

## **ANNEXURE : II**

Other than the vendors to whom the enquiry has been issued, interested vendors who wish to participate in the tender may apply with proper credentials and other relevant details so as to reach Head-Materials, Oil India Limited, P.O. Duliajan, Dist. Dibrugarh, Assam – 786602 (e-mail : [material@oilindia.in](mailto:material@oilindia.in), Fax : 0374-2800533) within 10 days of publication of the tender on OIL's website.

The vendors must fulfill the following conditions:

- i) The party should have 03 (three) years' experience as on the Bid closing date for the same item.
- ii) The party should have received one order for at least 50% quantity in last 03 (three) years' (as on the Bid closing date) for the item from any reputed firm.
- iii) Annual turnover of the firm in any of the last 3 (three) financial years or current financial year should be more than Rs.9.99 lakh.

### **NOTE:**

- a. The applicant must meet the above qualifying criteria for which documentary evidence should be enclosed by the applicant with the application without which tender document shall not be issued.
- b. Relevant documents in support of experience, last order and annual turnover must be submitted along with the application.
- c. Application without complete supporting document will not be considered.

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**Format For Uploading NIT in Oilindia web Portal**

\* indicates mandatory field.

Tender No : *	DID9574L16
Tender Title : *	4 WAY RMU
Tender Type : *	<div>Limited</div>
Attached File Name : *	DID9574L16
Is Flagged ?	<input checked="" type="checkbox"/>

**Tender No.** : DID9574L16/L5  
**Tender Date** : 12.12.2015  
**Bid Closing On** : 31.03.2016 at 13:00 hrs.(IST)  
**Bid Opening On** : 31.03.2016 at 13:00 hrs.(IST)

**Tender issued to following parties only:**

S/no	V_Code	Vendor Name	City/Country
1	200211	STEEL & INDUSTRIAL STORES	ASSAM
2	200310	ASSAM ELECTRICALS	TINSUKIA
3	200384	PHILIPS ELECTRONICS INDIA LIMITED	KOLKATA
4	200832	INDUSTRIAL EQUIPMENTS	GUWAHATI
5	201832	BAJAJ ELECTRICALS LIMITED	GUWAHATI
6	202000	BENGAL ELECTRICAL INDUSTRIES	KOLKATA
7	202289	U.K. ENTERPRISE	GUWAHATI
8	203062	GLOCON	TINSUKIA
9	203118	OSRAM INDIA LTD	KOLKATA - 700 020
10	203202	HAVELL'S INDIA LIMITED	GUWAHATI
11	203453	ELMECH TRADERS	TINSUKIA
12	203577	ARADHANA AGENCY	GUWAHATI
13	203799	CROMPTON GREAVES LTD	GUWAHATI
14	204724	KIRAN ELECTRONICS	GUWAHATI
15	204799	NATIONAL ELECTRIC CORPN (CAL)	KOLKATA
16	205062	POWER GRID ASSOCIATES	DULIAJAN
17	205108	GE INDIA INDUSTRIAL PVT. LTD.	KOLKATA
18	205516	VENUS ENTERPRISE	MORANHAT
19	205574	NATIONAL MARKETING ENTERPRISES	TINSUKIA
20	208275	VAISESHIKA	AMBALA CANTT
21	208329	GARG HARDWARE & ELECTRICALS	JORHAT
22	208781	SHIV ENTERPRISE	TINSUKIA
23	208845	BALAJI ELECTRICALS	TINSUKIA
24	210398	TIRUPATI ELECTRICAL	DULIAJAN
25	212296	MANGALAM ENTERPRISE	DULIAJAN

**OIL INDIA LIMITED**  
(A Govt. of India Enterprise)  
P.O. Duliajan-786602, Assam

**E-mail:**material@oilindia.in, **Fax No.**91-374-2800533

**Tender No. & Date : DID9574L16/L5 12.12.2015**

Bid Security Amount : INR 0.00 OR USD 0.00  
(or equivalent Amount in any currency)

**Bidding Type : Single Bid (Composite Bid)**

Bid Closing On : 31.03.2016 at 13:00 hrs. (IST)  
Bid Opening On : 31.03.2016 at 13:00 hrs. (IST)

Performance Guarantee : Not Applicable

OIL INDIA LIMITED invites Limited tenders for items detailed below:

Item No./ Mat. Code	Material Description	Quantity	UOM
<b>10</b> 0C000404	<p><b>Supply, installation, testing and commissioning of 1 No. of 11kV extensible 4-Way SF6 insulated Ring Main Unit with VCB.</b></p> <p>1.0 SCOPE: This specification covers supply, installation, testing and commissioning of 11kV extensible SF6 insulated Ring Main Unit with VCB at site. The RMU shall be outdoor type comprise of two(02) Nos Load Break Switch and two (02)Nos Vacuum Circuit Breaker and should be tested in accordance to IS/IEC 62271 or equivalent standards. It should be ready for operation on delivery. The RMU to be supplied against this specification are required for vital installations where continuity of service is very important. The design, materials and manufacture of the equipment shall, therefore, be of the highest order to ensure continuous and trouble-free service over the years.</p> <p>2.0 APPLICABLE CODES AND STANDARDS The latest revision / amendments of the following codes and standards shall be applicable for the equipment: IS/IEC 62271-part 100: High-voltage alternating-current circuit breakers. IS/IEC 62271-part 102: Alternating current disconnectors (isolators) and earthing switch. IS/IEC 62271-part 200: AC metal-enclosed switchgear and control gear for rated voltage above 1 kV and up to and including 52 kV. IEC 60376: Specification and acceptance of new sulphur hexafluoride. IEC 60529: Classification of degree of protection provided by enclosures.</p> <p>3.DESIGN AND CONSTRUCTION REQUIREMENTS 3.1 General: 3.1.1 The ring main unit shall consist of the following configurations: (i) 2 Nos. ring switches (Isolators) for through feed and 1 No. circuit breakers for tee-off according to manufacturer's type-tested configuration. (ii) 2 Nos. 630A, 11kV Incoming Load Break Switches with integral Earth Switch (iii) 1 No. 630A, 11kV Feeder Vacuum Circuit Breakers with microprocessor based IDMT 3 O/C + E/F numerical relays. (iv) Voltage presence indicating system (VPIS) in all modules: Make: Electrotech/Siemens or equivalent</p>	1	NO

**Tender No. & Date : DID9574L16/L5****12.12.2015**

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	<p>(v) 110V/ 12V Power pact with 12 Volt battery for auxiliary power supply, Make: Allen Bradley or equivalent.</p> <p>3.1.2 The terminals of the switches shall be suitable for installation of XLPE cable sizes of 3C 11kV 240 sqmm.</p> <p>3.1.3 All live parts of the switchgear and busbars assembly shall be grouped together and SF6 gas insulated in a gas-tight stainless steel chamber, and sealed for life.</p> <p>3.1.2 The terminals of the switches shall be suitable for installation of XLPE cable sizes of 3C 11kV 240 sqmm.</p> <p>3.1.3 All live parts of the switchgear and busbars assembly shall be grouped together and SF6 gas insulated in a gas-tight stainless steel chamber, and sealed for life.</p> <p>3.2 Foundation:</p> <p>3.2.1 The party shall develop foundation designs for the RMU based on the information/drawing furnished by the manufacturer of the RMU.</p> <p>3.3 Shed construction:</p> <p>The party shall construct shed for RMU panel with the following specification:</p> <p>3.3.1 Foundation: posts/columns shall be grouted with 1:2:4 concrete to form a block of 600x600x900 mm</p> <p>3.3.2 Structure: Pitched roof truts 1:3 slope made with MS tubular sections of suitable sizes including columns/posts. All steel sections shall be painted with synthetic enamel over a coat of red-oxide primer.</p> <p>3.3.3 colour coated galvalume / zincalume 0.50 mm thick profile sheet.</p> <p>3.3.4 Flooring (surrounding area): 75 mm thick trowel finished 1:2:4 concrete floor over a layer of flat brick soline over compacted earth.</p> <p>3.3.5 The successful bidder shall obtain drawing approval from OIL for design &amp; construction of shed for RMU Panel</p> <p>3.4 System Characteristics:</p> <p>The ring main unit shall be suitable to operate under system parameters. Electrical and mechanical strength of ring main unit shall be designed to operate in a system to withstand a short circuit current of 21 kA for 3 second or more at 11 kV nominal voltage.</p> <p>3.5 Current Rating</p> <p>The continuous current rating of the unit shall be in accordance with relevant IS/IEC standards:</p> <p>Load break switches (Isolator): 630 A, 11kV</p> <p>Circuit Breaker : 630 A, 11kV</p> <p>Bus Bar : 630 A, 11kV</p> <p>3.6 One (01) No Vacuum Circuit Breakers complete with motorised spring charging with breaker ON/OFF operating mechanism, power pact with battery for auxiliary power, numerical type O/C, S/C, E/F protection relay with associated Current Transformers shall be used for control and protection of Transformer. An integral cable earthing switch with full making capacity shall be provided.</p> <p>3.7 The Load Break Switch, Bus bars should be mounted inside a welded sealed for life, stainless steel tank of not less than 2.5 mm thick. The tank</p>		

Tender No. &amp; Date : DID9574L16/L5

12.12.2015

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	<p>should be filled with SF6 gas at adequate pressure. The degree of protection for gas tank should be IP67. There shall be provision for filling the SF6 gas at site. The Stainless Steel Gas Tank shall confirm to the sealed pressure system as per IS/IEC and ensure the gas leakage to 0.1 % per year as per IS/IEC.</p> <p>3.8 The VCB is required to control 11 kV Feeder/Transformer Feeder protection and shall be selected accordingly.</p> <p>3.9 Breaking &amp; Making Capacity: The Load Break Cable Switches shall be capable for breaking rated full load current. The same along with its earthing switch shall also be suitable for full making capacity of the system as specified. The complete switchgear shall be suitable for breaking capacity of 20kA symmetrical at 11000 volts three phase.</p> <p>3.10 Busbar: Switchgear shall be complete with all connection, bus-bars etc. Copper bus bars continuous rating shall be 630 Amps. The bus bars should be fully encapsulated by SF6 gas inside the steel tank.</p> <p>3.11 Protection: The Circuit breaker shall be fitted with numerical type relay. The same shall be used in conjunction with 100/1 CT's and Tripping Coil for fault tripping of the Circuit Breakers.</p> <p>3.12 Cable Termination: Each Cable compartment shall be provided with three bushings of adequate sizes to terminate the incoming outgoing 11kV 3 Core XLPE cables of 240 sq.mm. There shall be enough height from the base of the mounted switchgear so that the cables can be bent and taken vertically up to the bushings. The Cable termination shall be done by Heat shrinkable Termination method so that adequate clearances shall be maintained between phases for Termination. Access to all the cables should be possible from the front of RMU. Cable Termination boots shall be supplied by the switchgear manufacturer.</p> <p>4.0 TECHNICAL SPECIFICATIONS:</p> <p>4.1. Switchgear Data</p> <p>a) Service : Outdoor</p> <p>b) Type : Metal enclosed</p> <p>c) Number of Phases: 3</p> <p>d) System Voltage : 11kV</p> <p>e) Rated Frequency: 50 Hz</p> <p>f) Rated Current : 630 Amps</p> <p>g) System earthing : Solidly earthed</p> <p>4.2. Load Break Switches (Isolators)</p> <p>a) Type : Load breaking and fault making</p> <p>b) Rated Current : 630 Amps</p> <p>c) Rated Breaking capacity (kA rms): 20 kA (min.)</p> <p>d) Fault making capacity (kA peak) : 50 kA (min.)</p> <p>e) No. of poles : 3</p> <p>f) Operating mechanism: Operating handle with ON, OFF, Earth positions with arrangement for padlocking in each position.</p> <p>g) SF6 Chamber : With SF6 gas pressure gauge indicator and filling arrangement.</p>		

Tender No. &amp; Date : DID9574L16/L5

12.12.2015

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	<p>4.3 Vacuum Circuit Breaker</p> <p>a) Type : Fixed Type</p> <p>b) Rated Voltage : 12kV</p> <p>c) Rated Current : 630A</p> <p>d) Breaking current : 20kA for 3 Seconds.</p> <p>e) Making current : 50kA</p> <p>f) Short time rating : 20kA for 3 Sec.</p> <p>g) Impulse flashover withstand voltage: 75kV peak</p> <p>i) Power frequency withstand voltage : 28kV(rms)</p> <p>j) No. of poles : 3</p> <p>k) Operating mechanism: Trip free &amp; free handle type with mechanically operated indication &amp; pad locking.</p> <p>4.4 Busbars</p> <p>a) Material : Copper</p> <p>b) Rated Current : 630 Amps</p> <p>c) Breaking Current for 3 sec.: 20 kA</p> <p>d) Insulation of Busbars: Heat shrinkable sleeve insulation of 11KV voltage grade should be provided on busbar, its risers &amp; connections and shall be marked in different colour codes for identification of three different phases(R, Y, B).Thickness of busbar sleeve shall be 3 mm and shall be made of Raychem RPG 11 kV grade or similar type</p> <p>4.5 Load break switch (Isolator)</p> <p>The LBS offered shall conform to IS/IEC: 62271-102 as amended to date. The LBS shall be triple pole, spring assisted, hand operated, non-automatic type with quick break contacts. The operating handle shall have three positions 'ON', 'OFF' and 'EARTH' which shall be clearly marked with suitable arrangement to padlock in any position. A safety arrangement for locking shall be provided by which the isolator operation shall be prevented from 'ON' position to 'EARTH' position or vice versa.</p> <p>4.6 Switchgear:</p> <p>4.6.1 Sealed for life, the enclosure shall meet the "sealed pressure system" criteria in accordance with IS/IEC: 62271-200. In addition, manufacturer shall confirm that maximum leakage rate is lower than 0.1% per year. It shall provide full insulation, making the switchgear insensitive to the environment. Thus assembled, the active parts of the switchgear unit shall be maintenance free. The Entire units of RMU shall be in a single compact metal clad, outdoor type suitable for all weather conditions. The switchgear and bus bar shall all be filled with SF6 at 0.3-0.5 bar G/IEC/IS Standards relative pressure to ensure the insulation and breaking functions. The SF6 tank must be sealed for life and shall meet the "sealed pressure system" criterion in accordance with the IEC 62271-200 standard. The high-voltage vessel shall be made up of non-magnetic stainless steel grade SS304 or higher and must be tested for internal arc fault for 21kA/1sec. The cable compartment must also be type tested for internal arc fault for 21kA/1 sec. RMU shall be IAC tested for FLR 21kA/1sec.</p> <p>4.6.2 The switchgear &amp; switchboard shall be designed so that the position of different devices is visible to the operator on the front of the switchboard. The entire switching system shall be totally encapsulated. There shall be no</p>		

**Tender No. & Date : DID9574L16/L5****12.12.2015**

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	<p>access to exposed conductors. In accordance with the standards in effect, the switchboard shall be designed so as to prevent access to all live parts during operation without the use of tools.</p> <p>4.6.3 RMU should be tested for internal arc fault test as per the latest IS/IEC 62271-200 for 20KA/0.1 sec. This test shall be performed in cable compartment as well as the stainless steel HV enclosure and the valid type test reports shall be submitted for technical evaluation.</p> <p>4.6.4 The cable compartment cover must be interlocked with the switch position and the operator should get access only once the feeders is switched OFF &amp; EARTHED. The units shall be fitted with the standardized bushings that comply with EN 50181 standards. All the bushings shall be at the same height at min 850mm from the gland plate and shall be protected by a cable boot tested for partial discharge of &lt;5Pc, 95kv BIL level. All the cable bushings must be accessible from front only.</p> <p>4.6.5 Sulphur Hex fluoride Gas (SF6 GAS) The SF6 gas shall comply with IEC 376,376A,and 376B and shall be suitable in all respects for use in 11 KV panels under the operating conditions. The SF6 shall be tested for purity, dew point air hydrolysable fluorides and water content as per IEC 376,376A and 376B and test certificate shall be furnished to the owner indicating all the tests as per IEC 376 for each Lot of SF6 Gas. The stainless steel vessel shall be type tested for pressure test &amp; the type test report for the same shall be submitted along with the bid.</p> <p>4.7 Circuit Breaker: The Unit shall consists of two (02) No. of 630A Tee-off spring assisted, three pole Vacuum circuit breaker. The VCB for the controlling of DT must be provided inside the outdoor metal clad and insulated by SF6 gas , with combined disconnecter for earthing. The function shall be naturally interlocked to prevent the main &amp; earth switch from being switched 'ON' at the same time &amp; the CB not allowed to trip in 'Earth On' position. The selection of the main/earth switch lever on the panel, which is allowed to move only if the main or earth switches in the off position. The lever shall be able to pad locked in either the main or earth position. Manufacturer of the RMU must use its own make of vacuum interruptor in the offered switchgear. The type test reports shall mention the make of the VI used for type testing.</p> <p>4.8 Protection Relay : Numerical type relay having O/C, S/C and E/F Protection with Low set (Time Delay) and High-set (Instantaneous) Elements (50/51,50N/51N) suitable for solidly grounded system.</p> <p>4.8.1 The degree of protection of the relay enclosure shall be of class IP 54 or better. Relay shall be suitable for outdoor installations in extreme heat and dusty conditions without affecting its normal performance.</p> <p>4.8.2 The relay shall be suitable for 5A or 1A CT secondary current and 12 Volt auxiliary power supply powered with power pact with battery.</p> <p>4.8.3 Phase fault over current protection shall have IDMT features so as to coordinate with upstream IDMT and definite time delay relay. The selectable minimum pickup setting shall be 0.1 In.</p>		



**Tender No. & Date : DID9574L16/L5****12.12.2015**

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	<p>4.8.4 Ground fault protection shall have definite time characteristics features and shall have:                  Selectable pickup setting.                  Time setting range of 0.1 to 1.0s.</p> <p>4.8.5 The relay and CTs should be compatible with each other and the relay shall impose low burden on CTs.</p> <p>Make: ABB(REF 615)/Seimens(type Siprotec 7SJ80/ Areva T&amp;D India Ltd (type Micom-p122)/Micom Alstom p40/ ASHIDA/C&amp;S</p> <p>4.9 Voltage Indicator Lamps (VPIS)  The RMU shall be equipped with a LED voltage indication lamps with sensor as per IEC 601958 to indicate whether or not there is voltage on the cables.</p> <p>4.11 Name Plate / Rating Label  Ring main unit shall be provided with Aluminum /Stainless steel / Brass nameplate showing the following information indelibly marked in English:  o Manufacturer's Name  o Type/Model  o OIL's Purchase Order No. &amp; date  o Manufacturer's Serial Number  o Year of Manufacture  o Voltage Rating, kV  o Current Rating, Amps  o BIL, kV  o Short Circuit Rating / Duration, kA / Sec  o Rated Frequency, Hz  o Rated Making Current, kA  o Rated Breaking Current, kA  o Gross Weight, kg</p> <p>4.12 Danger Plates  Danger plate shall be provided and installed at the front of the ring main unit using M5 hot dipped galvanized /stainless steel / brass fasteners (oval head rounded neck bolts with nuts and external tooth lock washers) not removable / accessible from the front i.e. without opening the door / front cover.</p> <p>4.13 Type Tests:  The offered RMU should have been successfully type tested at NABL approved laboratories in India or equivalent international laboratories in line with the relevant standard and technical specification, within the last 5 (five) years from the date of offer. The bidder shall be required to submit complete set of the type test reports along with the offer.</p> <p>4.14. GUARANTEED TECHNICAL PARTICULARS:  The technical particulars as per IS shall be guaranteed and Guaranteed Technical particulars as per Annexure-I shall be furnished by the Bidder along with the bid.</p> <p>5.0 DOCUMENTS/ SUBMITTALS:  5.1 The following documents shall be submitted with the offer  i. GA drawing of the prefabricated RMU showing dimensional details  ii. RMU foundation detailed drawing</p>		

Tender No. &amp; Date : DID9574L16/L5

12.12.2015

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	<p>iii. Type Test certificates for tests conducted earlier on similar equipment shall be furnished.</p> <p>5.2. The successful bidder shall obtain approval for the following drawings, documents. All electrical details shall be submitted within 45 days of placement of order. OIL shall require minimum 30 days time for approval of drawings. The approval time may increase depending upon clarifications required from the bidders.</p> <p>i. GA drawing showing all details, including constructional detail, foundation detail and component layout of the prefabricated RMU.</p> <p>5.3. Four sets of the following documents shall be submitted with the supply</p> <p>i. Approved GA drawing showing all details, including constructional detail and component layout for panels</p> <p>ii. Technical specification of all equipment</p> <p>iii. Bill of materials with catalogues of various components.</p> <p>iv. Type test certificates of individual components of the RMU i.e. Isolators, Breaker, Relay etc as per relevant IS/IEC.</p> <p>v. Guarantee Certificate</p> <p>vi. List of recommended spare parts with part no. for two year</p> <p>6.0 SPECIAL NOTES:</p> <p>6.1 Bidder shall confirm in the bid that:</p> <p>6.1.1 The installation, testing &amp; commissioning of 11KV SF6 outdoor type RMU will be carried out under supervision of experienced supervisor certificate of competency for carrying out 11kv works valid for operating in Assam.</p> <p>6.1.2 All electrical works shall be carried out by person having valid supervisor certificate of competency for operating in Assam.</p> <p>6.1.3 Services of specialist Engineer from manufacturer shall be required at site for commissioning of the RMU with testing of numerical relay.</p> <p>6.1.4 Manufacturer of prefabricated 11KV outdoor type RMU shall have the testing facilities to carry out the routine tests of the RMU in their manufacturing works.</p> <p>7. TEST AND INSPECTION:</p> <p>7.1 The RMU shall be inspected by OIL engineer at manufacturer's work prior to dispatch.</p> <p>7.2 Routine tests on the RMU including primary &amp; secondary injection tests of relays in accordance with IS/IEC shall be carried out at the manufacturers works which shall be witnessed by OIL engineer.</p> <p>7.3 The supplier shall give 15 days' advance intimation to OIL regarding inspection for deputing Engineer.</p> <p>8. WARRANTY:</p> <p>The equipment shall be of best quality and workmanship. The RMU with all electrical equipments shall be guaranteed for 12 (Twelve) months from the date of commissioning against defects arising due to material, workmanship or design.</p> <p>9. Make of 4-Way RMU : ABB / Siemens / Schneider Make of CT &amp; PT: same as manufacturer of RMU.</p> <p><b>ANNEXURE - I (Copy attached)</b></p>		

Tender No. &amp; Date : DID9574L16/L5

12.12.2015

Item No./ Mat. Code	Material Description	Quantity	UOM
<b>20</b> 0C000001	<b>TERMINATION KIT, OUTDOOR TYPE, FOR 3C X 240. SQ.MM XLPE CABLE, 11KV.</b>  Heat Shrinkable end termination kit for following cable and having the following features: Size of cable: 3 core, 240 sq.mm, Aluminium Voltage grade: 11,000 VAC Cable type : Cross linked polyethylene (XLPE), armoured Type of kit:Outdoor Shelf life :Minimum 5 years. Make: Raychem/Heat shrink/ Xicon Note : The package shall contain the following information/ documents : 1. Make. 2. Batch no. 3. Date of manufacture. 4. Date of expiry. 5. Shelf life of the kit. 6. Guarantee certificate. 7. Installation manual.	4	NO
<b>30</b> 0C000001	<b>Heat Shrinkable end termination kit for following cable and having the following features:</b> Size of cable: 3 core, 240 sq.mm, Aluminium Voltage grade: 11,000 VAC Cable type : Cross linked polyethylene (XLPE), armoured Type of kit:indoor Shelf life :Minimum 5 years. Make: Raychem/Heat shrink/ Xicon Note :The package shall contain the following information/ documents : 1. Make. 2. Batch no. 3. Date of manufacture. 4. Date of expiry. 5. Shelf life of the kit. 6. Guarantee certificate. 7. Installation manual.	4	NO
	<b>INSTALLATION, TESTING AND COMMISSIONING</b>		
10	Installation, Test.& Comm. of Item-10, <b>Installation, Testing &amp; Commissioning of the above 1 nos of 11kV, SF6 3-Way Ring Main Unit:</b>  1) Shall be carried out by specialist engineer required from manufacturer for testing of RMU. A person holding the certificate of competency of supervising and skilled technician is required at the time of energizing of panel. 2) Tools and tackle should be provided by supplier for testing of the panel. 3) Secondary injection testing of VCB are required to be carried out by party at site before energisation of the panel and relevant test of RMU shall be carried out by party at the site. IR value of the panel shall be checked before energizing. Earth resistance value shall also be checked	1	AU

	before energizing of prefabricated RMU. 4) Earthing: Earthing of the prefabricated RMU shall be in the scope of supplier. All the materials required for earthing shall be brought by the supplier. The entire earth electrode should be connected together and resistance of earth should be less than 5 ohm. Earth electrode shall be connected with 50mm×6mm GI Strap. 5) Shall construct the foundation and Shed for RMU panel as per the OEM recommendation including supply of all required materials (sand, cement, gravel, GI pipe, GI shed,etc.		
20	Trench Cutting, Laying of Cable	1	AU
30	Termination Kits	1	NO

**Standard Notes:** (1) **VALIDITY :** Your offer must be valid for 75 days from the date of bid opening. Offer with inadequate validity will be rejected.

(2) The offer should be submitted in Duplicate.

(3) Any sum of money due and payable to the contractor (including Security Deposit refundable to them) under this or any other contract may be appropriated by Oil India Limited and set-off against any claim of Oil India Limited (or such other person or persons contracting through Oil India Limited) for payment of a sum of money arising out of this contract or under any other contract made by the contractor with Oil India Limited (or such other person or persons contracting through Oil India Limited).

(4) In the event you authorize your dealer/stockist/channel partner to quote on your behalf, the dealer/stockist/channel partner while submitting bid should mention on the body of the envelope that they are submitting bid on your behalf.  
In the event the dealer/stockist/channel partner do not mention the name of their OEM/principal on the body of the envelope, the offer shall be treated as unsolicited offer and will not be considered for opening.  
The dealer/stockist/channel partner should take note of above while submitting bid on behalf of their OEM/principal.

(5) For order with F.O.R. Destination term, 100% payment against despatch documents will not be entertained. In this regards please refer payment terms in ANNEXURE-MM/TENDER/LP/01/06.

(6) To evaluate the inter-se ranking of the offers, Assam Entry Tax on purchase value will be loaded as per prevailing Government of Assam Guidelines as applicable on bid closing date. Bidders may check this with the appropriate authority while submitting their bids.

(7) Bidder must mention page no./nos. in every pages of their offer.

(8) Bidders should submit their bids (preferably in tabular form) explicitly mentioning compliance / non compliance to all the NIT terms and conditions of NIT.

(9) Bidder should clearly mention their name and address on the outside of the envelope containing their offer.

(10) In the event of receipt of only a single offer against the tender within B.C.date, OIL reserves the right to extend the B.C. date as deemed fit by the company. During the extended period, the bidders who have already submitted the bids on or before the original B.C date, shall not be permitted to revise their quotation.

(11) Other than the vendors to whom the enquiry has been issued, interested vendors who wish to participate in the tender may apply with proper credentials and other relevant details so as to reach Head-Materials, Oil India Limited, P.O. Duliajan, Dist. Dibrugarh, Assam - 786602 (e-mail : material@oilindia.in, Fax : 0374-2800533) within 10 days of

publication of the tender on OIL's website.

(12) Bidders to note that Govt. of India under Micro, Small and Medium Enterprises Development (MSMED) Act 2006, has proclaimed the Public Procurement Policy, 2012 with effect from 1st April, 2012 in respect of procurement of goods and services, produced and provided by micro and small enterprises, by its Ministries, Departments and Public Sector Undertakings for promotion and development of Micro and Small Enterprises. A new Clause on applicability of Public Procurement Policy for procurement of goods from Micro, Small and Medium Enterprises (MSME) in the tender is furnished vide Amendment to General Terms and Conditions for INDIGENOUS TENDERS (MM/TENDER/LP/01/06). Bidders are requested to take note of the same and to submit their offers accordingly."

- Special Notes :**
1. The offered RMU should have been successfully type tested at NABL approved laboratories in India or equivalent international laboratories in line with the relevant standard and technical specification, within the last 5 (five) years from the date of offer. The bidder shall be required to submit complete set of the type test reports along with the offer.
  2. The bidder should have successfully completed in supply and commissioning of minimum 1no of 11KV RMU in any central Govt. /Govt. PSU/Public Limited Companies during the last 5 years. Copy of Work Order/SES/Completion certificate must be submitted along with the offer.
  3. Quotation alongwith technical catalogues/literatures, dimensional drawings for all items should be submitted for technical evaluation.
  4. Bidder should quote for all items(10, 20, 30 & 40). Incomplete offer will not be acceptable. Materials under item- 20, & item-30 is for the installation and commissioning of RMU panel at site. Therefore, order for supplying of these items shall be placed on the same party on which order for supplying of item-10 is placed.
  5. Offer along with documents for supply of termination kits under item-20 & item-30 should be as per item description in NIT.
  6. Prefabricated 11KV RMU panel should be guaranteed for minimum one year period from the date of commissioning. Duly stamped Guarantee certificate should be supplied along with the material.
  7. Make of RMU Panel: CG/SIEMENS/ABB/Schneider.  
Make of Cable Termination Kits: Heatshrink/Raychem/Xylon
  8. Copy of test certificates for 11KV RMU panel and Termination Kits should be submitted along with the offer.
  9. The cable compartment of RMU must be type tested for internal arc fault for 21kA/1 sec. RMU should be IAC tested for FLR 21kA/1sec. Manufacturer of the RMU must use its own make of vacuum interruptor in the offered switchgear. The type test reports should mention the make of the VI used for type testing.
  10. The party should inform OIL for the inspection of RMU Panel at their premises/workshop before its dispatch.
  11. Installation, Testing and Commissioning of 11KV RMU panel at site including civil foundation and shed should be executed as per terms and conditions mentioned in item description of item-40.

12. Packing of materials should be adequate to avoid transit damage and ingress of water.
13. Bidder must quote for all items (10,20,30 & 40) and submit offer alongwith supporting documents. Incomplete offer shall not be accepted for evaluation.
14. Bidder must submit filled datasheet as per Annexure -I (enclosed herewith) mentioned in the item description of item no. 10.
15. Bidder should carry out the all required jobs for the proper installation, testing and commissioning of RMU panel at site.
16. Bidder should comply all required job list mentioned in item decription under item-40.
17. Installation & Commissioning of RMU should be carried out by specialist engineer required from manufacturer for testing of RMU. A person holding the certificate of competency of supervising and skilled technician is required at the time of energizing of panel.

## **ANNEXURE- I**

Guaranteed Technical Particular for 4-way Ring Main Unit-11kV extensible RMU (outdoor type):

### **1.0 SWITCHGEAR ASSEMBLY**

1.1 Make

1.2 Type

1.3 Reference Standards

1.4 Voltage (Normal/Max.) kV

1.5 Phase (Nos.)

1.6 Frequency (HZ)

1.7 Short Circuit rating

a) Breaking Symmetrical (KA)

b) Breaking Asymmetrical (KA)

c) Short time for 1 Sec. (KA)

d) Short time for 3 Sec. (KA)

1.8 Insulation Level

a) Impulse withstand (KV peak)

b) 1 Minute 50 Hz. Voltage withstand (KV rms)

1.9 Metal Clad Construction Yes/No

1.10 Degree of protection

1.11 Switchgear completely wire and tested at factory: Yes/No

### **2.0 CONSTRUCTION:**

2.1 Overall Dimensions

a. Breaker

i) Length (MM)

ii) Breadth (MM)

iii) Height (MM)

b. Isolator

i) Length (MM)

ii) Breadth (MM)

iii) Height (MM)

c. Total Non Extensible 4 Way RMU

i) Width (W) (mm)

ii) Depth (D) (mm)

iii) Height (mm)

2.2 Weight:

a) Breaker (Kg)

b) Isolator (Kg)

c) Extensible 4 Panel RMU (Kg)

3.0 Bus bar

3.1 Make

3.2 Material & Grade

3.3 Reference Standard

3.4 a) Cross sectional area (mm<sup>2</sup>)

b) Size (mm<sup>2</sup>)

3.5 Continuous Current

a) Standard

b) At site conditions and within cubicle

- 3.6 Maximum temperature rise over ambient (c)
- 3.7 Short time current for 1 Sec. (KA rms)
- 3.8 Minimum clearance from bare bus bar connection
  - a) Phase to phase (mm)
  - b) Phase to Earth (mm)
- 3.9 Bus Bar provided with
  - a) Insulation Sleeve
  - b) Phase barriers
  - c) Cast Resin shrouds for joints
- 3.10 Bus bar connection
  - a) Silver Plated
  - b) Made with anti-oxide grease
- 3.11 Bus Bar support spacing (mm)
- 3.12 Bus support insulators
  - a) Make
  - b) Type
  - c) Reference Standard
  - d) Voltage Class (KV)
  - e) Minimum creepage distance (mm)
  - f) Cantilever strength Kg/mm<sup>2</sup>
  - g) Net Weight (Kg)
- 3.13 SF<sub>6</sub> gas pressure (filling pressure at 20 deg. C)

#### 4.0 Vacuum CIRCUIT BREAKER

- 4.1 Make
- 4.2 Type
- 4.3 Reference Standard
- 4.4 Rated Voltage
- 4.5 Rated Frequency
- 4.6 No. of Poles
- 4.7 Rated Current
  - a) Normal (Standard) Amps
  - b) Rated (Site) Amps
- 4.8 Maximum temperatures rise over ambient.(deg. C)
- 4.9 Rated operating Duty
- 4.10 Rupturing capacity at rated voltage (MVA)
- 4.11 Breaking Capacity at rated voltage & operating duty
  - a) Symmetrical (KA rms)
  - b) Asymmetrical (KA rms)
- 4.12 Rated making current (KA peak)
- 4.13 a) Short time current for 1 Sec.(KA rms)
  - b) Short time current for 3 Sec.(KA rms)
- 4.14 Transient Recovery Voltage
  - a) Rate of rise (KV/ms)
  - b) Peak Voltage (KV)
- 4.15 Insulation Level
  - a) Impulse Voltage with stand on 1/50 full wave
  - b) 1 minute 50Hz voltage withstand
- 4.16 Maximum over voltage factor when switching off
- 4.17 Opening time Maximum No load condition (ms)



- 4.18 Opening and closing time under SF6 gas loss or vacuum loss condition (ms)
- 4.19 At 100% Breaking capacity
  - a) Opening time max (ms)
  - b) Arcing time max (ms)
  - c) Total break time (ms)
- 4.20 At 60% Breaking capacity
  - a) Opening time max (ms)
  - b) Arcing time max (ms)
  - c) Total break time (ms)
- 4.21 At 30% Breaking capacity
  - a) Opening time max (ms)
  - b) Arcing time max (ms)
  - c) Total break time (ms)
- 4.22 At 10% Breaking capacity
  - a) Opening time max (ms)
  - b) Arcing time max (ms)
  - c) Total break time (ms)
- 4.23 a) Make time (max)(ms)
- b) Total closing time (ms)
- 4.24 Number of breaks per pole
- 4.25 Total length of breaks per pole (mm)
- 4.26 Total length of contact travel (mm)
- 4.27 Speed of break (100% Short Circuit Current) m/sec
- 4.28 Rate of Contact travel
  - a) At tripping M/sec.
  - b) At closing M/sec.
- 4.29 No of breaker operations permissible without requiring inspection replacement of contacts and other main parts.
  - a) At 100% rated current
  - b) At 100% rated breaking current
- 4.30 Type of contacts
  - a) Main
  - b) Arcing
- 4.31 Material of contacts
  - a) Main
  - b) Arching
  - c) Whether contacts silver plated
  - d) Thickness of silver plating
- 4.32 Contact pressure at no load
- 4.33 Type of arc control device provided
- 4.34 Operating mechanism- closing
  - a) Type
  - b) No of breaker operations stored
  - C) Trip free or fixed trip
  - d) Anti pumping features provided
  - e) Earthing for operating mechanism and metal parts furnished
  - f) Earth terminal size and material
- 4.35 Operating mechanism- tripping
  - a) Type
  - b) No of breaker operations stored

- c) Trip free or fixed trip (V)
  - d) Anti pumping features provided (%)
  - e) Earthing for operating mechanism and metal parts furnished
  - f) Earth terminal size and material
- 4.36 Spring charging mechanism
- 2) Make
  - 3) Type
  - 4) Size
  - 5) Rating
- 4.37 Tripping coil
- a) Voltage
  - b) Permissible voltage variation (%)
  - c) Tripping current at rated voltage (A)
  - d) Power at rated voltage (W)
  - e) 2-Over current trip and 1-earth fault furnished as specified
- 4.38 Breaker /Accessories such as control switch indication Lamps etc. furnished as specified  
:(please attach separate sheet giving details of all accessories, inter locks and safety shutters)
- a) Mechanical safety Interlock
  - b) Automatic Safety Interlock
  - c) Operational Interlock
  - d) Emergency manual trip
  - e) Operation counter
  - f) Charge /discharge indicator
  - g) Manual spring charging facility
- 4.39 Impact load foundation design (to include dead load plus impact value On opening at maximum interrupting rating) (KG)
- 5.0 Isolators
- 5.1 Make
  - 5.2 Type
  - 5.3 Reference standard
  - 5.4 Rated voltage (KV)
  - 5.5 Rated Frequency HZ
  - 5.6 No. Of poles (No)
  - 5.7 Rated current
    - ) Normal (Standard) Amps
    - j) De-rated (site) Amp
  - 5.8 Maximum temperature rise over ambient Deg. C
  - 5.9 Rated operation duty
  - 5.10 Rupturing Capacity at rated voltage MVA
  - 5.11 Rated making current KA peak
  - 5.12 Short time current
    - a) For 1 sec KA rms
    - b) For 3 sec KA rms
  - 5.13 Impulse voltage withstand on 1/50 full wave
  - 5.14 Maximum over voltage factor when switching off
    - a) Loaded feeder cable
  - 5.15 Minimum SF6 Gas pressure required?
  - 5.16 No of isolator operation permissible without requiring inspection, replacement of contacts and other main parts
- At 100% rated current

At 100% rated breaking current  
5.17 Isolator provided with the following  
Mechanical safety  
Mechanical ON, OFF, CABLE EARTH indicators  
Operation counter  
Manual spring charging facility  
6.0 CURRENT TRANSFORMER  
6.1 Make  
6.2 Type & voltage level  
6.3 Reference standard  
6.4 C.T. ratio as specified  
6.5 Rated frequency  
6.6 Short circuit withstand  
i) Short time current for 1 sec. KA rms  
j) Short time current for 3 sec. KA rms  
k) Dynamic current KA peak  
6.7 Class of insulation  
6.8 Temperature rises over ambient. Deg. C  
6.9 Basic insulation level  
6.10 For tripping  
CT RATIO  
Class of accuracy  
Rated Burden VA.