Nigam upto one year of receipt of material in store, retention amount of supply of VCB/ BG of 10% cost of breaker, may be released.

### **15.0 FURNISHING OF PROTO TYPE BREAKER:-**

One Proto Type 12 KV Outdoor VCB Kiosk conforming to various requirements of technical specification along with subsequent modifications made, has to be supplied by the successful bidder within two months of placement of detailed purchase order for our inspection & approval. The offer for inspection of subsequent material shall be entertained only after approval of proto type VCB Kiosk and successful bidder will have to complete the entire ordered quantity within **six months** of approval of proto type VCB Kiosk. Prior to supply of prototype VCB Kiosk, the detailed drawings, Bill of Material & protection scheme shall be got approved.

In case if there is delay in furnishing of proto type VCB by the firm for our inspection beyond 60 days, the delivery schedule shall be reduced by the number of days for which above delay was occurred. Further, in case successful bidder does not get its proto type approved within one year from the date of receipt of detailed Purchase Order or initial contractual delivery period whichever occurs earlier, then in such case it will be treated as failure of supply of material on part of the firm and action as per the provision of P.O. will be initiated.

The proto type sample shall be inspected by a team of two officers including one from M&P Wing.

If the bidder has already got approved Proto type sample in the previous tender with similar specification of the instant tender, furnishing of fresh proto type sample is not required.

**16.0 QUANTITY :**

12 KV OUTDOOR VCB KIOSKS : **966 Nos.**

The quantity as indicated above is approximate and may be increased or decreased to any extent at the time of finalization of this tender enquiry.

**17.0** As GST act has been affected from 01.07.2017, therefore, BOQ has been prepared accordingly with applicability of GST. Further, old tax structure wherever appearing in ITB & GCC may be replaced by GST as per notification.

Further, GST registration number of Jodhpur Discom is 08AAACJ8578R1ZJ

**18.0 ADDITIONAL ORDER**

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

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

**20.0 Purchasing on the Risk & cost of supplier, in case of non-execution of order/delay in delivery.**

As per field requirement, as it is, material (s) / equipment (s) is /are urgently required to Nigam and for which final notice has been given to supplier but supplier is being breach of agreement against stipulated delivery schedule, if at any time during the currency of the contract, the performance in whole or in part be prevented or delayed by more than the three months of the delivery schedule, the purchaser reserves the right to procure the material/equipment on order or part thereof from any other source at the risk and cost of the contractor/ supplier.

## **SECTION-III (PART-B)**

### **1 SCOPE**

This specification is intended to cover the installation & commissioning of 12 KV Outdoor Vacuum Circuit Breaker (Kiosks), complete in all respect at various 33/11 KV Sub-Stations under Jodhpur Discom.

### **2.0 INSTALLATION & COMMISSIONING OF VCB**

The 12 KV Outdoor Vacuum Circuit Breaker Kiosks supplied shall be installed & commissioned by the successful bidder, at various 33/11 KV Sub-Stations under Jodhpur Discom. The name of 33/11 KV Sub-Stations shall be intimated at the time of dispatch instructions/ stores.

### **3.0 ACTIVITY**

The following main activities are to be carried out by the supplier for installation & commissioning of 12 KV Outdoor Vacuum Circuit Breaker Kiosks:-

- a) Foundation of Bolts along with grouting.
- b) Installation & Commissioning of Kiosk.
- c) Laying & connection of control cables from breaker to Control & Relay panel (Control cables shall be supplied by Nigam).
- d) Connection of Earthing of breaker from the earth mesh of the GSS. Providing M.S. flat shall be in the scope of supplier.
- e) All Civil works related with foundation and installation & commissioning of 12 KV Outdoor VCB Kiosks.

**Note:- The M.S. Earthing & Foundation bolts required for Installation & Commissioning shall be provided in a packet and shall put up in each breaker.**

### **4.0 CIVIL FOUNDATION WORK:-**

The foundation & grouting work along with all civil works required for installation of 12 KV outdoor vacuum circuit breaker kiosk shall be carried out by the supplier. The foundation drawing shall be furnished by the successful bidder(s), which shall be approved by SE(MM) in consultation with SE(Civil).

### **5.0 INSTALLATION & COMMISSIONING OF KIOSK**

Installation & commissioning of 12 KV Outdoor Vacuum Circuit Breaker Kiosks complete with accessories including use of special tools & conducting all pre-commissioning tests before energisation shall be carried out by the supplier. PG/T-Clamps of required size to connect incoming & outgoing terminals of VCB to main bus bar shall be arranged by the supplier, however, required ACSR conductor for jumpers shall be arranged by the Nigam

The agency should engage team of experienced Engineers & skilled staff for the purpose of Installation & Commissioning of 12 KV Outdoor Vacuum Circuit Breaker Kiosks.

Mainly following pre-commissioning tests shall be carried out:-

- a) Visual inspection.
- b) Cleaning
- c) Testing of relays/ CTs/PTs.
- d) Testing of current circuitry by primary injection
- e) Testing of breaker by primary injection.
- f) IR value.
- g) Checking of various equipments viz. Ammeter, Voltmeter, Energy meter etc. and alarms/ flags/ trip circuit healthiness etc.

### **6.0 NODAL OFFICER:**

The concern Assistant Engineer/Feeder Manager of M&P shall be the Nodal officer for supervision of installation & commissioning of 12 KV Outdoor Vacuum Circuit Breaker Kiosks.

## 7.0 WORK COMPLETION SCHEDULE

The Installation & Commissioning of 12 KV Outdoor Vacuum Circuit Breaker Kiosks shall be completed within 30 days from the date of receipt of intimation of location of 33/11 KV Sub-Stations where the supplied breakers are to be installed. The concerned Nigam's officer shall give intimation to the firm only after transporting the breaker to Sub-Station/Site.

## 8.0 DELAY IN WORK COMPLETION:

In case of delay in Installation & Commissioning of breaker beyond 30 days from the date of intimation to the supplier about the site ( the date of receipt of intimation shall be treated as the date of FAX/ 3 days from the date of dispatch of letter about intimation of site by the field officer/ stores/ Purchaser), Only 50% payment towards installation & commissioning charges of breaker will be payable and in case the supplier fails to complete installation & commissioning of the breaker within 60 days, no payment towards installation & commissioning will be payable and breaker will be installed & commissioned by the Nigam itself and penalty towards non-installation of breaker @ 10% cost of breaker shall be levied.

## 9.0 PAYMENT:-

The payment shall be released on production of satisfactory installation & commissioning report of 12 KV Outdoor Vacuum Circuit Breaker Kiosks duly verified by the Nodal Officer.

The payment shall be released by Sr.A.O. (Cash & CPC) on production of satisfactory installation & commissioning report of 12 KV Outdoor VCB Kiosks duly verified by the concerned Assistant Engineer/ Feeder Manager of M&P Wing.

While issuing the Installation & Commissioning Report, the nodal officer should ensure that activities as per clause No. 3.0 of Schedule-III (part-B) have been completed by the supplier. If the Installation & Commissioning of Breaker has been done on the existing foundation of the sub-station, then only 50% payment of the total Installation & Commissioning charge shall be admissible and accordingly the payment will be made by the Sr. A.O. (Cash & CPC).

## 10.0 PRICES:

**Installation & Commissioning charges shall be on FIRM price basis. In the price schedule, the bidder shall quote separately the prices for supply of 12 KV Outdoor Vacuum Circuit Breaker Kiosks, Installation & Commissioning charges inclusive of all type of taxes & service charges, if any and cost of Civil Works per breaker.**

**Work Contract Tax (WCT), if applicable, shall be borne by the Nigam.**

## 11.0 Security bank Guarantee towards Installation & Commissioning:

Successful bidders shall furnish Bank Guarantee equivalent to 10% cost of breaker, towards successful installation & commissioning, which should be initially valid for a period of one year and if bidders fail to carry out installation & commissioning work of breaker in time, Nigam may invoke their Bank Guarantee.

**Schedule – I****SCHEDULE OF REQUIREMENT**

<b>S.No</b>	<b>ITEM</b>	<b>QUANTITY</b>
<b>1</b>	<b>12 KV OUTDOOR VCB KIOSKS</b>	<b>966 Nos.</b>

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

**SCHEDULE- II****PRICE ADJUSTMENT FORMULA**  
**12 KV OUTDOOR VCB KIOSKS (TN-1560)**

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

$$P = \frac{P0}{100} \left( 20 + 28 \frac{IS}{ISO} + 26 \frac{C}{CO} + 4 \frac{AL}{ALO} + 9 \frac{In}{In0} + 13 \frac{W}{W0} \right)$$

Wherein,

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

PO = Price quoted / confirmed (Exclusive of all taxes and duties).

ISo = Wholesale price index for “Manufacture of basic metals” (Base: 2011-12 = 100) (refer notes).

This index is as applicable for the month, three month prior to the date of tendering.

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

This price is as applicable for the month, one month prior to the date of tendering.

Alo = Price of busbar grade aluminium (refer notes).

This price is as applicable on the first working day of the month, one month prior to the date of tendering.

Ino = Price of epoxy resin for indoor circuit breakers and switchgear (refer notes).

This price is as applicable on the first working day of the month, one month prior to the date of tendering. **OR**

Wholesale price index of insulator for outdoor circuit breakers (VBF and SDB) (refer notes)

This index number is as applicable for the month, three month prior to the date of tendering.

Wo= All India average consumer price index number for industrial workers, as published by the Labour Bureau, Ministry of Labour, Govt. of India (Base 2001 = 100).

This index number is as applicable for the month, four months prior to the date of tendering.

For example, if the date of tendering falls in May, 2019, the applicable prices of copper (Co), aluminium bus bar (Alo) should be as on 1st April 2019 and wholesale price index of “Manufacture of basic metals” (ISo) and insulating material (Ino) should be as on 1st February 2019 and all India average consumer price index number (Wo) should be for the month of January, 2019.

The above prices and indices are as published by IEEMA vide circular reference number IEEMA (PVC)SWGR(R-1)/\_\_\_/\_\_\_ONE prevailing as on first working day of the month \_\_\_\_\_ i.e. one month prior to the date of tendering.

IS = Whole sale price index for “Manufacture of basic metals” (Base: 2011-12 = 100) (refer notes).

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

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

This price is as applicable on the first working day of the month, two months prior to the date of delivery.

Al = Price of busbar grade aluminium (refer notes).

This price is as applicable on the first working day of the month, two months prior to the date of delivery.

In = Price of epoxy resin for indoor circuit breakers and switchgear (refer notes).

This price is as applicable on the first working day of the month, two month prior to the date of tendering. **OR**

Wholesale price index of insulator for outdoor circuit breakers (VBF and SDB) (refer notes)

This index number is as applicable for the month, four month prior to the date of tendering.

W = All India average consumer price index number for industrial workers, as published by the Labour Bureau, Ministry of Labour, Govt. of India (Base 2001 = 100).

This index number is as applicable for the months, five months prior to the date of delivery.

For example, if the date of tendering falls in June, 2019, the applicable prices of copper (Co), aluminium bus bar (Alo) should be as on 1st April 2019 and wholesale price index of “Manufacture of basic metals” (ISo) and insulating material (Ino) should be as on 1st February 2019 and all India average consumer price index number (Wo) should be for the month of January, 2019.

The “date of delivery” is the date on which the product is notified as being ready for inspection / dispatch. (In the absence of such notification the date of manufacturer’s dispatch note is to be considered as the date of delivery) or the contracted delivery date (including any agreed extension thereto), whichever is earlier.

**Note:- The base date will be 1.07.2019 irrespective of date of tender opening.**

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**SCHEDULE-II-A****PRICES & PRICE VARIATION**

- a) The prices quoted shall be variable as per Price Variation Formula given in the Specification (Schedule-III-A) without any ceiling.
- b) If the price variation formula is changed, the same shall be applicable for the price variation. During the transit period when both old and new indices are being circulated, then the admissible Price Variation shall be applicable, which is advantageous to Nigam, and the period from which the old indices are discontinued then the P.V. shall be admissible with the new indices.
- c) The date of delivery applicable for claiming price variation shall be the date prevailing on the first day of Calendar month which shall be determined in the manner prescribed hereunder:-
- (i) When the material is offered within stipulated delivery schedule : For allowing P.V. the date of delivery shall be considered the date on which material is notified as being ready for inspection or date of receipt of inspection call in the office.
- (ii) When the material is offered after expiry of stipulated delivery schedule : For allowing P.V. in the cases supplies are made after the expiry of scheduled delivery, the price prevailing in the last month of the stipulated scheduled delivery or the date on which material is notified as being ready for inspection or date of receipt of inspection call in the office, whichever is beneficial to Nigam shall be allowed.
- (iii) When the material is offered ahead of delivery schedule on the request of Jaipur Vidyut Vitran Nigam Limited : Normally supplies ahead of delivery schedule shall not be accepted. However in case of urgency of material, if supplies are accepted ahead of delivery schedule, PV shall be allowed on the basis of the material is notified as being ready for inspection or date of receipt of inspection call in the office.
- (iv) When the material is offered ahead of delivery schedule by firm at their own and accepted by Nigam on the request of firm: Normally the request of the firm to accept the material ahead of delivery schedule will not be accepted. In case firm offers supplies ahead of delivery schedule at their own and such request is accepted by Nigam, the price prevailing in the last month of stipulated delivery schedule or the date on which material is notified as being ready for inspection or date of receipt of inspection call in the office, whichever is beneficial to Nigam shall be allowed.

**Schedule – III****JODHPUR VIDYUT VITRAN NIGAM LIMITED****A Govt. of Rajasthan Undertaking  
Prescribed technical specification for supply of**

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

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

Name &amp; Designation with seal of the bidder

**SCHEDULE-III-A****QUALIFICATION REQUIREMENT****ITEM:- 12 KV OUTDOOR VCB KIOSKS****TN- 1560**

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 item. 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 of 12 KV Outdoor VCB Kiosks, 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 and minimum quantity to be offered 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 VCB 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 upto 50% of ordered quantity in previous tender upto 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 upto 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 any CPRI/ERDA/NABL accredited/ ILAC i.e. International Laboratory Accreditation Cooperation (in case of foreign laboratory) of similar rating and design of tendered material/equipment. The type test certificates by in-house Lab. of tendering firm, even if it is a NABL accredited/ ILAC accredited, will not be acceptable. Such type test certificates should not be older than **5 (Five) years** as on the date of bid opening. For this purpose date of conducting type test will be considered.

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

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

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

3.05 Following 10 type tests are generally required for outdoor VCB/outdoor VCB kiosk/ indoor VCB panel. These type tests can be divided in following two groups:

#### **GROUP I**

- (i) Single phase short circuit test
- (ii) Basic short circuit duties test
- (iii) Out of phase making & Breaking test
- (iv) Capacitive current switching test
- (v) Mechanical operation type test

#### **GROUP II**

- (vi) Dielectric test on main circuits
- (vii) Short Time Withstand & peak withstand current tests
- (viii) Temperature Rise Test
- (ix) Measurements of resistance of main current:
- (x) IP-55/IP-5X Test (to be conducted on cubicle/control cabinet)

In view of the purchaser, in light of various provisions of IEC/applicable standards, assemblies of outdoor VCB/outdoor VCB kiosk/ indoor VCB panel with following arrangements are generally acceptable:

- (i) Outdoor VCB/outdoor VCB kiosk/ indoor VCB panel of rated current rating (type tested as per group II) fitted with Circuit Breaker of higher current rating (type tested as per as per group I) or vice-versa.
- (ii) Outdoor VCB/outdoor VCB kiosk (type tested as per group II) and fitted with Circuit Breaker (type tested as per group I with indoor panel or type tested as VCB truck alone).
- (iii) Indoor VCB panel (type tested as per group II) fitted with Circuit Breaker (type tested as per group I with Outdoor VCB/outdoor VCB kiosk or type tested as VCB truck alone).
- (iv) Complete type tests conducted on higher current rating outdoor VCB/outdoor VCB kiosk/ indoor VCB panel are also acceptable if bidder confirms to supply the material with such higher rating.

Accordingly, type test reports of Indoor VCB panel when tendered item is Outdoor VCB/ Outdoor VCB Kiosk may be acceptable or vice versa when arrangement is as above. But type tests (as per group II) of indoor VCB panel will not be acceptable when tendered item is Outdoor VCB/outdoor VCB kiosk. Similarly, type tests (as per group II) of Outdoor VCB/outdoor VCB kiosk will not be acceptable when tendered item is indoor VCB panel.

Indoor VCB panel/ Outdoor VCB kiosk, type tested (as per group II) and fitted with type tested (as per group I) Circuit Breaker where one or more type test (as per group I) is carried out on higher current rating or one or more type test (as per group II) is carried out on higher current rating kiosk/panel is acceptable if there is no change in constructional design. In case any change in constructional design is made, the same is acceptable only if manufacture can demonstrate that this

change does not influence the result of the individual type test. The performance of any particular arrangement may be substantiated by test data of comparable arrangements.

3.06 In technical specifications operating duty for gang operation is defined as O-0.3 sec.-CO-3 min.-CO, the firms are required to furnish the type test reports of making and breaking tests including Basic short circuit duty tests of circuit breaker as per operating duty for gang operation as defined O-0.3 sec.-CO-3 min.-CO. However, mechanical operation test on other operating sequence conducted as per IEC 62271-100 may be acceptable.

3.07 Certain makes of Vacuum Interrupter are approved by the purchaser and mentioned in the technical specifications. It is mandatory for the firm to furnish the type test reports and supply of the material with approved make of Vacuum Interrupter. The make of Vacuum Interrupter should invariable be same in type test reports as well as in supply.

3.08 The firms furnish the drawings to the purchaser for approval before commencement of supply. The approved drawing of VCB should be representative of the type tested material and therefore it is irrespective that the type test reports are of fixed type VCB or draw out type VCB. Any change of constructional detail is acceptable, if the manufacture can demonstrate that this change does not influence the result of the individual type test.

#### **4.0 POOR RECORD OF PERFORMANCE AND DELIVERY :**

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

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

#### **5.0 (A) Black listing of a firm:**

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

(i) There are sufficient and strong reasons to believe that the supplier or his employee has been guilty of malpractices such as manhandling/misbehavior with Government official by supplier or his partner/employee, bribery, corruption or abatement of such a offence in a position where he could corrupt Nigam's official, fraud, vitiating fair tender process 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 proforma only. The deviations indicated elsewhere in the bid shall not be accepted.

II) The bidder must clearly fill up each and every particular of guaranteed technical particulars annexed with Technical Specifications otherwise he will be responsible for Technical Non-responsiveness.

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.

**Must be filled-in by the tenderer and attach 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 tender against specification No. JdVVNL/SE/MM&C/TN-  
**1560** we agree to supply the following quantity:-

S. No	Particulars of item	Tendered Quantity (Nos.)	Qty. Offered	Justification of quantity offered as per Qualifying Requirement.	Status of Type Test Certificates.
1	2	3	4	5	6
	<b>12 KV OUTDOOR VCB KIOSKS</b>	966			

- 1 The offer is valid for a period of 120 days from the date of opening of this tender.
- 2 The base date of prices will be **01.07.2019** (as per IEEMA latest circular) irrespective of date of tender opening.
- 3 It is noted that the quantities as mentioned in the specification are approximate and we agree to supply any quantity as per your requirement.
- 4 The delivery shall strictly be in accordance with our delivery clause as given in **Schedule-VIII** of this specification. In case we fail to deliver the material as indicated in the clause No. 1.23 of G.C.C. (Section-II), we are liable to pay recovery for delay in delivery as per clause No. 1.24 of this SECTION-II of this specification. The material shall conform to your specification No. JdVVNL/SE/ MM&C/TN-**1560** and as per relevant ISS in all respect.
- 5 We confirm that we agree to all the terms & conditions as well as the technical stipulations of your specification No. JdVVNL/SE/MM/TN-**1560** and there are no deviations other than as specified in the **Schedule VI (A&B)**.

Yours faithfully,

Signature of tenderer  
with stamp  
Dated



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

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

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

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

S.No. Particulars of technical & other Performance data	Reasons for deviations/departure.
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**(Signature)**

Name & Designation  
with seal of the bidder.

## Schedule – V(A)

**SCHEDULE OF GUARANTEED TECHNICAL PARTICULARS OF 12 KV OUTDOOR VCB  
KIOSKS AGAINST TN-1560**

Sl. No.	PARTICULARS	To be furnished by the Bidder
<b><u>CIRCUIT BREAKERS</u></b>		
1	NAME OF MANUFACTURER & COLLABORATOR, IF ANY	
(A)	OFFICE ADDRESS OF MANUFACTURER	
(B)	WORKS ADDRESS	
(c)	GST REGISTRATION NO	
2(A)	CONSTRUCTION TYPE OF BREAKER	
2(B)	MAKE OF BREAKER	
3	NO. OF POLES	
4	CLASS	
5	RATED VOLTAGE	
6	RATED INSULATION LEVEL	
(a)	LIGHTENING IMPULSE WITHSTAND VOLTAGE	
(b)	ONE MIN. POWER FREQ. WITHSTAND TEST VOLTAGE KV (rms)	
(c)	ONE MIN. POWER FREQ. WITHSTAND TEST VOLTAGE FOR AUXILIARY CIRCUITS KV (rms)	
7	RATED FREQUENCY	
8	RATED NORMAL CURRENT	
9	RATED SHORT CIRCUIT BREAKING CURRENT/ CAPACITY	
10	RATED SHORT TIME WITHSTAND CURRENT AND ITS DURATION	
11	RATED TRANSIENT RECOVERY VOLTAGE FOR TERMINAL FAULTS	
12	RATED SHORT CIRCUIT MAKING CURRENT	
13	RATED OPERATING SEQUENCE	
14	FIRST POLE TO CLEAR FACTOR	
15(a)	OPENING TIME	
15(b)	CLOSING TIME	
16	TOTAL BREAK TIME MEASURED FROM THE INSTANT OF TRIP CIRCUIT ENERGISATION	
(a)	AT 10% BREAKING CAPACITY	
(b)	AT 100% BREAKING CAPACITY	
17	PROTECTION CLASS OF KIOSK	
18	CONTACT TRAVEL	

(a)	LENGTH OF TRAVEL	
(b)	RATE OF TRAVEL	
19	MAKE TIME	
20	SPRING CHARGING TIME	
21	DEGREE OF VACUUM PROVIDED IN VCB	
22	OPERATING MECHANISM OF CIRCUIT BREAKER AND ITS ASSOCIATED EQUIPMENT	
22.1	TYPE OF CLOSING MECHANISM	
22.2	WHETHER THE CIRCUIT BREAKER IS TRIP FREE OR FIXED TRIP AND WHETHER IT IS WITH LOCKOUT PREVENTING CLOSING	
22.3	RATED SUPPLY VOLTAGE OF CLOSING MECHANISM	
22.4	CURRENT REQUIRED AT RATED SUPPLY VOLTAGE TO CLOSE THE CIRCUIT BREAKER	
22.5	RATED SUPPLY VOLTAGE OF SERIES/ SHUNT OPENING RELEASE	
22.6	CURRENT REQUIRED AT RATED VOLTAGE FOR SERIES/ SHUNT OPENING RELEASE	
22.7	NO. AND TYPE OF SPARE AUXILIARY SWITCHES/ CONTACTS	
22.8	CURRENT REQUIRED AT RATED SUPPLY VOLTAGE BY OTHER AUXILIARIES	
23	<b>OTHER INFORMATION</b>	
23.1	(a) TYPE OF BREAKER (DRAWOUT/ FIXED)	
	(b) TYPE OF ISOLATION (VERTICAL/ HORIZONTAL)	
23.2	TYPE OF ARC CONTROL DEVICE	
23.3	<b>CONTACTS</b>	
(a)	<b>MAIN</b>	
(I)	TYPE	
(II)	MATERIAL	
(III)	SILVER FACING PROVIDED	
(iv)	DESIGN CONTACT PRESSURE	
(b)	<b>ARCING CONTACTS</b>	
(I)	TYPE	
(II)	MATERIAL	
(III)	SILVER FACING PROVIDED	
(IV)	DESIGN CONTACT PRESSURE	
23.4	<b>LIFE</b>	
(I)	MECHANICAL OPERATIONS	
(II)	ELECTRICAL OPERATIONS	
(III)	SHORT CIRCUIT OPERATIONS	
23.5	MAXIMUM TEMPERATURE RISE OVER AN AMBIENT TEMPERATURE OF 50° C	
23.6	<b>TRANSIENT BEHAVIOUR DETAILS</b>	
(a)	PF RECOVERY VOLTAGE BETWEEN PHASES	
(b)	PEAK TRANSIENT RECOVERY VOLTAGE	
©	RATE OF RISE OF RECOVERY VOLTAGE	
23.7	WHETHER THE CIRCUIT BREAKER IS RESTRIKE FREE	
23.8	DETAILS OF INTERLOCKS PROVIDED	

23.9	DERATING FACTOR FOR SPECIFIED 50 DEG. C. AMBIENT TEMPERATURE AND SITE CONDITION, IF ANY	
23.10	MAXIMUM CHOPPING CURRENT	
23.11	VACUUM INTERRUPTED DETAILS	
(a)	MAKE AND CODE NUMBER OF VACUUM BOTTLE	
(b)	PRESSURE INSIDE INTERRUPTER	
(C)	MANUFACTURER'S CODE NO. / REFERANCE STANDARD	
23.12	CONTACT WEAR INDICATION	
23.13	MAX. OVER VOLTAGE ON SWITCHING TRANSFORMER ON NO LOAD.	
24	THICKNESS OF SHEET STEEL	
25	WHETHER COLD ROLLED OR HOT ROLLED	
<b>11 KV VOLTAGE TRANSFORMER</b>		
1	MANUFACTURER'S NAME	
2	TYPE DESIGNATION	
3	HIGHEST EQUIPMENT VOLTAGE	
4	NO. OF PHASES	
5	SYSTEM EARTHING	
6	INSULATION LEVEL	
(a)	ONE MINUTE POWER FREQUENCY WITHSTAND VOLTAGE	
(I)	PRIMARY WINDING	
(II)	SECONDARY WINDING	
(b)	IMPULSE WITHSTAND VOLTAGE	
7	FREQUENCY	
	TRANSFORMATION RATIO	
	RATED OUTPUT	
	ACCURACY CLASS	
	WINDING CONNECTION	
	RATED VOLTAGE FACTOR	
13	TYPE	
13.1	RESIN CAST OR OIL FILLED	
13.2	WHETHER SINGLE PHASE OR THREE PHASE	
13.3	TYPE OF FUSES PROVIDED	
(a)	PRIMARY	
(b)	SECONDARY	
©	MAKE	
<b>CURRENT TRANSFORMERS</b>		
1	MANUFACTURER'S NAME	
2	TYPE DESIGNATION	
3	RATED VOLTAGE	
4	TYPE OF INSULATION WHETHER OIL FILLED OR RESIN CAST	
5	INSULATION LEVEL	
5.1	ONE MINUTE POWER FREQUENCY WITHSTAND VOLTAGE	

5.2	IMPULSE WITHSTAND VOLTAGE	
5.3	PF WITHSTAND VOLTAGE FOR SECONDARY	
6	FREQUENCY	
7	TRANSFORMATION RATIO	
8	RATED OUTPUT	
9	CLASS OF ACCURACY	
10	INSTRUMENT SECURITY FACTOR	
11	SHORT TIME THERMAL CURRENT AND ITS DURATION	
12	SECONDARY WINDING RISE AT 75 DEG.C	
13	KNEE POINT VOLTAGE	
14	MAXIMUM EXCITING CURRENT IN RMS	
<b>RELAYS</b>		
1	MANUFACTURER'S NAME	
2	TYPE DESIGNATION	
3	RATED CT SECONDARY CURRENT.	
4	TAP RANGE	
5	VA BURDEN	
	1) HIGHEST TAP	
	2) LOWEST TAP	
6	RATED VOLTAGE OF COIL FOR OPERATION.	
7	WHETHER RELAY IS ABLE TO STORE A MINIMUM OF FIVE FAULT VALUES INCLUDING FAULT LEVEL AND PHASE WITH DATE & TIME.	
8	WHETHER RELAY IS MOUNTED IN FLUSH PATTERN ON THE PANEL BOARD.	
9	WHETHER TEST BLOCKS PROVIDED AS PER SPEC.	
10	WHETHER NUMERICAL RELAY IS WITH COMMUNICATION FACILITY AND STANDARD OPEN PROTOCOL / SCADA COMPATIBILITY ALONGWITH IED FOR PURPOSE OF SCADA	
11	WHETHER COMMUNICATION ON RS-485 PORT PROTOCOL PROVIDED.	
12	TYPE OF CHARACTERISTIC	
13	DESCRIPTIVE LEAFLET ATTACHED OR NOT	
14	ACCURACY CLASS OF CT NEEDED	
15	RANGE OF SETTING FOR OVER CURRENT AND EARTH FAULT PROTECTION.	
16	WHETHER DRAWOUT TYPE	
<b>MEMORY TYPE STATIC HT TVM ENERGY METER</b>		
1	NAME OF MANUFACTURER	
2	TYPE OF METER	
3	CLASS OF ACCURACY	

4	REFERENCE VOLTAGE	
5	BASIC CURRENT	
6	MAXIMUM CONTINUOUS CURRENT	
7	WHEATHER SEALING ARRANGEMENT PROVIDED ON FRONT SIDE OF METER FOR METER BODY/ TERMINAL COVER / MD RESET BUTTON/ COMMUNICATION PORT.	
8	PROGRAMMED INTO METER MEMORY FOR IDENIFICATION THROUGH CMRI	
9	BURDEN AND WATT LOSS OF VOLTAGE CIRCUIT PER PHASE.	
10	PUSH BUTTON MODE AS PER SPECIFICATIONS PROVIDED OR NOT	
11	MEMORY NON- VOLATILE OR BATTERY BACKED	
12	WHETHER ENERGY METER CONFIRMING TO IS AND HAVING ALL THE PARAMETER REQUIRED AS PER LATEST SPEC. OF JDVVNL.	
<b>INDICATING AND INTEGRATING INSTRUMENTS</b>		
(I)		
1	MANUFACTURER'S NAME	
2	TYPE DESIGNATION	
3	ACCURACY CLASS	
4	THE VA BURDEN AT NORMAL CURRENT AND OR NOMINAL VOLTAGE	
(a)	CURRENT COIL	
(b)	POTENTIAL COIL	
5	TRANSFORMATION RATIO OF INSTRUMENT TRANSFORMER FOR WHICH THE INSTRUMENT HAS BEEN ADJUSTED, IF RELEVANT	
6	SIZE	
7	WHETHER SUITABLE FOR SHEET STEEL MOUNTING	
8	COLOUR FINISH	
9	SHORT DURATION OVER LOAD CAPACITY	
10	MAKE AND TYPE OF SELECTOR SWITCH FOR AMMETER/ VOLTMETER	
(ii)	<b>CONTROL SWITCHES</b>	
1	MANUFACTURER'S NAME	
2	TYPE DESIGNATION	
3	TYPE OF HANDLE PROVIDED	
4	NO. OF POSITION	
5	NO. OF CONTACTS	
(a)	NORMALLY CLOSED	
(b)	NORMALLY OPENED	
6	MAKING/ BREAKING CAPACITY	
7	WHETHER SPRING RETURNED TO NORMAL OR STAY PUT TYPE	
8	TYPE OF LOCK PROVIDED	
(iii)	<b>INDICATING LAMPS</b>	
1	MANUFACTURER'S NAME	
2	TYPE DESIGNATION	
3	OPERATING VOLTAGE	
4	SIZE OF LAMP	

5	WATTAGE OF LAMPS	
6	COLOUR OF LAMP BODY	
(IV)	<b>SWITCH BOARD WIRING</b>	
1	INSULATION OF WIRING	
2	SIZE OF WIRING CONDUCTOR FOR	
(a)	CT CIRCUITS	
(b)	PT CIRCUITS	
©	AC SUPPLY CIRCUITS	
(d)	OTHER CIRCUITS	
3	SIZE OF EARTHING BAR FOR SAFETY EARTHING	
4	TYPE OF TERMINALS PROVIDED ON WIRING	
5	CONDUCTOR MATERIAL	
6	COLOUR USED	
(a)	AC CIRCUITS	
(I)	I PHASE	
(II)	II PHASE	
(III)	III PHASE	
(IV)	NEUTRAL	
(V)	EARTH	
(b)	DC CIRCUITS	
7	IDENTIFICATION OF SUFFIX USED FOR	
a)	METERING CIRCUITS	
(b)	O/C AND E/F INDICATION	
8	AC AUXILIARY CIRCUITS	
	MICELLANEOUS INFORMATION	
<b>1 BUSHINGS</b>		
(a)	MAKE AND DRAWING NO.	
(b)	TYPE OF BUSHING	
(c)	CREEPAGE DISTANCE	
(I)	TOTAL	
(ii)	PROTECTED	
(d)	ONE MINUTE POWER FREQUENCY WITHSTAND VOLTAGE FOR BUSHING	
	DRY	
	WET	
(e)	IMPULSE WITHSTAND VOLTAGE	
(f)	REFERENCE STANDARD	
(g)	PERMISSIBLE SAFE CANTILEVER LOADING ON BUSHING	
(h)	CATALOGUE NO. OF BUSHING OFFERED AND ITS MECHANICAL STRENGTH	
<b>2</b>	<b>MOTOR</b>	
a)	MAKE	
(b)	WATTAGE	
(c)	RATED VOLTAGE	
(d)	PROTECTION EQUIPMENT	
(e)	CLOSING CONTACTOR	
<b>3</b>	<b>TERMINAL CONNECTORS</b>	
a)	MAKE/ MATERIAL	
(b)	RATED CONTINUOUS CURRENT	
(c)	RATED SHORT TIME CURRENT FOR 3 SEC.	
(d)	MAXIMUM TEMPERATURE RISE OF TERMINAL CONNECTOR OVER AMBIENT TEMPERATURE OF 50 DEG. C AND MAXIMUM TEMPERATURE ATTAINED.	
<b>4</b>	<b>PAINT SHADE OF OUTDOOR KIOSK</b>	
<b>5</b>	<b>MAIN BUS BAR</b>	

a)	SIZE	
(b)	MATERIAL (COPPER ONLY)	
(c)	RATED SHORT TIME CURRENT FOR 3 SEC.	
(d)	CURRENT DENSITY	
<b>6</b>	<b>INTER CONNECTING BUS BAR</b>	
a)	SIZE	
(b)	MATERIAL (COPPER ONLY)	
(c)	RATED SHORT TIME CURRENT FOR 3 SEC.	
(d)	CURRENT DENSITY	
<b>7</b>	<b>CT WINDINGS</b>	
(a)	PRIMARY	
(i)	NO. OF TURNS	
(ii)	CROSS SECTIONAL AREA	
(iii)	MATERIAL	
(b)	SECONDARY	
(i)	NO. OF TURNS	
(ii)	CROSS SECTIONAL AREA	
(iii)	MATERIAL	
<b>8</b>	<b>LIST OF INTERLOCKS</b>	
(a)	MECHANICAL	
(b)	ELECTRICAL	
<b>9</b>	<b>OVERALL DIMENSIONS</b>	
9.1	FOR VACUUM CIRCUIT BREAKER KIOSK COMPLETE	
9.2	CIRCUIT BREAKERS	
9.3	IMPACT FOR FOUNDATION DESIGN TO INCLUDE DEAD LOAD PLUS IMPACT VALUE ON OPENING AT MAXIMUM INTERACTING RATING IN DEAD LOAD	
<b>10</b>	<b>CONSTRUCTIONAL FEATURES</b>	
(a)	MASS OF COMPLETE CIRCUIT BREAKER WITH MECHANISM AND VACUUM BOTTLE	
(b)	MASS OF VACUUM BOTTLE	
(c)	NO. OF BREAKERS IN SERIES PER POLE.	
(d)	MINM. CLEARANCE IN AIR.	
(I)	BETWEEN POLES	
(ii)	TO EARTH	
11	ARRANGEMENT PROVIDED	
	POLE DISCREPANCY	
(a)	TRIP FREE / FIXED TRIP	
(b)	ANTI PUMPING	
12	CONNECTION FOR CT	
(a)	SIZE	
(b)	MATERIAL	
13	CONNECTION FOR PTs	
(a)	SIZE	
(b)	MATERIAL	

**Name of Firm**  
**Signature of Bidder**  
**Designation & Seal**  
**Date**



**Schedule – VI (A)**

**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.

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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)****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:-

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

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

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

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

**SCHEDULE-VIIA****TN-1560****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 Utilities / Government Departments / Discoms/ SEBs as detailed out below:

**FOR THE LAST THREE FINANCIAL YEARS FROM THE DATE OF OPENING OF TECHNO-COMMERCIAL BID.**

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

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

Signature of C.A  
Name :  
Address:

Membership No

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:- 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.**

**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**

## Schedule – VIII

**JODHPUR VIDYUT VITRAN NIGAM LIMITED****A Govt. of Rajasthan Undertaking  
DELIVERY SCHEDULE****PART-A**

The delivery schedule of the material by the Purchase Officer is as mentioned hereunder:-

<b>Sr. No.</b>	<b>Particulars of Material</b>	<b>Commencement period</b>	<b>Rate of supply per month</b>	<b>Period for completion of delivery of entire material</b>
1.	<b>12 KV OUTDOOR VCB KIOSKS</b>	After 60 Days from the date of receipt of detailed Purchase Order/ proto approval.	_____ Nos. per month (to be quoted by tenderer)	Completion in <b>SIX months</b> at equal monthly rate.

**PART-B**

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

<b>S.No.</b>	<b>Particulars of Material</b>	<b>Commencement period per Month.</b>	<b>Rate of supply per Month material</b>	<b>Period for completion of delivery of entire</b>
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**Note:** 1. During the commencement period the process of model assembly and submission of B.O.M. for approval shall be got completed.

2. During the commencement period the contractual formalities shall be got completed.

**(Signature)**

Name & Designation  
with seal of the bidder.

**Schedule – IX****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 &amp; enclosed with the bid)

Manufacturers and / or their authorized agents who are quoting against this bid are requested to furnish the following information along-with the bid. The Purchaser will have the discretion to ignore the bid without the under noted particulars and/or ignore the bid particulars.

1.	Name and Address of Manufacturer (with landline, mobile & FAX No.)	
2.	Official email ID	
3.	GSTIN	
4.	Whether firm is proprietorship/partnership/ Limited (Please give details and also enclose copy of memorandum of constitution of firm along with name of directors/ partners/proprietor & their address.	
5.	Place where works exist (indicate the name of the only one works from where you want to supply the offered material).	
6.	Details of machinery particularly with B.H.P. of each item installed.	
7.	Details of staff employed in the works	
8.	Date when started the manufacturing of item under reference	
9.	List of items manufactured.	
10.	Literature and drawings of items manufactured showing their description, size, design and other important technical particulars	
11.	Details of order so far, executed along with the names of organization to whom supplied.	
12.	Manufacturing capacity.	
13.	Is the workshop open for inspection by the representative of the board, if required?	
14.	Statement of financial resources and Banking Reference along with Balance-Sheet for previous two years	
15.	Testing facilities available for the manufactured articles in the testing laboratory of works.	
16.	Whether the Firm is a small/medium/large scale industry.	
17.	Registration No. with :-	
	• i. Small Scale, National/State.	
	ii) DGTD	
	iii) State Industries Department	

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

**GENERAL PARTICULARS ABOUT THE TENDER IN BRIEF**

**JODHPUR VIDYUT VITRAN NIGAM LIMITED  
( MATERIAL MANAGEMENT )  
NEW POWER HOUSE, INDUSTRIAL AREA JODHPUR-342003**

**TELEPHONE: - 0291-2651376****FAX: - 0291-2746539**

**SPECIFICATION FOR SUPPLY OF 12 KV OUTDOOR VCB KIOSKS UNDER SPECIFICATION NO.JdVVNL/SE/MM/SPO-V/TN-1560.**

NIT No.	TN-1560
<b>Last date for receipt of tenders</b>	<b>29.08.2019 upto 12:00 PM</b>
<b>Date &amp; time of tender opening</b>	<b>29.08.2019 at 3:00 PM</b>
Cost of Specification	Rs. 2,950.00 (Two Thousand Nine Hundred & Fifty only) For MSME Of Rajasthan: Rs. 1,475 (One Thousand Four Hundred & Seventy Five only)
Processing of RISL	Rs. 1,000.00 per set (One Thousand only)
Bid security to be deposited	i) General Bidder : Rs. 47,47,828.00 ii) Sick Unit of Rajasthan : RS 23,73,914.00 iii) SSI unit of Rajasthan: Rs 11,86,957.00 *
Validity	120 days from the next date of opening of techno-commercial bid.

**\*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 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 attest documentary evidence duly attested by notary to claim the above.

**VERY VERY IMPORTANT**

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:

1. 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.
2. Departments / Discom for similar or higher rating equipment latest executed.
3. Year wise past experience for last 5 years of similar or higher rating of tendered equipment.
4. The details of testing facilities available at the works and copies of latest type test certificates, carried out on similar ITEM.
5. Quality assurance plan.
6. Complete guaranteed technical particulars, out lines and general arrangement drawings along with Bill of Material.
7. Bids without Section-I, II, III & Schedules (I to XI) shall be rejected.
8. Bids shall be furnished **through online**.



9. 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.
10. 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**).
11. Deviation of any kind shall not be quoted in price bid, if found quoted, the same shall be ignored.
12. 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
-

**Format of Affidavit**  
**(ON NON JUDICIAL STAMP OF RS. 100/-)**

I \_\_\_\_\_ S/o \_\_\_\_\_ Aged \_\_\_\_\_ Yrs. \_\_\_\_\_  
Residing at \_\_\_\_\_ Proprietor/Partner/Director of  
M/s \_\_\_\_\_ do hereby solemnly affirm and declare that:

(a) My/Our above noted enterprise M/s \_\_\_\_\_ has been issued  
acknowledgement of Entrepreneurial Memorandum Part II by the District Industries  
Centre \_\_\_\_\_. The acknowledgement No. is \_\_\_\_\_ dated  
\_\_\_\_\_ and has been issued manufacture of following items:

Name of Items	Production Capacity (Yearly)
---------------	------------------------------

- (i)
- (ii)
- (iii)
- (iv)
- (v)

(b) My/Our above noted acknowledgement of Entrepreneurial Memorandum Part-II has not been cancelled or withdrawn by the Industries Department and that the enterprise is regularly manufacturing the above items.

(c) My/Our enterprise is having all the requisite plant and machinery and is fully equipped to manufacture the above noted items.

Place \_\_\_\_\_

Signature of  
Proprietor/Director Authorized Signatory  
With Rubber Stamp and date

**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 favour 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 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 **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., may now be read as G.S.T.**

**5) 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 effort to make payment to the contractor / supplier generally on **45<sup>th</sup> 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.

**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 Vitaran 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.

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**IMPORTANT INSTRUCTION**

As discussed following instructions/clarifications are required to be incorporated in the tender specification:

1. All the intending bidders are requested to submit hard copy of all the document(s), uploaded on the e-procurement web-portal, in a sealed envelop in the office of the SE (MM & C), JdVVNL, Jodhpur. This sealed envelop shall be opened on the same date of bid opening i.e. on website of e.proc.rajasthan.
2. Bidders are requested to read the bid documents very carefully and upload their bid well in time. Please note that in the event of shortcoming in any tender document(s), the bid is likely to be rejected.
3. At the time of accepting counter offer given or at the time of negotiation, bidders change the quantity of original offer & give the conditional acceptance of counter offer which is not in accordance with RTPP rules and Act therefore Negotiation with the bidders or counter offer given to bidder shall be accepted in terms of price only. Restriction on quantity to be supplied or any other conditional offer shall not be accepted. If any conditional offer is given then that bidder shall be treated for violation of the code of integrity in terms of sec 11 of RTPP Act and Rule 80 of RTPP Rules and action shall be taken against defaulter bidder in accordance with RTPP Rules and Act.
4. In case of bid security deposited, the firm deposits lesser security than the required amount, bid shall be rejected.
5. As per notification SO 165 issued by Fin. Dept. dt. 19.11.2015 on reference to RTPP rules, "clause 8(A)" bidding document shall be provided to MSME at 50% of prescribed cost.
6. RTPP Act 2012 & RTPP rules 2013 shall be applicable for the procurement process.
7. A declaration regarding debarment/blacklisting/code of integrity shall be given by bidder in Annx-'A'.

**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.**

**Firm's Name  
Seal & Signature**