

OIL INDIA LIMITED
(A Government of India Enterprise)
P.O. Duliajan-786602, Assam, India
E-mail: material@oilindia.in

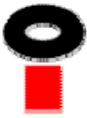
INVITATION FOR BID
LOCAL COMPETITIVE BID

OIL INDIA LIMITED invites Local Competitive Bid (LCB) through its e-procurement portal <https://etender.srm.oilindia.in/irj/portal> for the following items:

Tender No	BidClosing/ Opening Date	Item & Qty
SDI7166P16 DT: 13.05.2015	02.07.2015	HEAT EXCHANGER
SDI7175P16 DT: 15.05.2015	09.07.2015	RADIO NETWORK

Tender fee (Non-refundable): Rs 1,000.00; Bid Closing/Opening Time: **(11 Hrs.) IST/(14 Hrs.) IST**; Period of sale of documents: **18.05.2015 to one week prior to bid closing date**. The complete bid documents and details for purchasing bid documents, participation in E-tenders are available on OIL's e-procurement portal <https://etender.srm.oilindia.in/irj/portal> as well as OIL's website www.oil-india.com.

NOTE: All addenda, Corrigenda, time extension etc. to the tenders will be hosted on above website and e-portal only and no separate notification shall be issued in the press. Bidders should regularly visit above website and e-portal to keep themselves updated.



OIL INDIA LIMITED
(A Government of India Enterprises)
PO : Duliajan – 786602
Assam (India)

TELEPHONE NO. (91-374) 2808719

FAX NO: (91-374) 2800533

Email: tuhin_roy@oilindia.in ; erp_mm@oilindia.in

FORWARDING LETTER

Tender No. : SDI7175P16 Dated 15.05.15
Tender Fee : Rs 1,000.00
Bid Security Amount : Rs 6,69,000.00
Bidding Type : SINGLE STAGE TWO BID SYSTEM
Bid Closing on : As mentioned in the e-portal
Bid Opening on : -do-
Performance Security : Applicable
Integrity Pact : Applicable

OIL invites Bids for **Radio Network** through its e-Procurement site under **SINGLE STAGE TWO BID SYSTEM**. The bidding documents and other terms and conditions are available at Booklet No. MM/LOCAL/E-01/2005 for E-Procurement LCB Tenders. The prescribed Bid Forms for submission of bids are available in the Technical RFx -> External Area -> Tender Documents

The general details of tender can be viewed by opening the RFx [Tender] under RFx and Auctions.. The details of items tendered can be **found in the Item Data and details uploaded under Technical RFX.**

The tender will be governed by:

- a) “General Terms & Conditions” for e-Procurement as per Booklet No. MM/LOCAL/E-01/2005 for E-Procurement LCB Tenders.
- b) Technical specifications and Quantity as per **Annexure – 1A**.
- c) The prescribed Bid Forms for submission of bids are available in the Technical RFx -> External Area -> Tender Documents.
- d) 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.
- e) All corrigenda, addenda, amendments, time extension, clarifications etc. To the tender will be hoisted on OIL’s website (www.oil-india.com) and in the e-portal (<https://etenders.srm.oilindia.in/irj/portal>) only and no separate notification shall be issued

in the press. Prospective bidders are requested to regularly visit the website and e-portal to keep themselves updated.

- f) 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 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).
- g) Bidder are advised to fill up the Technical bid check list (**Annexure EEE**) and Response sheet (**Annexure FFF**) given in MS excel format in Technical RFX -> External Area -> Tender Documents. The above filled up document to be uploaded in the **Technical RFX** Response.

Special Note:

1.0 General Qualification Criteria:

In addition to the general BRC/BEC, following criteria on Bidders' Experience and their financial capabilities shall be considered (**documentary evidence to be provided along with the bid in Technical RFX -> External Area -> Tender Documents**) as on the Bid Closing Date:

Criteria	Complied / Not Complied.
Annual financial turnover of the firm in any of the last 3 financial years or current financial year should not be less than Rs 668.77 Lakhs.	Documentary evidence submitted / not submitted

Note: Documentary evidence in respect of the above should be audited Annual Reports or balance sheet certified by a chartered accountant.

2.0 Application showing full address/email address with Tender Fee (Non-refundable) of Rs. 1,000.00 in favour of M/s Oil India Limited and payable at Duliajan is to be sent to Head-Materials, Oil India Limited, P.O. Duliajan, Assam-786602. Application shall be accepted only upto one week prior to the bid closing date (or as amended in e-portal). The envelope containing the application for participation should clearly indicate “REQUEST FOR ISSUE OF USER ID AND PASSWORD FOR E TENDER NO ...” for easy identification and timely issue of user ID and password. On receipt of requisite tender fee, USER_ID and initial PASSWORD will be communicated to the bidder (through e-mail) and will be allowed to participate in the tender through OIL’s e- Procurement portal. No physical tender documents will be provided. Details of NIT can be viewed using “Guest Login” provided in the e-Procurement portal. The link to e-Procurement portal has been also provided through OIL’s web site www.oil-india.com.

NOTE:

- a) Tender Fee may also be paid online upto one week prior to the bid closing date (or as amended in e-portal).**

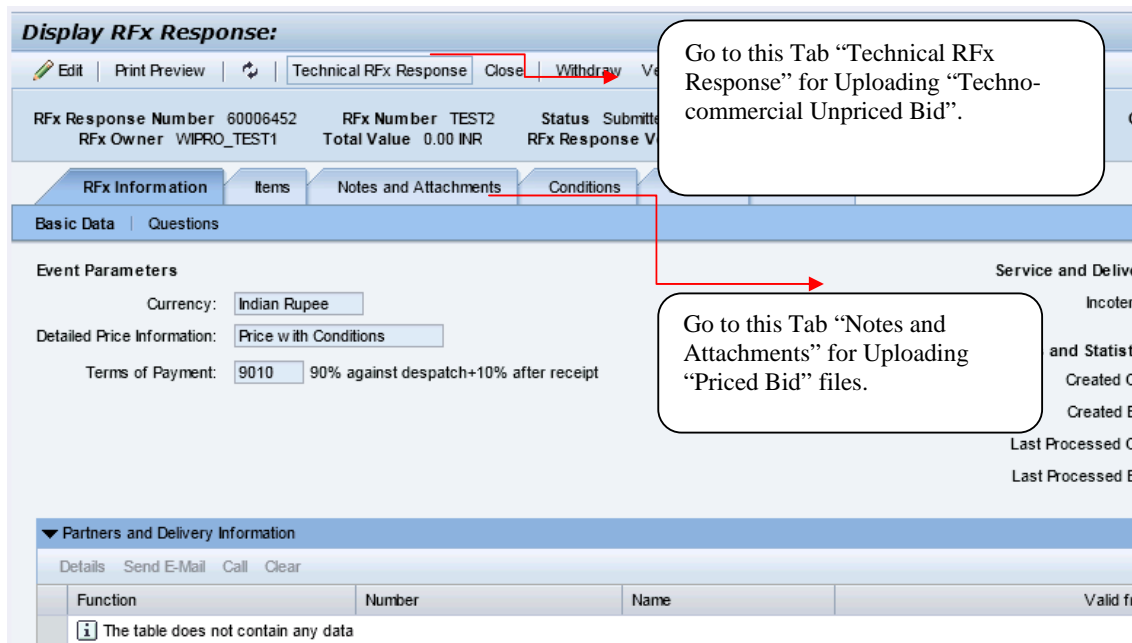
b) PSUs and SSI units are provided tender documents Free of Cost (as per govt guidelines), however they have to apply to OIL's designated office to issue the tender documents before the last date of sale of tender document mentioned in the tender.

3.0 The tender is invited under SINGLE STAGE-TWO BID SYSTEM. The bidders are required to submit both the “TECHNO-COMMERCIAL UNPRICED BID” and “PRICED BID” through electronic format in the OIL’s e-Tender portal within the Bid Closing Date and Time stipulated in the e-Tender.

3.1 Please ensure that Technical Bid / all technical related documents related to the tender are uploaded in the Technical RfX Response-> User - > Technical Bid only. The “**TECHNO-COMMERCIAL UNPRICED BID**” shall contain all techno-commercial details except the prices. **Please note that no price details should be uploaded in** Technical RfX Response.

3.2 The “**PRICE BID**” must contain the price schedule and the bidder’s commercial terms and conditions. **The prices of the items should be quoted in “Conditions Tab”. Details of prices as per Bid format / Commercial bid can be uploaded as Attachment under the attachment option under “Notes & Attachments”.**

3.3 **A screen shot in this regard is given below. Offer not complying with above submission procedure will be rejected as per Bid Rejection Criteria mentioned in Annexure-CCC.**



On “EDIT” Mode- The following screen will appear. Bidders are advised to Upload “Techno-Commercial Unpriced Bid” and “Priced Bid” in the places as indicated above:

Bid on “EDIT” Mode

Note :

* The “Techno-Commercial Unpriced Bid” shall contain all techno-commercial details **except the prices**.

** The “Price bid” must contain the price schedule and the bidder’s commercial terms and conditions. For uploading Price Bid, first click on Sign Attachment, a browser window will open, select the file from the PC and click on Sign to sign the Sign. On Signing a new file with extension .SSIG will be created. Close that window. Next click on Add Attachment, a browser window will open, select the .SSIG signed file from the PC and name the file under Description, Assigned to General Data and click on OK to save the File.

4.0 Please note that all tender forms and supporting documents are to be submitted through OIL’s e-Procurement site only except following documents which are to be submitted manually in sealed envelope super scribed with **Tender no.** and **Due date** to **Head Materials, Materials Department, Oil India Limited, Duliajan - 786602, Assam** on or before the Bid Closing Date and Time mentioned in the Tender.

- a) **Original Bid Security**
- b) **Detailed Catalogue (if any)**
- c) **Any other document required to be submitted in original as per tender requirement**

All documents submitted in physical form should be signed on all pages by the authorised signatory of the bidder and to be submitted in triplicate.

5.0 Benefits to Micro & Small Enterprises (MSEs) as per prevailing Govt guidelines as applicable on B.C date shall be given. MSEs who are interested in availing the benefits will upload with their offer proof of their being MSE registered for the item tendered. The MSE are also required to upload scanned copies of relevant documents indicating details of registration alongwith validity, name of the registering organization and details of the item, ownership etc., failing which, their offer may not be liable for consideration of benefits to MSEs.

6.0 Bidders are requested to examine all instructions, forms, terms and specifications in the bid. Failure to furnish all information required as per the NIT or submission of offers not substantially responsive to the bid in every respect will be at the bidders risk and may result in rejection of its offer without seeking any clarifications.

7.0 Bidders must ensure that their bid is uploaded in the system before the tender closing date and time. Also, they must ensure that above documents which are to be submitted in a sealed envelope are also submitted at the above mentioned address before the bid closing date and time failing which the offer shall be rejected.

8.0 Bid must be submitted electronically only through OIL's e-procurement portal. Bid submitted in any other form will be rejected.

9.0 **SINGLE STAGE TWO BID SYSTEM** shall be followed for this tender and only the PRICED-BIDS of the bidders whose offers are commercially and technically acceptable shall be opened for further evaluation.

10.0 a) **The Integrity Pact is applicable against this tender. Therefore, please submit the Integrity Pact document duly signed along with your quotation as per BRC. OIL shall be entering into an Integrity Pact with the bidders as per format enclosed vide Annexure DDD of the tender document. This Integrity Pact proforma has been duly signed digitally by OIL's competent signatory. The proforma has to be submitted by the bidder (along with the technical bid) duly signed (digitally) by the same signatory who signed the bid, i.e., who is duly authorized to sign the bid. Uploading the Integrity Pact with digital signature will be construed that all pages of the Integrity Pact has been signed by the bidder's authorized signatory who sign the Bid. If any bidder refuses to sign Integrity Pact or declines to submit Integrity Pact with the offer, their bid shall be rejected straightway".**

b) **The name of the OIL's Independent External Monitors at present are as under:**

**SHRI RAGHAW SHARAN PANDEY, IAS (Retd.),
Former Secretary, MOP & NG,
e-Mail ID : rspandey_99@yahoo.com**

**SHRI RAJIV MATHUR, IPS (Retd.)
Former Director, IB, Govt. of India,
e-Mail ID : rajivmathur23@gmail.com**

11.0 The tender shall be governed by the Bid Rejection & Bid Evaluation Criteria given in enclosed **Annexure-CCC**. However, if any of the Clauses of the Bid Rejection Criteria / Bid Evaluation Criteria (as per **Annexure-CCC**) contradict the Clauses of the tender and / or "General Terms & Conditions" as per Booklet No. MM/LOCAL/E-01/2005 for E-procurement (LCB Tenders) elsewhere, those in the BEC / BRC shall prevail.

12.0 To ascertain the substantial responsiveness of the bid OIL reserves the right to ask the bidder for clarification in respect of clauses covered under BRC also and such clarifications fulfilling the BRC clauses in toto must be received on or before the deadline given by the company, failing which the offer will be summarily rejected.

13.0 Please do refer the User Manual provided on the portal on the procedure How to create Response for submitting offer.

NOTE:

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

Yours Faithfully

Sd-
(T. ROY)
DEPUTY MANAGER MATERIALS (IP)
FOR : HEAD-MATERIALS

Tender No & Date: SDI7175P16 Dated 15.05.15

BID REJECTION CRITERIA (BRC) / BID EVALUATION CRITERIA (BEC)

The following BRC/BEC will govern the evaluation of the bids received against this tender. Bids that do not comply with stipulated BRC/BEC in full will be treated as non responsive and such bids shall prima-facie be rejected. Bid evaluation will be done only for those bids that pass through the “Bid Rejection Criteria” as stipulated in this document.

Other terms and conditions of the enquiry shall be as per General Terms and Conditions vide MM/LOCAL/E-01/2005 for E-Procurement LCB Tenders. However, if any of the Clauses of the Bid Rejection Criteria / Bid Evaluation Criteria (BRC / BEC) contradict the Clauses of the tender or MM/LOCAL/E-01/2005 elsewhere, those in the BRC / BEC shall prevail.

<u>Criteria</u>	Complied / Not Complied. (Remarks if any)
<p>1.0 BID REJECTION CRITERIA (BRC):</p> <p>The bid shall conform generally to the terms and conditions given in this document. Notwithstanding the general conformity of the bids to the stipulated specifications, the following requirements will have to be particularly met by the Bidders without which the same will be considered as non-responsive and rejected.</p> <p>A) TECHNICAL:</p> <p>1. The Bidder will be classified either as OEM or non-OEM. OEM may quote directly against the tender. Non-OEM should submit authorization letter from their respective OEM to quote against this enquiry. The sample format for reference is provided in Annexure-I.</p> <p>2. The bidder must have successfully commissioned at least one Radio Network in other PSUs/ Govt. organisations/ public limited companies during the last seven years from the bid closing date. The implementation should have at least 30 Radios. The project should be of minimum Rs. 01.50 Crore (1 crore 50 lakhs) value. The bidders must submit copies of historical documents like - Purchase Orders with corresponding completion certificate along with the bid as documentary evidence for the above.</p> <p>B) COMMERCIAL:</p> <p>i). Validity of the bid shall be minimum 120 days from the Bid Closing Date.</p> <p>ii). Bid security: The bid must be accompanied by Bid Security of Rs 6,69,000.00 in OIL's prescribed format as Bank Guarantee or a Bank Draft/Cashier cheque in</p>	

favour of OIL. The Bid Security may be submitted manually in sealed envelope superscribed with Tender no. and Bid Closing date to Head Materials, Materials Department, Oil India Limited, Duliajan- 786602, Assam on or before the Bid Closing Date and Time mentioned in the Tender. **The Bank Guarantee towards Bid Security shall be valid for 10 months from Bid closing date. (i.e. upto 09.05.2016).**

Bid Security may also be paid online on or before the Bid Closing Date and Time mentioned in the Tender.

If bid security in ORIGINAL of above mentioned Amount and Validity is not received or paid online within bid closing date and time, the bid submitted through electronic form will be rejected without any further consideration.

For exemption for submission of Bid Security, please refer Clause No. 8.8 of General Terms and Conditions vide MM/LOCAL/E-01/2005 for E-Procurement LCB Tenders.

The format of Bank Guarantee towards Bid Security (Annexure – VII) has been amended to Annexure – VII (Revised) and bidders should submit Bank Guarantee towards Bid Security as per Annexure – VII (Revised) only.

In case of extension of Bid Closing date against the tender where a bidder has already submitted his bid with requisite bid security validity within the original B.C. Date, such bidders will extend validity of bid security covering the extended period of the bid closing date.

iii). Bids are invited under “Single Stage Two Bid System”. Bidders have to submit both the “Techno-commercial Unpriced Bids” and “Priced Bids” through electronic form in the OIL’s e-Tender portal within the bid Closing date and time stipulated in the e-tender. The Techno-commercial Unpriced bid is to be submitted as per scope of works and Technical specification of the tender and the priced bid as per the online Commercial bid format. For details of submission procedure, please refer relevant para of General Terms and Conditions vide MM/LOCAL/E-01/2005 for E-Procurement LCB Tenders. Any offer not complying with the above shall be rejected straightway.

v). Performance Security:

a) The successful Bidder will have to provide 1st Performance Security @ 10% of total cost of Equipment + Installation & Commissioning + Warranty + Installation & De-Installation of Temporary Sites . The Performance Security must be valid for one year from the date of successful commissioning of the equipment or 18 months from the date of despatch whichever is earlier.

b) The successful Bidder will have to provide 2nd Performance Security

@ 10% of total cost of AMS for 4 years prior to expiry of the 1st Performance Security. The Performance Security must be valid for 4 years.

The validity requirement of Performance Security is assuming despatch within stipulated delivery period and confirmation to all terms and conditions of order. In case of any delay in despatch or non-confirmation to all terms and conditions of order, validity of the Performance Security is to be extended suitably as advised by OIL.

For exemption for submission of Performance Security, please refer Clause No. 9.12 of General Terms and Conditions vide MM/LOCAL/E-01/2005 for E-Procurement LCB Tenders.

- iv). *The Bank Guarantee should be allowed to be encashed at all branches within India.*
- v). The prices offered will have to be firm through delivery and not subject to variation on any account. A bid submitted with an adjustable price will be treated as non-responsive and rejected.
- vi). Bids received after the bid closing date and time will be rejected. Similarly, modifications to bids received after the bid closing date & time will not be considered.
- vii). All the Bids must be Digitally Signed using “Class 3” digital certificate with Organisation’s name (*e-commerce application*) as per Indian IT Act obtained from the licensed Certifying Authorities operating under the Root Certifying Authority of India (RCAI), Controller of Certifying Authorities (CCA) of India. The bid signed using other than “Class 3 with Organisation’s Name” digital certificate, will be rejected.
- viii). Technical RFX Response folder is meant for Technical bid only. Therefore, No price should be given in Technical RFX Response folder, otherwise the offer will be rejected.
- ix). Price should be maintained in the “online price schedule” only. The price submitted other than the “online price schedule” shall not be considered.
- xi). Integrity Pact :

OIL shall be entering into an Integrity Pact with the bidders as per format enclosed vide Annexure DDD of the tender document. This Integrity Pact proforma has been duly signed digitally by OIL’s competent signatory. The proforma has to be submitted by the bidder (along with the technical bid) duly signed (digitally) by the same signatory who signed the bid, i.e., who is duly authorized to sign the bid. Uploading the Integrity Pact with digital signature will be construed that all pages of the Integrity Pact has been signed by the bidder’s authorized signatory who sign the Bid. If any bidder refuses to sign Integrity Pact or declines to submit Integrity Pact with the offer, their bid shall be rejected straightway”.

xii). A bid shall be rejected straightway if it does not conform to any one of the following clauses:

- (a) Validity of bid shorter than the validity indicated in the Tender.**
- (b) Original Bid Security not received within the stipulated date & time mentioned in the Tender.**
- (c) Bid Security with (i) Validity shorter than the validity indicated in Tender and/or (ii) Bid Security amount lesser than the amount indicated in the Tender.**
- (d) In case the Party refuses to sign Integrity Pact.**
- (e) Average Annual Turnover of a bidder lower than the average Annual turnover mentioned in the Tender.**

2.0 BID EVALUATION CRITERIA (BEC)

The bids conforming to the terms and conditions stipulated in the tender and considered to be responsive after subjecting to the Bid Rejection Criteria as well as verification of original of any or all documents/ documentary evidences pertaining to BRC, will be considered for further evaluation as per the Bid Evaluation Criteria given below.

A) TECHNICAL:

- i). For evaluation of bids cost of all items shall be considered together.

B) COMMERCIAL:

- i). To evaluate the inter-se-ranking of the offers, Assam Entry Tax on purchase value will be loaded as per prevailing Govt. of Assam guidelines as applicable on bid closing date. Bidders may check this with the appropriate authority while submitting their offer.
- ii) Priced bids of only those bidders will be opened whose offers are found technically acceptable. The technically acceptable bidders will be informed before opening of the "priced bid".
- iii). To ascertain the substantial responsiveness of the bid OIL reserves the right to ask the bidder for clarification in respect of clauses covered under BRC also and such clarifications fulfilling the BRC clauses in toto must be received on or before the deadline given by the company, failing which the offer will be summarily rejected.

NOTE:

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

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TECHNICAL SPECIFICATIONS WITH QUANTITY

Tender No & Date: SDI7175P16 Dated 15.05.15

New Radio Network for OIL:

Oil India Limited (OIL) is a premier Indian National oil company under the administrative control of Ministry of Petroleum and Natural Gas, Govt. of India. OIL is engaged in the business of Exploration, Development and Production of Crude Oil, Natural Gas and LPG and transportation of Crude Oil.

Existing Setup:

Oil India Limited has an existing 2.4 GHz ISM Band Ethernet Bridge Radio Network connecting OIL's field installations like OCS, GCS, Drilling Locations, Seismic camps, etc., located within a radius of 80 km from OIL's Field Headquarters, Duliajan, to OIL's campus computer network. The network is based on E-ION VIP 110-24 Ethernet Bridge Radios and was installed and commissioned in the year 2005. This network is used for both Voice and Data traffic. Oil India Limited is currently implementing a SCADA system for 81 (eighty one) production installations (Oil and Gas) in Duliajan, Digboi, Moran and Kumchai areas. The existing Radio Network is currently being utilized for transmitting SCADA data from field installations to the MCS.

In addition to the permanent installations connected by the above-mentioned Radio Network, there are installations which demand temporary network connectivity for a period of 3-4 months. In such cases, radio towers are erected and Radio, Antenna and Networking devices are installed on a temporary basis and the same are dismantled once the connectivity requirement for the site ceases.

Proposal:

OIL now plans to replace the existing IT radio network with new equipment, keeping the base infrastructure (mainly towers) intact. The detailed description of the project follows below.

Technical Specification	
<u>Item No 1. RADIO NETWORK High Capacity AP. Qty = 56 Nos</u>	
High Capacity (100 Mbps) Access Point, Make/Model: Vendor must Specify	
1. System must operate in unlicensed band frequency spectrum of ISM-III Unlicensed band. Operating frequency range: 2.4 Ghz band	
2. The system proposed may use active RF antenna to cover a distance of 15 km LOS condition.	
3. The useable throughput shall be minimum 100 Mbps over 20 MHz Channel. Minimum Base Trans-receiver Station capacity should be 300 Mbps for 360 degree coverge	
4. System should support a Channel Width of 5/10/20 MHz with 2.5 MHz channel spacing	
5. System should use an Access Method of TDD/TDMA	
6. Modulation Type should be OFDM-MIMO based QPSK , 16 QAM , 64 QAM,256QAM	

7. RF Power output upto 22 dBm
8. One way latency should not be more than 8 ms with data
9. IPV4, IPV6, UDP, TCP, ICMP, Telnet, SNMP, FTP Should be manageable from NMS.
10. Link Monitoring: Menu driven options for RF link monitoring with parameters like RSSI, Signal level and Uplink/Downlink efficiencies from both Central Point and Remote Point for checking the quality of RF link and for alignment of antenna / radio.
11. The system should be able to support at least 100 remote locations (CPEs) per sector
12. The system should support remote maintenance of radio units & shall have the capabilities of upgrading the Software over the air from the central location
13. The system shall allow enabling prioritization of VOIP and Video over data traffic.
14. The system should support operating temperature from -35 deg Celsius to +55 deg Celsius
15. The system should support Web user-interface, CLI (Telnet), SSH, HTTP, SNMP
16. The system should WEEE/RoHS compliance
17. The radio should be IP66/IP67 certified for outdoor deployment.
18. The complete system should support high level of security mechanisms such as DES/AES for end-to-end connectivity to prevent any breaches due to interference or hacking.
19. The complete system should be type approved by WPC & operate accordingly.
20. The system should have the capability to counter mutual interference in intra-site & inter-site environment using GPS sync for TDD Synchronization.
21. The system should have the capability to reuse the frequency channel in co-located scenarios to increase the spectral efficiency in unlicensed frequency band - may be by using GPS sync.
22. The system should have support for AAA authentication for better security and protection from intrusion.
23. The system should have an inbuilt surge protection mechanism up to 1 Joule.
24. The system should be able to configure symmetric & asymmetric bandwidth. Upload and download percentage should be user configurable in steps of 1%.
25. The system should support VLAN 802.1ad (DVLAN Q-in-Q), 802.1Q with 802.1p priority, dynamic port VID.
26. The system should support minimum 512 subcarriers to support superior performance in NLOS condition
27. The system must support Automatic Transmit Power Control (ATPC) to limit the CPE power when not required.
28. Specification Certification
RSS Gen and RSS 210
FCC Part 15 Class B

Notes:

1. The equipment shall be used for outdoor purposes and shall be weather proofed to withstand local conditions such as exposure to rain, thunder & lightning and continuous sunlight.
2. The equipment should be able work in LOS and near Line of Sight conditions.
3. The system at Base Stations should have coverage of 360 degrees so that communication link can easily be set up between Base station equipment and CPE installed within an aerial distance of 15 Kms (LOS) from nearest Base station (BTS).

<p><u>Item No 2. BASE STATION SWITCH with GPS UNIT. Qty = 12 Nos</u></p> <p>Specification:</p> <p>Make/Model: Vendor Must Specify</p> <p>1. DATA INTERFACE: (minimum) 8 Powered input ports (from radios) 8 Data output ports (to switch) 1 GPS timing port (RJ-25) 1 Controller (administration) port 1 N-Type GPS antenna port</p> <p>2. SURGE SUPPRESSION : Included for all radio ports Included GPS lightning suppression</p> <p>3. SWITCH FEATURES: (minimum)</p> <p>USER INTERFACE: 14 10/100BaseT ports, 2 1000BaseT ports ETHERNET INTERFACE: 10/100BaseT, half/full duplex, rate auto negotiated (802.3 compliant) PROTOCOLS USED: IPv4,IPv6, UDP, TCP, IP, ICMP, Telnet, SNMP, HTTP, FTP NETWORK MANAGEMENT: HTTP, Telnet, FTP, SNMP v2c VLAN : 802.1ad (DVLAN Q-in-Q), 802.1Q with 802.1p priority, dynamic port VID</p> <p>4. Physical: MAX DISTANCE FROM MANAGED RADIOS: 328 cable feet (100m) MAX DISTANCE TO GPS ANTENNA: 100 cable feet (30.5m) CABINET TEMPERATURE : -40° C to +55° C (-40° F to +131° F), 100% humidity, condensing</p> <p>5. Power Supply: POWER CONSUMPTION 5W plus 0.5W per radio attached, Plus 12W for PoE switch POWER INTERFACE TERMINALS Two 30V, Two 56V, One Ground</p>	
<p><u>Item No 3. Ethernet Line Surge Protector. Qty = 190 Nos.</u></p> <p>Specification:</p> <p>Make/Model: Vendor must Specify</p> <p>CONNECTORS RJ45 CAPACITY 1500J peak energy dissipation with 10/10000 micro sec waveform GROUND LOOP ELIMINATION Digital Noise Isolation</p>	
<p><u>Item No 4. 7000M Outdoor Cat 6 STP Cable. Qty = 1 No.</u></p> <p>Technical Specification for Outdoor Cat6 STP Cable:</p> <p>Make/Model: Vendor Must Specify Type Cat6 U/UTP 4 pair Outdoor Cable, solid bare copper with cross filler pair</p>	

<p>separator Application Outdoor usage suitable in an IP65 environment Jacketing Double jacketed. Inner Jacket - Polyethylene Outer jacket - LSZH Max pull force: 80 N Frequency: Tested upto 250 MHz Outer Diameter: 7.2 mm Packaging: 500m reel Fire Rating: Shall meet IEC 60754-1 for Toxicity Shall meet IEC 60754-2 for Acid Gas Outer jacket color: Preferably Black Compliance ROHS/ELV compliant</p>	
<p><u>Item No 5. Chemical Earth Pit. Qty = 118 Nos.</u></p> <p>Chemical earth Pit:</p> <p>Parameters Features Type of Earthing Chemical, as per above mentioned Drawing Length of the Electrode 3000 mm Outer Pipe Diameter 62 mm Inner Pipe Diameter 32 mm Hygroscopic Material GRIP (Ground Resistance Improvement Powder) Desired Earth resistance < 0.5 Ohms Earthing Strip 25 X 3 mm thick Grounding Wire Pure Copper, AWG 10 or 6mm2 No. of Earthing pits per site 2 Earth Distribution From Earth pit to equipment rack bus bar by 16 sq.mm green insulated multistrand single core copper cable Connecting lugs: 16 sq. mm Copper lugs Type of fastners: SS Nuts, bolts and washers for fitting of copper plate with copper strip, for interconnection of pits by copper lugs etc. Warranty The Chemical Earthings shall be warranted for TEN(10) years.</p>	
<p><u>Item No 6. 9 U RACK. Qty = 9 Nos</u></p> <p>9U Rack Specification:</p> <p>Racks manufactured out of steel sheet punched, formed, welded and Powder coated Rack should be from ISO 9001:2008 Certified Company & UL Listed Standard for Racks configuration will be welded frame and vented top cover Rack should have Front Toughened Glass Door with lock & Key and Back Cover Rack should be 9U(1U=44.45 mm) in Height, 550MM Width, 500MM Depth. Rack should Conform to DIN 41494 or Equivalent EIA /ISO / EN/CEA Standard Rack should have Adjustable mounting depth, Rack 4 No Adjustable, 19” verticals with Punched 10mm Square Hole and Universal 12.7mm-15.875mm-15.875mm alternating hole pattern offers greater mounting flexibility, maximizes usable mounting space. Rack should have Numbered U positions, Rack should have 100% assured compatibility with all equipments conforming to DIN 41494 (General industrial standard for equipments) Powder coated finish with seven Tank pretreatment process meeting IS Rack should have Proper Grounding & Bonding</p>	

<p>Rack should have Fan module Mount Provision on top Cover 1Ph, 230V, 8A, 2U standard rack mount power distribution unit with 6 X Indian Round Pin 5A, Inlet Plug type 6A Indian Round Pin, 8A Fuse - PDU Rating 1.8KVA Rack should have 1 No Cantiliver shelf. Rack should have minimum 2 Nos of FAN. Rack should have 1 No Horizontal Cable Organizer with Plastic Loops. Rack should have provision for cable entry Exit from Both top & Bottom. Rack should have 1 Packet of Mounting hardware, Pack of 20</p>	
<p><u>Item No 7. 6 U RACK. Qty = 80 Nos</u></p> <p>6U Rack Specification</p> <p>Racks manufactured out of steel sheet punched, formed, welded and Powder coated Rack should be from ISO 9001:2008 Certified Company & UL Listed Standard for Racks configuration will be welded frame and vented top cover Rack should have Front Toughened Glass Door with lock & Key and Back Cover Rack should be 6U(1U=44.45 mm) in Height, 550MM Width, 500MM Depth . Rack should Conform to DIN 41494 or Equivalent EIA /ISO / EN/CEA Standard Rack should have Adjustable mounting depth, Rack 4 No Adjustable, 19” verticals with Punched 10mm Square Hole and Universal 12.7mm-15.875mm-15.875mm alternating hole pattern offers greater mounting flexibility, maximizes usable mounting space. Rack should have Numbered U positions, Rack should have 100% assured compatibility with all equipments conforming to DIN 41494 (General industrial standard for equipments) Powder coated finish with seven Tank pretreatment process meeting IS Rack should have Proper Grounding & Bonding Rack should have Fan module Mount Provision on top Cover 1Ph, 230V, 8A, 2U standard rack mount power distribution unit with 6 X Indian Round Pin 5A, Inlet Plug type 6A Indian Round Pin, 8A Fuse - PDU Rating 1.8KVA Rack should have 1 No Cantiliver shelf. Rack should have minimum 2 Nos of FAN. Rack should have 1 No Horizontal Cable Organizer with Plastic Loops. Rack should have provision for cable entry Exit from Both top & Bottom. Rack should have 1 Packet of Mounting hardware, Pack of 20</p>	
<p><u>Item No 8. High Capacity CPE. Qty = 27 Nos.</u></p> <p>Technical Specification for High Capacity (55Mbps) Customer Premises Equipment(CPE):</p> <p>Make/Model: Vendor must Specify</p> <p>1 System must operate in unlicensed band frequency spectrum of ISM-III Unlicensed band. Operating frequency range: 2.4 Ghz Band 2 The Wireless system shall be for outdoor type supported with integrated antenna. 3 The system proposed shall not use active RF antenna and cables to avoid failures due to moisture/rain etc. 4 System should support a Channel Width 5/10/20 MHz 5 System should use an Access Method of TDD/TDMA 6 Modulation Type should be OFDM based QPSK, 16 QAM , 64 QAM , 256 QAM</p>	

<p>7 RF Power output shall be less than 22 dBm.</p> <p>8 Should have provision to increase the gain of integrated antenna up to 19 dBI for 2.4 GHz band by adding passive antenna without cables to support for longer range</p> <p>9 One way latency should not be more than 7 ms.</p> <p>10 Protocols: IPV4,IPV6,UDP, TCP, ICMP, Telnet, SNMP, FTP Should be manageable from NMS.</p> <p>11 Inbuilt spectrum analyser for selecting appropriate sub Channels</p> <p>12 Link Monitoring: Menu driven options for RF link monitoring with parameters like RSSI, Signal level and Uplink/Downlink efficiencies from both Central Point and Remote Point for checking the quality of RF link and for alignment of antenna / radio.</p> <p>13 Power Consumption of the radio should be less than 10 W.</p> <p>14 The system support remote maintenance of radio units & shall have the capabilities of upgrading the Software over the air from central location</p> <p>15 The system shall allow enabling prioritization of VOIP and Video over data traffic.</p> <p>16 The system shall be capable of applying different qualities like offering different services types, latency, jitter and bandwidth control for each direction (uplink and downlink) independently</p> <p>17 The system shall pass through bridging mode SLA per CPE(CIR/MIR).</p> <p>18 The system shall be equipped with surge suppressors to protect it from unavoidable lightning conditions.</p> <p>19 The complete system should support high level of security mechanisms such as AES for end-to-end connectivity to avoid any breaches due to Interference or hacking, FIPS-197</p> <p>20 The system should be type approved by WPC & operate accordingly</p> <p>21 System should support operating temprature from -20 deg Celsius to +55 deg Celsius</p> <p>22 Web user interface, CLI (Telnet), SSH HTTP, SNMP.</p> <p>23 System should WEEE/RoHS compliance</p> <p>24 Radio Shoud be IP55/IP66/IP67 certified for outdoor deployment.</p> <p>25 System should be able to serve as DHCP Server and DHCP client</p> <p>26 System should have inbuilt surge protection mechanism up to 1 Joule</p> <p>27 System should support features like NAT and L2TP, DHCP option 82 to enhance security and prevent broadcast</p> <p>28 System should have the support of VLAN 802.1ad (DVLAN Q-in-Q), 802.1Q with 802.1p priority, dynamic port VID</p> <p>29 System should support minimum 512 subcarrier to support superior performance in NLOS condition</p> <p>Notes: Capacity 55 Mbps</p> <ol style="list-style-type: none"> 1. These equipment are intended for use at repeater locations situated within minimum aerial distance of 15 Kms (LOS) from any of the nearest Base station and should be able to give minimum throughput of 30 Mbps at 10 db fade margin. 2. The equipment shall be used for outdoor purposes and shall be weather proof to withstand local conditions such as exposure to rain, thunder & lightning and continuous sunlight. 3. The equipment shall be lightweight for rapid deployment and easy to set-up. 	
<p><u>Item No 9. 10 MB CPE. Qty = 105 Nos.</u></p> <p>TECHNICAL SPECIFICATIONS & FEATURES OF SUBSCRIBER RADIO EQUIPMENT (CPE) for Remote Sites</p>	

Notes: Capacity 10 MB

1. These devices are intended for use at remote locations situated within maximum aerial distance of 15 Kms (LOS) from any of the nearest Base stations and should be able to give a minimum throughput of 6 Mbps at 10 db fade margin. Some of the remote installations will be fixed and some will be Semi - fixed type. The details are mentioned in the file Sitedetails.
2. The equipment shall be used for outdoor purposes and shall be weather proof to withstand local conditions such as exposure to rain, thunder & lightning and continuous sunlight.
3. The equipment shall be lightweight for rapid deployment and easy to set-up.

Specifications:

Make/Model: Vendor must Specify

- 1 System must operate in unlicensed band frequency spectrum of ISM-III Unlicensed band. Operating frequency range: 2.4 Ghz Band
- 2 The Wireless system shall be for outdoor type supported with integrated antenna.
- 3 The system proposed shall not use active RF antenna and cables to avoid failures due to moisture/rain etc.
- 4 System should support a Channel Width 5/10/20 MHz
- 5 System should use an Access Method of TDD/TDMA
- 6 Modulation Type should be OFDM based QPSK, 16 QAM, 64 QAM, 256 QAM
- 7 RF Power output shall be less than 22 dBm.
- 8 Should have provision to increase the gain of integrated antenna up to 19 dBI for 2.4 GHz band by adding passive antenna without cables to support for longer range
- 9 One way latency should not be more than 7 ms.
- 10 Protocols: IPV4, IPV6, UDP, TCP, ICMP, Telnet, SNMP, FTP Should be manageable from NMS.
- 11 Inbuilt spectrum analyser for selecting appropriate sub Channels
- 12 Link Monitoring: Menu driven options for RF link monitoring with parameters like RSSI, Signal level and Uplink/Downlink efficiencies from both Central Point and Remote Point for checking the quality of RF link and for alignment of antenna / radio.
- 13 Power Consumption of the radio should be less than 10 W.
- 14 The system support remote maintenance of radio units & shall have the capabilities of upgrading the Software over the air from central location
- 15 The system shall allow enabling prioritization of VOIP and Video over data traffic.
- 16 The system shall be capable of applying different qualities like offering different services types, latency, jitter and bandwidth control for each direction (uplink and downlink) independently
- 17 The system shall pass through bridging mode SLA per CPE(CIR/MIR).
- 18 The system should support VLAN 802.1Q feature.
- 19 The system shall be equipped with surge suppressors to protect it from unavoidable lightning conditions.
- 20 The complete system should support high level of security mechanisms such as AES for end-to-end connectivity to avoid any breaches due to Interference or hacking, FIPS-197
- 21 The system should be type approved by WPC
- 22 System should support operating temperatures from -20 deg Celsius to +55 deg Celsius
- 23 Web user-interface, CLI (Telnet), SSH HTTP, SNMP.

<p>24 System should WEEE/RoHS compliant</p> <p>25 Radio should be IP55/IP66/IP67 certified for outdoor deployment.</p> <p>26 System should be able to serve as DHCP Server and DHCP client</p> <p>27 System should have inbuilt surge protection mechanism up to 1 Joule</p> <p>28 System should support features like NAT and L2TP, DHCP option 82 to enhance security and prevent broadcast</p> <p>29 System should be upgradable with software license keys without changing the Hardware</p> <p>30 System should have the support of VLAN 802.1ad (DVLAN Q-in-Q), 802.1Q with 802.1p priority, dynamic port VID</p> <p>31 System should support minimum 512 subcarriers to give superior performance in NLOS condition</p>	
<p><u>Item No 10. Antenna for AP Base. Qty = 60 Nos.</u></p> <p>ACCESS POINT ANTENNA/ Base Station Antenna:</p> <p>Specification:</p> <p>Make/Model: Vendor Must Specify</p> <ol style="list-style-type: none"> 1.FREQUENCY RANGE 2.4 – 2.48 GHz 2.ANTENNA TYPE Access Point Sector 3.GAIN 18dBi +1dBi /-1dBi 4.VSWR 1.5:1 max 5.PORT TO PORT ISOLATION 28 dB min 6.6dB BEAMWIDTH-AZIMUTH 65° 7.3dB BEAMWIDTH-AZIMUTH 52° 8.3dB BEAMWIDTH-ELEVATION 6° 9.ELEVATION NULL FILL Down to -18° 10.POLARIZATION Dual Slant, +/- 45° 11.MAXIMUM INPUT POWER 20 W per channel 12.INPUT IMPEDANCE 50 Ohms 13.FRONT-TO-BACK RATIO > 33 dB, 180 ± 30° 14.CROSS POLARIZATION > 20 dB, 0 ± 30° 15.MOUNTED ANT WEIGHT (w/ AP) Should not exceed 15 kg (33 lb) 16.ANTENNA CONNECTOR 2 X N-Type Female, Straight 17.WIND SURVIVAL 206 km/h 18.WIND LOADING (@216 km/h) Front: 1202 N (273 lbf) 19.Side: 461 N (105 lbf)" 20.POLE MOUNTING HARDWARE Quick Release, 1.5” TO 4.5” Dia. Pole to be supplied 21.MECHANICAL DOWNTILT 0° TO 5° 	
<p><u>Item No 11. PoE. Qty = 135 Nos.</u></p> <p>Specification:</p> <p>Make/Model: Vendor must specify</p> <p>Input Voltage: AC 100-240 VAC</p> <p>Output Voltage: + 29.5 VDC</p> <p>Minimum Peak load current 0.6 A</p> <p>Environment Operating Temperature : -40 C to +60C</p>	

<p>Operating Relative Humidity : -5% to 90%, Non- Condensing EMI: FCC Class B EN55022 Class B Power On Indicator: Green LED</p>	
<p><u>Item No 12. 2 KVA UPS SNMP based. Qty = 12 Nos.</u></p> <p>2KVA UPS Specification</p> <p>Make/Model: Vendor must specify</p> <p>Rating 2 KVA / 1600 Watts</p> <p>Input AC Parameters</p> <p>Input Voltage 160 - 300V</p> <p>Frequency 50 Hz; Tolerance (45-55) Hz</p> <p>Input power factor > 0.98</p> <p>Output AC Parameters</p> <p>Rated apparent/active power 1000VA / 800W</p> <p>Output Voltage 220/230 V AC</p> <p>Frequency 50 +/- 0.5 Hz</p> <p>Waveform True Sine Wave</p> <p>Over load 110% for 30 seconds, 125% for 1 second</p> <p>Output Power Factor 0.8</p> <p>Indication & Controls</p> <p>LED Indication/ Display Level</p> <p>Indications LED mimic diagram + LCD Display with measurements (Input / Output / Bypass V & Hz, Battery V & capacity level indicator, Load % & level Indicator)</p> <p>Audio Alarm operation Suitable Alarms for Battery Operation / Overload</p> <p>Communication Ports 1 x Intelligent-Slot (SNMP), 1 x RS232 Serial Port.</p> <p>UPS Remote Management & Administration UPS should have a SNMP Manager for remote administration and monitoring of UPS Parameters. Detailed specifications are enumerated below</p> <p>Back-up Time & Battery Bank Details (VAH Rating) 12V, VRLA Sealed lead-acid Maintenance Free batteries for providing necessary back-up of 12 hours @450W load (7200 VAH)</p> <p>Isolation Transformer UPS output shall be fully isolated by dedicated isolation transformer at the Input of the UPS</p> <p>Environmental</p> <p>Operating Temperature: 0 Degree C to 40 Degree C</p> <p>Relative humidity 0% to 95%, non-condensing</p> <p>Audible Noise <50 dB</p> <p>Certification</p> <p>Quality System ISO 9001, ISO14001, OHSAS 18001</p> <p>Markings CE</p> <p>Safety IEC 62040-1</p> <p>EMC IEC 62040-2</p> <p>Environmental RoHS</p> <p>Rack: Necessary Rack for UPS and Batteries must be supplied</p>	

Item No 13. TVSS 25 KA. Qty = 12 Nos

TECHNICAL SPECIFICATIONS OF TRANSIENT VOLTAGE SURGE SUPPRESSOR (TVSS)

Make/Model: Vendor Must Specify

Transient Voltage Surge Suppressor (TVSS) shall be connected to AC input line.

Surge Current Capacity : 25 KA

Connection Type : 1 Phase Parallel

Operating Voltage Range : 15%

Fault Current Rating(AIC): 14 KAIC

Operating Frequency Range: 47 to 63 KHz

EMI/RFI Attenuation : 40 dB typical

Response Time : <0.5 nanosecond

Item No 14. Spike board with surge suppressor. Qty = 120 Nos.

Make/Model: Vendor Must Specify

"Features a 2,444 Joule energy rating"

Maximum Spike Current: 86,000 Amps

1,500 Watts of Continuous Power

Cable management

Delivers power through a 3-metre, heavy duty cable

Safety Shutters help to protect from dust and debris from unused sockets

Allow room for large AC adapter blocks

Item No 15. EMS S/w for Wireless devices. Qty = 1 No.

NMS specification & requirement:

Make/Model: Vendor must Specify

1.The proposed solution shall have network management system at Sector Headquarter (Network Operator Control) to manage & configure Base Station Unit & Remote Station Unit with the following features & functionality:

- a)Automatic & Manual device discovery of all network elements such as Base Station, Remote stations etc. System shall keep details of all the network elements.
- b)A real time physical network map containing all the different network element with drill down to individual card level view which are being managed shall be provided.
- c)It shall provide intuitive web interface and a comprehensive, context sensitive user guide/ help system
- d)Shall be possible to use pre-defined custom filters for searching entities such as alarms, Base Stations, Remote stations etc through NMS
- e)Support for both user based and rol based authorization to limit and control access to NMS
- f)Automatic & Manual device discovery of all network elements such as Base Station, Remote station etc. System shall keep details of all the network elements. Displays of connected network devices from the NMS Hardware, giving a complete view of the network without physically checking each device at remote sites.
- g)Alarms to be collected from the entire network and stored within the database and displayed using filters in the alarm custom view.

<p>h)Performance management of network elements</p> <p>i)NMS should be able to generate performance report for each RF parameter for more than six months</p> <p>j)Should be able to support atleast 10000 nodes. Should support high availability feature</p> <p>k)NMS should be able to configure Radio without login to radio.NMS should support the configuration of multiple device at the same time.NMS Should be able to take backup and restore configuration of single and multiple simultaneously.</p> <p>l)System should be able to generate historical and current graph of statistic for all RF parameter and ethernet Parameter.</p> <p>m)System should be able to store all the report for minimum 6 months. System should have the report for all inventory device</p> <p>System must support graphical report of RF and Ethernet statistic. System should be able to generate the report for Device configuration. System should be able to generate the report for all radio system health.</p> <p>n) It is mandatory for NMS to Support High Availability feature for redundancy of NMS.</p>	
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<p><u>Item No 16. NMS S/w for UPS. Qty = 1 Nos.</u></p> <p>UPS Management Software (2 KVA UPS):</p> <p>The UPS management software should monitor and manage from one to multiple UPSs in a networked environment including LAN, INTERNET and Modbus networks. It should not only prevent data loss from power outage and safely shutdown systems, but also store programming data and scheduled shut down of UPS Systems. The SNMP manager through the SNMP card should allow remote monitoring and management of multiple UPSs from anywhere with internet access. The Power Management Software should leverage internet capability of SNMP manager to remotely program or shut down UPS's.</p> <p>Network Support RJ45 10/100BaseT Supported MIB RFC1213, RFC1628, oem MIB Supported Software oem Supported OS Windows family, Linux, MAC, and Solaris Supported Extension Devices Optional environmental monitoring detector Power Input 12V Power Consumption 2 watt (max.) Operating Temperature 0 - 40°C Operating Humidity 0%-95%</p> <p>Technical Features of SNMP Card</p> <ul style="list-style-type: none"> " Allow control and monitoring of multiple UPSs through RJ-45 Network connection " Real-time dynamic graphs of UPS data (voltage, frequency, load level, battery level) " Warning notifications via audible alarm, broadcast, mobile messenger, e-mail and SNMP traps " Historic data log should be stored in centralized PC database " Simple firmware upgrade with one click " Password security protection and remote access management " Support optional environmental monitoring detector for temperature, humidity and smoke 	
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Item No 17. SERVER Grade PC with OS. Qty = 2 Nos.

Server Grade PC Specification:

Specification for Workstation

1. Make & Model: Vendor should mention the make and model
2. Processor : Intel® Xeon® E5-1620 3.60 GHz, 10MB cache, 4 Core or higher
4. RAM : Minimum 16 GB(4X4GB) DDR3 1333 MHz ECC expandable upto 64 GB with atleast 8 DIMM Slots
5. HDD : Minimum 2 X 500 GB(7200RPM) SATA Drive, RAID 0 Configuration.
6. Network : Integrated 10/100/1000 Mbps Ethernet Controller and IPV6 compliant.
7. Optical : Minimum 16X DVD + /-RW with Dual Layer Drive Write Capabilities (Preferably same make & colour as CPU box) Complete with driver software on CD/DVD media, standard accessories and cables.
8. Slots : Min 3 nos of PCI series slots
9. Graphics : 2GB nVIDIA Quadro graphics card to be fitted in the motherboard.
10. Standard : USB 2.0 (minimum two on front panel, minimum 4 on I/O back panel)
11. Monitor : OEM Monitor 23 inches(Minimum) diagonal Flat Panel LCD/LED Monitor with standard accessories and cables (Preferably same make & color as CPU box)
12. Keyboard : USB 104 Key Standard Keyboard (Preferably same make & colour as CPU box)
13. Mouse : USB Optical Scroll Mouse (Preferably same make & colour as CPU box)
14. Operating System: Windows 8.1 Pro 64 downgrade to Windows 7 Professional 64-bit OS DVD + Driver DVD
15. Chassis : Vertical Tower
16. Other :
 - a) Power Cables
 - c) Power Extension spike guard with 4nos. of 5 Amps output
 - d) Patch cord - Min. 3m length with Branded Factory made
 - e) All drivers on CD/DVD media
 - f) Energy Star 5.0 certified

Item No 18. 42 inch LED Display. Qty = 2 Nos.

LED Display Specification:

Display

Type LED LED

Screen Size 40-42"

Max. Resolution 1,920 x 1,080

Brightness 500cd/m2

Contrast Ratio 5,000 : 1

Aspect Ratio 16:09

Viewing Angle (H/V) 178° / 178°

Display Color 16.7million

Response Time 8ms (G to G)

Video System NTSC / PAL

Panel Life 50,000hours

Filter Type 3D combfilter

<p>Interface Video Connector CVBS, HDMI x 2, Component (D-sub 15pin) RGB / DVI Connector Analogue D-sub, DVI-D, Display port Input Signal 0.7Vp-p ±5% HDMI Connector HDMI 1, HDMI 2 Audio Connector RCA (L/R), Stereo mini jack Output Signal Loop-through line level (PC only), Speakers 2 x 5W On Screen Display Language English General Electrical Input Voltage 100 ~ 240V AC (50/60Hz) Power Consumption Type 108W Type 85W Environmental Operating Temperature 0 ~ +40°C (+32°F ~ +104°F) Operating Humidity 10% ~ 80% (Non-condensing) Rack Mounts</p>	
<p><u>Item No 19. CPE Antenna. Qty = 130 Nos</u></p> <p>CPE ANTENNA SPECIFICATION</p> <p>Make/Model: Vendor Must Specify</p> <p>1. ANTENNA TYPE: PROPOSED ANTENNA SHOULD BE CAPABLE OF AVOIDING RF CABLE LOSS, EFFECT OF MOISTURE, ETC. 2. GAIN: 15dB</p>	
<p><u>Item No 20. Any Other Item Required to Complete the Project. Qty = 1 AU</u></p> <p>Any other item which may be required for successful completion of the project to be quoted by the bidder.</p>	
<p><u>Item No 21. Installation & Commissioning. Qty = 1 AU</u></p> <p>Delivery, Installation, Testing, Commissioning & System Integration:</p> <p>Delivery:</p> <p>1. The successful bidder has to deliver the material to</p> <p>Head Materials Oil India Limited Duliajan, Dist. Dibrugarh Assam - 786602</p> <p>Within 90 days from the date of issue of Purchase Order by OIL.</p> <p>Installation and Commissioning:</p> <p>The installation and Commissioning must be completed within 120 days from the date of delivery of materials.</p> <p>1. The scope of installation, commissioning & system integration shall mean to install, configure and integrate the following (but not limited to), adhering to essential security and safety measures.</p>	

<p>a) Carry out installation of active components, passive components and accessories supplied as per standards for successful integration and implementation of the systems at all sites.</p> <p>b) Configuring and fine-tuning of subsystems to achieve overall optimal network performance and highest security.</p> <p>2. The components to be installed and configured shall include but not be limited to:</p> <p>i) Wireless equipment/network units</p> <p>ii) Network Management System.</p> <p>iii) All patches and updates to be provided by the successful bidder during the currency of the contract.</p> <p>iv) Carrying out all general tests such as Power on test on delivery, pre-installation checks to ensure correct connections, completeness of system documentation, etc.</p> <p>v) The successful bidder shall not cause any damage to buildings/other premises/property; if any damage occurs, the successful bidder will perform restoration. Trenches, path/road cutting, etc. will be back-filled and restored to the original condition immediately after laying of the conduit/cable/erection of mast etc. The successful bidder, if required, shall also plug conduits and entrance holes with suitable sealing material, where the cable has been laid.</p> <p>vi) The system shall be subjected to inspection at various stages. The successful bidder shall follow all Safety Regulations and practices.</p> <p>vii) Bidders shall spell out various tests that are being proposed to be carried out for demonstrating the functionality of the solution.</p> <p>viii) The Successful Bidder shall provide warranty for all the components including hardware, software, etc. as per Tender for a period of one year from the date of the issuance of Final Acceptance Certificate. Any delay for acceptance caused by the successful bidder will result in automatic extension of the total warranty period by the same duration.</p> <p>x) The successful bidder shall be responsible for the commissioning and maintenance of the entire system.</p> <p>xi) The Successful bidder has to make his own arrangements for transportation and accommodation of the Installation Engineers at Duliajan.</p>	
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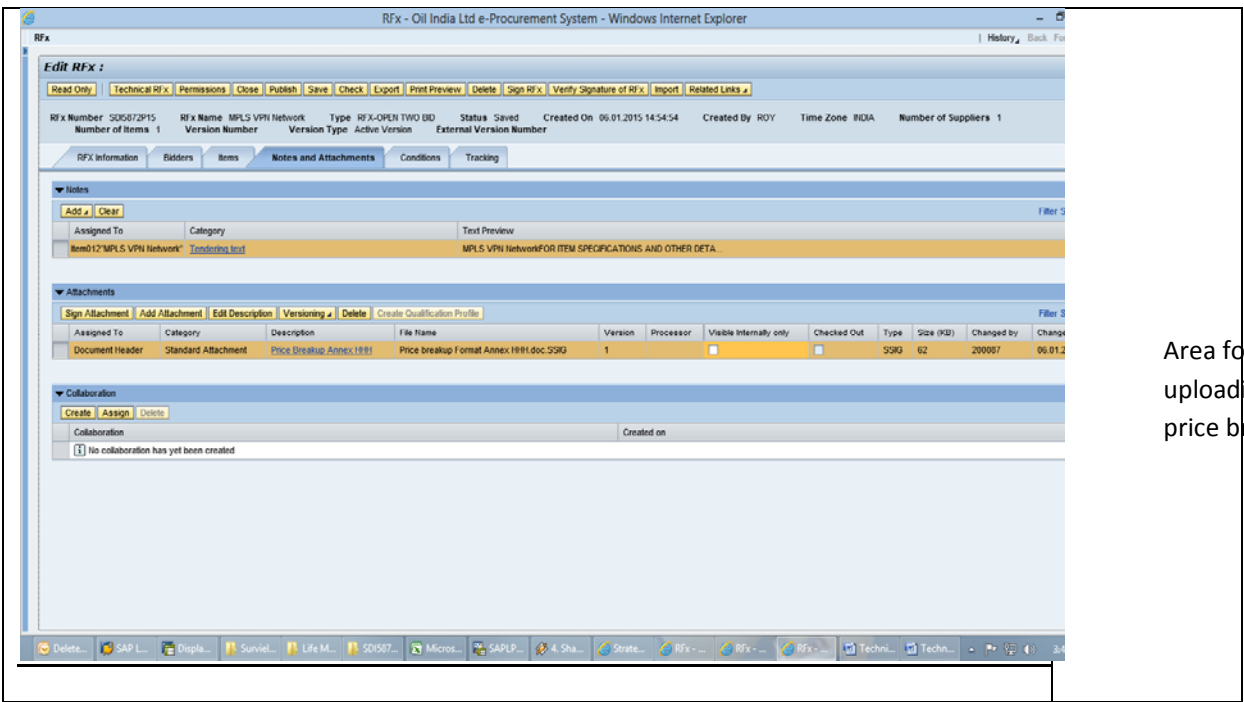
<p><u>Item No 22. Warranty for One Year. Qty = 1 AU</u></p> <p>Warranty Terms:</p> <p>1. Minimum 1(one) year onsite warranty against each item after successful commissioning.</p> <p>2. Warranty has to cover all equipment, including power devices and batteries, workmanship of any equipment-fixing work carried out by successful bidder.</p> <p>3. During the warranty period, any defective device shall have to be replaced with a new one within 48 hours of reporting the failure. Necessary configuration of the replacement device for proper operation of the device in the said Radio Network is the responsibility of the successful bidder.</p> <p>4. Cost of all visits (including transport to and from Duliajan and accommodation at Duliajan) by bidder's personnel for warranty-related work shall have to be borne by the successful bidder.</p> <p>7. Absence of the Service engineer / rigger-men during the warranty period will attract penalties as per the Penalty Clause of this document.</p> <p>8. Delay in replacement of defective items will attract penalties as per the Penalty Clause of this document.</p> <p>9. The successful bidder has to maintain the stock of spare items at IT Department, Duliajan during Warranty and AMS period as per list given below. Any spare item consumed must be replaced by the bidder within 15 days of consumption. In case of</p>	
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<p>non-replacement of spares within stipulated 15 days period, OIL reserves the right to procure the same at its own cost and deduct the same from the amount due to the bidder. Spare items will become property of OIL after the completion of AMS period.</p> <p>Spare Items:</p> <ol style="list-style-type: none"> 1.High Capacity AP: 2 Nos 2.High Capacity CPE: 2 Nos 3.10 MB CPE: 2 Nos 	
<p><u>Item No 23. Annual Maintenance Service for 4 years. Qty = 1 AU.</u></p> <ol style="list-style-type: none"> 1. The Annual Maintenance Contract shall start after successful completion of warranty period, as certified by OIL. 2. For any reason, if the warranty period is extended, AMS shall start after completion of the extended warranty period. 3. The AMS shall be for a period of four (4) years. 4. During the AMS period, any failed device shall have to be repaired/ replaced with a new/ standby one within 48 hrs. of reporting the failure. Necessary configuration of the replacement device for proper operation of the device will be the responsibility of the successful bidder. 5. In case of failure on the part of the successful bidder to rectify a reported problem within 48 hrs of reporting the problem, the tenure of the AMS will be extended on a pro-rata basis till rectification of fault, at no extra cost to OIL. This will apply to those failures which affect <ol style="list-style-type: none"> a) a backhaul link, which results in disconnection of all the nodes serviced by that backhaul b) the base station equipment, which disrupts the entire network. 6. Transport arrangements for the successful bidder's personnel for AMS-related work shall have to be made by the successful bidder. 7. AMS charges will be paid quarterly after completion of the quarter. The successful bidder must submit appropriate invoices to Head-IT, IT Department, Oil India Limited, Duliajan, Assam - 786602, on a quarterly basis, clearly mentioning the OIL Purchase Order no. and period of billing. 8. Non-OEM bidders must have a service agreement with the OEM for providing maintenance support for the solution. The bidder must submit a copy of the service agreement to OIL immediately after the placement of Purchase Order and before commencing installation and commissioning. 9. Absence of service team members/ delay in replacement of defective items will attract penalties as per as per the Penalty Clause in this document. 10.The successful bidder has to maintain the stock of spare items at IT Department, Duliajan during Warranty and AMS period as per list given below. Any spare item consumed must be replaced by the bidder within 15 days of consumption. In case of non-replacement of spares within stipulated 15 days period, OIL reserves the right to procure the same at its own cost and deduct the same from the amount due to the bidder. Spare items will become property of OIL after the completion of AMS period. <p>Spare Items:</p> <ol style="list-style-type: none"> 1.High Capacity AP: 2 Nos 2.High Capacity CPE: 2 Nos 3.10 MB CPE: 2 Nos 	

<p><u>Item No 24. Installation of Temporary Sites. Qty = 25 Nos.</u></p> <ol style="list-style-type: none"> 1. The successful bidder has to establish connectivity to temporary installations from a nearby Base Station as per OIL's requirement. The job must be completed within 5 days of issue of work order by OIL. 2. Towers required for such temporary installations shall be provided by OIL. 3. The Successful bidder must submit separate invoices for such installations to Head-IT on a quarterly schedule. 4. Delay attributable to the bidder will attract penalties as per the Penalty Clause in this document. 	
<p><u>Item No 25. De-Installation of Temporary sites. Qty = 25 Nos.</u></p> <ol style="list-style-type: none"> 1. The successful bidder has to dismantle communication equipment at temporary installations as per OIL's requirement. The job must be completed within 5 days of work order issued by OIL. 2. The successful bidder must submit separate invoices for such de-installation to Head-IT on a quarterly schedule. 3. Delay attributable to the bidder will attract penalties as per the Penalty Clause in this document. 	
<p>*****</p>	
<p>Scope of Work:</p> <ol style="list-style-type: none"> 1. The successful bidder has to replace OIL's existing the radios with new radios in 81 (eighty one) remote sites. The successful bidder has to dismantle the exiting radios from tower and hand it over to IT Department, Oil India Limited. 2. The successful bidder has to design the network clearly specifying antenna and power requirement. <u>The sites details are given in this document.</u> 3. The successful bidder has to use OIL's existing infrastructure, i.e. towers, routers(CiscoWSC3560C12PC-S), switches(L2) while designing and implementing the new radio network. 4. OIL reserves the right to add new Radio Installations with similar radios and networking equipment. In case of such additions, OIL will inform the vendor in writing. Payment for such newly installed equipment will be made on a pro-rata basis from the date of informing the vendor. 5. For temporary installations, the towers will be provided by OIL; the radio equipment will have to be installed and de-installed as per OIL's requirement under this order. 6. The successful bidder has to place one (1) maintenance team at Duliajan,, consisting of atleast two service engineers (CCNA certified) and two rigger-men exclusively to provide maintenance support for entire period of Purchase Order(Warranty & AMS). The successful bidder has to arrange for Health Certificate and Work Accident Insurance for his personnel as per safety guidelines of Oil India Limited. 7. The successful bidder has to submit the bio-data of the service engineers/ rigger-men to OIL's IT Department within one month of placing purchase order. The bio data has to include full name of the person including any identification mark, his/her permanent address, present address amongst other details. The successful bidder has to ensure good health and physical fitness of the riggers. 8. In case of replacement personnel posted at Duliajan, OIL's IT Department has to be informed at least one month in advance. 9. Before discharging any personnel, the vendor has to ensure that all documents and material connected with OIL's Radio Network made available to the 	

<p>person are returned to OIL. In case of loss or misuse of any such material or document, the successful bidder will be liable for the same.</p> <p>10. The successful bidder has to ensure that no document or information regarding OIL's installations/ radio network, made available to the vendor for carrying out this order, is misused for any un-lawful activity or activity detrimental to OIL's business interests.</p> <p>11. Spare items must be stocked at IT Department, Duliajan during Warranty and AMS period. Any spare item consumed must be replaced by the bidder within 15 days of consumption. In case of non-replacement of spares within stipulated 15 days period, OIL reserves the right to procure the same at its own cost and deduct the same from the amount due to the bidder. Spare items will become property of OIL after the completion of AMS period.</p> <p>12. The successful bidder has to arrange for transportation of his personnel and material to/ from remote sites for carrying out maintenance/ installation jobs. However, OIL will facilitate the arrangement of entry permits for personnel and vehicle . The successful bidder has to provide necessary details of their personnel and vehicles as required by OIL's security norms and shall also have to abide by OIL's security and safety rules to obtain the entry permits.</p> <p>13. The successful bidder has to arrange for the accommodation of his personnel at Duliajan at his own cost.</p> <p>14. The successful bidder has to provide cell phones to his service engineers to IT department.</p> <p>15. The successful bidder has to provide all tools and equipment required for maintenance of the network, including Digital Multi-meter, Compass, GPS (Global Positioning System), etc.</p> <p>16. Bidder's maintenance staff has to be available at OIL's IT department on all working days during OIL's working hours. However, on holidays and after office hours, they have to be available on call basis.</p> <p>17. The successful bidder has to supply all materials required for Chemical Earthing at sites and construct the earth pit as per the specification mentioned in this tender document.</p>	
<p>Confidentiality Agreement:</p> <p>OIL Confidentiality and Non-Disclosure Agreement(NDA) will be applicable and bidder has to submit Non-Disclosure Agreement as per given format duly signed & Sealed by the authorized signatory of the bidder.</p>	
<p>Special Terms and Conditions:</p> <p>1.The proposed solution of the bidder should be vetted by OEM of Radio equipment and the technical bid shall contain Point to Multipoint link engineering report on the basis of Base station coordinates.</p> <p>2.Bidders must not propose solutions involving hardware products that have reached or are near end of life. The proposed solution must have minimum of 5 years of end of support/end of life from the date of bid closing. OEM certificate to this effect must be submitted along with the bid.</p> <p>3. MAF must be submitted by the bidder for</p> <ul style="list-style-type: none"> a) Radio Equipment - High Capacity AP,CPE,10 MB CPE, Antenna for AP & CPE. b) Base Station Switch <p>4. Bidder must submit un-priced bill of materials with Make/Model.</p>	

<p>Payment Terms:</p> <ol style="list-style-type: none"> 1. 70% payment of the equipment cost will be paid against delivery of material. Balance 30% will be paid after commissioning of the entire network. 2. Warranty charges (if any) and AMS charges will be paid Quarterly after completion of the Quarter. The successful bidder must submit appropriate invoices to Head-IT, IT Department, Oil India Limited, Duliajan, Assam - 786602, on a quarterly basis, clearly mentioning the OIL Purchase Order No. and period of billing. The amount will be paid after deduction of penalty (if any) for this period of billing. 3. Charges for Installation & De installation of Temporary Sites shall be made on actual after completion of the job. 	
<p>Penalty Terms:</p> <ol style="list-style-type: none"> 1. During the AMS/Warranty period, any failed device shall have to be repaired/ replaced with a new/ standby device within 48 hrs. of reporting the failure. Necessary configuration of the replacement device for proper operation of the device will be the responsibility of the successful bidder. In case of failure on the part of the bidder to rectify the problem within 48 hrs of reporting, a penalty of Rs 1000.00 per day per device will be levied and the tenure of the AMS/Warranty will be extended for the period on a pro-rata basis at no extra cost to OIL. However, maximum penalty will not exceed 15% of the total AMS charges for the period in question. 2. Non-availability of maintenance team personnel will be penalized as follows: <ol style="list-style-type: none"> a) Service Engineer (CCNA certified): Rs. 1000 per day per person. b) Rigger-man: Rs. 500 per day per person. 3. Delay in installation/ de-installation of temporary sites will be penalised at Rs 3000 per day. 	
<p><u>Price Breakup:</u></p> <p>Bidders should submit the price breakup of all the items as per “Annexure HHH” which has been uploaded under “Notes & Attachments” > “Attachments” as shown below. The price breakup “Annexure HHH” should be filled up, signed and uploaded under “Notes & Attachments” > “Attachments” only. The filled up price breakup of all the items should not be uploaded in Technical RFX Response folder as it shall lead to rejection of the offer as per Bid Rejection Criteria.</p>	



NOTE:

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

Annexure-I

Sample Format of authorization letter from OEM
(To be typed on the letterhead of the OEM)

Ref. No _____

Date _____

Head (Materials)
Oil India Limited,
Duliajan-786 602

Sub: Authorization Certificate

Ref: Your tender enquiry No. _____ Dated _____.

Sir,

We hereby authorize M/s _____ to quote for supply of equipment , provision of onsite warranty and Annual Maintenance support, including replacement of spares, for the above tender, on our behalf.

Yours faithfully,

For(Type Name & Affix Seal of the firm)

.....
(Signature of Authorized Signatory)

Name:
Designation:
Place: Email:
Phone No.:

Site details with diagram

Tender No & Date: SDI7175P16 Dated 15.05.15

Here is a brief of proposed Network

The entire area of operation is approximately 90 sq. K.M. To cover this entire 90 sq. K.M., we proposed 9 based stations (AP cluster). Each base station will have coverage of 15-20 K.M. in 360 degree radius. The backbone CPE links proposed are of 55 MBPS. The proposed high capacity CPE links & Point to Multiple links with base station names are tabulated herewith for reference.

1. High Capacity CPE Links for Repeating Station:

Sl No	Repeater Station	Connecting Base	CPE Capacity	QTY (NOS)	Latitude	Longitude
1	BHEKULAJAN	DULIAJAN & KATHALONI	55 MB	2	27°22'41.49"N	95°11'45.84"E
2	KUSIJAN 3/6	DULIAJAN & DIGBOI	55 MB	2	27°21'56.00"N	95°33'29.29"E
3	GCS 8/GCS2/OCS2	DULIAJAN & SHALMARI	55 MB	2	27°19'8.02"N	95°15'38.00"E
4	DEROI EPS	SHALMARI & MORAN	55 MB	2	27°12'37.94"N	95° 3'22.04"E
5	DIBC	SHALMARI & KATHALONI	55 MB	2	27°19'7.84"N	94°59'50.12"E
6	KATHALGURI GCS	DULIAJAN & NAGAJAN	55 MB	2	27°22'13.23"N	95°26'44.15"E
7		NAGAJAN & DIGBOI	55 MB	2		
8	BORDHUMSA TERMINAL	DIGBOI & KHARSANG	55 MB	1	27°31'33.02"N	95°52'49.05"E
9	HWD-H	DULIAJAN & HAPJAN	55 MB	2	27°26'23.53"N	95°22'38.40"E
10	BAREKURI	DULIAJAN & BAGHJAN	55 MB	2	27°32'12.54"N	95°24'2.64"E
11	MAKUM OCS	BAGHJAN & HAPJAN	55 MB	2	27°28'14.56"N	95°25'27.45"E
12		SPARE ITEM	55 MB	4		

Minimum 21 meter existing tower to be used for the remote site connectivity. It is applicable for both high capacity CPE (backhauls) and remote CPE.

2. Base Station Name and connecting remote sites are mentioned in following table.

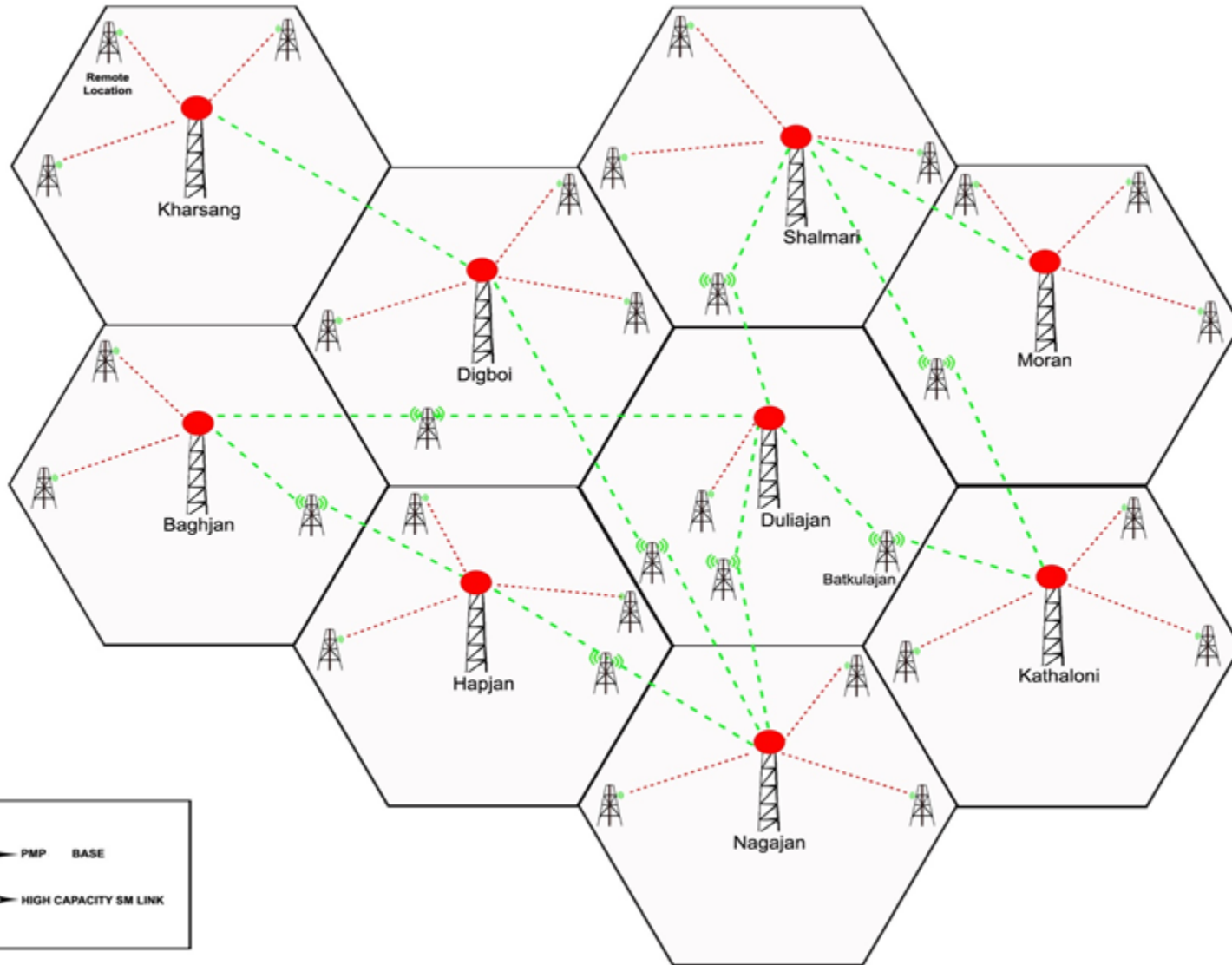
BASE STATION NAME	SI No.	CONNECTING SITES (10 MB CPE)	Latitude	Longitude
DULIAJAN BASE (Tower height 100 mtr) 27°21'7.40"N, 95°18'57.10"E	1.	SOUTH BANK	27°18'52.38"N	95°19'33.99"E
	2.	JAIPUR	27°15'59.43"N	95°22'13.90"E
	3.	OCS 6	27°19'31.51"N	95°17'57.41"E
	4.	MOHMARI OCS 2	27°19'22.50"N	95°16'40.17"E
	5.	NKX	27°18'21.66"N	95°17'4.88"E
	6.	MUDPLANT 7	27°20'2.26"N	95°17'20.42"E
	7.	NIA	27°21'39.86"N	95°20'54.20"E
	8.	NKF	27°21'28.32"N	95°17'49.78"E
	9.	GCS 8	27°19'8.02"N	95°15'38.00"E
	10.	WI 21	27°21'44.34"N	95°20'27.54"E
	11.	GCS 4	27°22'27.32"N	95°21'29.28"E
	12.	GCS 1	27°18'28.02"N	95°18'50.17"E
	13.	CBUS	27°20'4.65"N	95°20'4.73"E
	14.	GCS 2	27°19'51.16"N	95°16'27.20"E
	15.	HVK	27°25'31.76"N	95°17'27.83"E
	16.	USHAPUR OCS	27°18'6.64"N	95°23'38.94"E
	17.	WELL 285	27°25'25.81"N	95°16'31.88"E
	18.	BALIJAN EPS	27°22'50.35"N	95°14'31.02"E
	19.	WI 240	27°20'7.92"N	95°17'30.60"E
	20.	OCS 6	27°19'31.51"N	95°17'57.41"E
	21.	WI 254	27°18'3.79"N	95°18'6.41"E
	22.	DGS 336	27°21'22.84"N	95°28'8.91"E
	23.	OCS 4	27°22'20.24"N	95°21'17.29"E
	24.	SHANTI MUDPLANT	27°18'41.66"N	95°24'4.36"E

	25.	OCS 1	27°18'35.93"N	95°19'11.81"E
	26.	DIAN	27°28'49.79"N	95°14'6.39"E
	27.	WELL 50	27°22'47.03"N	95°19'54.44"E
	28.	NLF	27°16'12.08"N	95°22'6.87"E
	29.	NEW PONTOON	27°19'41.68"N	95°19'1.03"E
	30.	NLG	27°16'25.54"N	95°22'33.10"E
	31.	NLB	27°20'47.98"N	95°14'28.80"E
	32.	NEW TDX EXCHANGE	27°22'13.67"N	95°19'5.29"E
	33.	ANANDAPARA	27°22'3.77"N	95°18'41.70"E
MORAN BASE (Tower height 40 mtr) 27° 9'1.85"N, 94°53'54.45"E	34.	OCS 1	27° 9'29.12"N	94°55'56.09"E
	35.	OCS 2	27° 8'31.17"N	94°56'53.06"E
	36.	GCS 2	27° 9'38.20"N	94°56'2.08"E
	37.	DEROI EPS	27°12'37.94"N	95° 3'22.04"E
	38.	MFC	27°13'23.09"N	94°51'21.62"E
KATHALONI BASE (Tower height 40 mtr) 27°22'42.09"N, 95° 5'26.70"E	39.	DIKOM OCS	27°26'58.09"N	95° 4'59.48"E
	40.	BOGPARA OCS	27°26'3.32"N	94°58'52.82"E
	41.	HATIALI EPS	27°25'37.58"N	95° 7'18.78"E
	42.	WELL 263	27°25'23.96"N	95° 7'45.24"E
	43.	BHEKULAJAN EPS	27°22'41.49"N	95°11'45.84"E
	44.	HUP	27°26'4.23"N	95° 9'29.84"E
	45.	HJC	27°26'12.50"N	95° 9'43.57"E
	46.	DIBC	27°19'7.84"N	94°59'50.12"E
	47.	CHABUA 3	27°26'55.71"N	95°11'30.21"E
	48.	HSW	27°25'0.95"N	95° 8'59.45"E
	49.	DIAZ	27°25'44.59"N	94°58'34.85"E

NAGAJAN BASE (Tower height 40 mtr) 27°23'30.98"N, 95°28'20.06"E	50.	HVF-H	27°26'40.56"N	95°22'55.56"E
	51.	LANGKASHI OCS	27°23'43.64"N	95°26'13.14"E
	52.	KATHALGURI OCS	27°22'7.86"N	95°26'46.99"E
	53.	JORAJAN OCS	27°20'26.59"N	95°29'3.71"E
	54.	NEEPCO	27°20'21.59"N	95°24'28.53"E
	55.	HWD-H	27°26'23.53"N	95°22'38.40"E
	56.	LANGKASHI WI	27°23'0.25"N	95°27'7.37"E
	57.	KATHALGURI GCS	27°22'13.23"N	95°26'44.15"E
HAPJAN BASE (Tower height 40 mtr) 27°27'36.55"N, 95°28'35.96"E	58.	HAPJAN OCS	27°27'36.15"N	95°28'36.13"E
	59.	HWS	27°29'27.54"N	95°26'16.26"E
	60.	MAKUM OCS	27°28'14.56"N	95°25'27.45"E
	61.	KHUSIJAN 2	27°22'56.93"N	95°34'58.30"E
	62.	HUU	27°26'59.18"N	95°23'48.03"E
	63.	BAREKURI	27°32'12.54"N	95°24'2.64"E
DIGBOI BASE (Tower height 100 mtr) 27°23'34.95"N, 95°38'47.17"E	64.	KJN 3/6	27°21'56.00"N	95°33'29.29"E
	65.	BOILER BATTERY 515	27°23'45.11"N	95°40'9.46"E
	66.	CENTRAL COMPRESSOR	27°23'57.49"N	95°40'54.63"E
	67.	DIGBOI MAGZINE HOUSE	27°24'28.87"N	95°41'6.57"E
	68.	SECTION 4	27°25'26.90"N	95°42'8.00"E
	69.	PENGRI GATE	27°25'26.44"N	95°43'3.78"E
SHALMARI BASE (Tower height 40 mtr) 27°15'34.11"N, 95° 9'1.81"E	70.	OCS	27°15'34.30"N	95° 9'1.73"E
	71.	DGV	27°13'56.43"N	95°10'40.07"E
	72.	GCS 1	27°15'30.38"N	95° 9'1.36"E
BAGHJAN BASE	73.	BAGHJAN EPS/GGS	27°36'15.21"N	95°24'17.35"E
	74.	TIE	27°32'43.92"N	95° 9'21.36"E

(Tower height 40 mtr) 27°36'14.30"N, 95°24'16.54"E	75.	TX	27°43'42.07"N	95°37'7.66"E
	76.	MESAKI	27°43'33.73"N	95°37'37.60"E
KHARSANG BASE (Tower height 100 mtr) 27°24'1.73"N, 96° 1'54.62"E	77.	BORDUMSA	27°31'33.02"N	95°52'49.05"E
	78.	MANABHUM	27°32'1.32"N	96°10'0.26"E
	79.	KHUMSAI	27°33'27.59"N	96° 2'15.12"E
	80.	DIYUN	27°32'22.41"N	96° 6'1.72"E
	81.	KHARSANG OFFICE	27°24'1.71"N	96° 1'54.69"E

Schematic Wireless Network in 2.4GHz for OIL India Duliajan, Assam



Note: At present total remote sites are 81 numbers. Additional 19 numbers of remote station sets for upcoming sites which will be put into operation under these 9 Base stations. Total number of remote site equipment to be count as 100 numbers.

Remote station locations are as per latest active sites. These may change at the time of actual deployment. Similarly additional back haul link requirement may come up to meet the bandwidth requirement on deployment.

Annexure- DDD

INTEGRITY PACT

Between

Oil India Limited (OIL) hereinafter referred to as "The Principal"

And

(**Name of the bidder**).....hereinafter referred to as "The Bidder/Contractor" |

Preamble :

The Principal intends to award, under laid down organizational procedures, contract/s for Tender No. **SDI7175P16** The Principal values full compliance with all relevant laws and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder/s and Contractor/s.

In order to achieve these goals, the Principal cooperates with the renowned international Non-Governmental Organisation "Transparency International" (TI). Following TI's national and international experience, the Principal will appoint an external independent Monitor who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

Section 1 - Commitments of the Principal

- (1) The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:-
1. No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for him/herself or third person, any material or immaterial benefit which he/she is not legally entitled to.
 2. The Principal will, during the tender process treat all Bidders with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidders the same information and will not provide to any Bidder confidential/additional information through which the Bidder could obtain an advantage in relation to the tender process or the contract execution.
 3. The Principal will exclude from the process all known prejudiced persons.
- (2) If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the relevant Anti-Corruption Laws of India, or if there be a Page 2 of 6 substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions.

Section 2 - Commitments of the Bidder/Contractor

- (1) The Bidder/Contractor commits itself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.
1. The Bidder/Contractor will not, directly or through any other person or firm, offer, promise or give to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material or immaterial benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.
 2. The Bidder/Contractor will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, Subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelisation in the bidding process.
 3. The Bidder/Contractor will not commit any offence under the relevant Anticorruption Laws of India; further the Bidder/Contractor will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
 4. The Bidder/Contractor will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
- (2) The Bidder/Contractor will not instigate third persons to commit offences outlined above or be an accessory to such offences.

Section 3 - Disqualification from tender process and exclusion from future Contracts

If the Bidder, before contract award has committed a transgression through a violation of Section 2 or in any other form such as to put his reliability or credibility as Bidder into question, the Principal is entitled to disqualify the Bidder from the tender process or to terminate the contract, if already signed, for such reason.

1. If the Bidder/Contractor has committed a transgression through a violation of Section 2 such as to put his reliability or credibility into question, the Principal is entitled also to exclude the Bidder/Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of the transgression. The severity will be determined by the circumstances of the case, in particular the number of transgressions, the position of the transgressions within the company hierarchy of the Bidder and the

amount of the damage. The exclusion will be imposed for a minimum of 6 months and maximum of 3 years.

2. The Bidder accepts and undertakes to respect and uphold the Principal's Absolute right to resort to and impose such exclusion and further accepts and undertakes not to challenge or question such exclusion on any ground, including the lack of any hearing before the decision to resort to such exclusion is taken. This undertaking is given freely and after obtaining independent legal advice.
3. If the Bidder/Contractor can prove that he has restored/recouped the Damage caused by him and has installed a suitable corruption prevention system, the Principal may revoke the exclusion prematurely.
1. A transgression is considered to have occurred if in light of available evidence no reasonable doubt is possible.

Section 4 - Compensation for Damages

1. If the Principal has disqualified the Bidder from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover from the Bidder liquidated damages equivalent to 3 % of the value of the offer or the amount equivalent to Earnest Money Deposit/Bid Security, whichever is higher.
2. If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to section 3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages equivalent to 5% of the contract value or the amount equivalent to Security Deposit/Performance Bank Guarantee, whichever is higher.
3. The bidder agrees and undertakes to pay the said amounts without protest or demur subject only to condition that if the Bidder/Contractor can prove and establish that the exclusion of the Bidder from the tender process or the termination of the contract after the contract award has caused no damage or less damage than the amount or the liquidated damages, the Bidder/Contractor shall compensate the Principal only to the extent of the damage in the amount proved.

Section 5 - Previous transgression

1. The Bidder declares that no previous transgression occurred in the last 3 years with any other Company in any country conforming to the TI approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process.
2. If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

Section 6 - Equal treatment of all Bidders/Contractor/Subcontractors

1. The Bidder/Contractor undertakes to demand from all subcontractors a commitment in conformity with this Integrity Pact, and to submit it to the Principal before contract signing.

2. The Principal will enter into agreements with identical conditions as this one with all Bidders, Contractors and Subcontractors.
3. The Principal will disqualify from the tender process all bidders who do not sign this Pact or violate its provisions.

Section 7 - Criminal charges against violating Bidders/Contractors/ Subcontractors

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor, which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the Vigilance Office.

Section 8 - External Independent Monitor/Monitors (three in number depending on the size of the contract) (to be decided by the Chairperson of the Principal)

1. The Principal appoints competent and credible external independent Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.
2. The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the Chairperson of the Board of the Principal.
3. The Contractor accepts that the Monitor has the right to access without restriction to all Project documentation of the Principal including that provided by the Contractor. The Contractor will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors. The Monitor is under contractual obligation to treat the information and documents of the Bidder/Contractor/Subcontractor with confidentiality.
4. The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.
5. As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the Management of the Principal and request the Management to discontinue or heal the violation, or to take other relevant action. The monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.
6. The Monitor will submit a written report to the Chairperson of the Board of the Principal within 8 to 10 weeks from the date of reference or intimation to him by the 'Principal' and, should the occasion arise, submit proposals for correcting problematic situations.

7. If the Monitor has reported to the Chairperson of the Board a substantiated suspicion of an offence under relevant Anti-Corruption Laws of India, and the Chairperson has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.
8. The word 'Monitor' would include both singular and plural.

Section 9 - Pact Duration

This Pact begins when both parties have legally signed it. It expires for the Contractor 12 months after the last payment under the respective contract, and for all other Bidders 6 months after the contract has been awarded.

If any claim is made/ lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged/determined by Chairperson of the Principal.

Section 10 - Other provisions

1. This agreement is subject to Indian Law. Place of performance and jurisdiction is the Registered Office of the Principal, i.e. New Delhi.
2. Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.
3. If the Contractor is a partnership or a consortium, this agreement must be, signed by all partners or consortium members.
4. Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

<p>TUHIN ROY DEPUTY MANAGER MATERIALS (IP) ----- For the Principal</p>	<p>----- For the Bidder/Contractor</p>
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Place. Duliajan.	Witness 1 :
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Date 15.05.2015 .	Witness 2 :
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Bidders Response Sheet**Annexure-FFF**

Tender No.	
Bidders Name	

Sl No.	Description	Remarks
1	Name of Bidder	
2	Whether tender document purchased from OIL's offices.	
3	Place of Despatch	
4	Whether Freight charges have been included in your quoted prices	
5	Whether Insurance charges have been included in your quoted prices	
6	Make of quoted Product	
7	Offered Validity of Bid as per NIT	
8	Delivery Period in weeks from placement of order	
9	Complied to Standard Payment Terms of OIL or not.	
10	Bid Security Submitted (if applicable)	
11	Details of Bid Security Submitted to OIL (if applicable)	
	a) Bid Security Amount (In Rs):	
	b) Bid Security Valid upto:	
	c) Name and Full Address of Issuing Bank:	
12	Confirm that the Bid Security submitted (In case of Bank Guarantee) is in toto as per format provided in the tender.	
13	Bid Security if Not submitted reasons thereof	
14	Whether you shall submit Performance Security in the event of placement of order on you (if applicable)	
15	Integrity Pact Submitted (if applicable)	
16	Confirm that the Integrity Pact submitted is in toto as per format provided in the tender.	
17	Whether submitted documents in support of General Qualification criteria of NIT	
18	If bidder is Small scale unit whether you have quoted your own product	
19	If bidder is Small scale unit whether you are eligible for purchase preference (as per Govt guideliness)	
20	Whether filled up the bank details for online payment as per Annexure GGG	

NOTE: Please fill up the greyed cells only.

Technical Bid Checklist

Annexure-EEE

Tender No.			
Bidder's Name :			
		Compliance by Bidder	
SL. NO.	BEC / TENDER REQUIREMENTS	Indicate 'Confirmed' / 'Not Confirmed' / Not applicable	Indicate Corresponding page ref. of unpriced bid or Comments
1	Bidder to confirm that he has not taken any exception/deviations to the bid document .		
2	Confirm that the product offered strictly conform to the technical specifications.		
3	Confirm that the Offer has been made with Bid Bond / Bank Guarantee / Earnest Money along with the offer (Wherever Applicable) ?		
4	Confirm unconditional validity of the bid for 120 days from the date of opening of techno-commercial bid.		
5	Confirm that the prices offered are firm and / or without any qualifications?		
6	Confirm that all relevant fields in the on-line bidding format been filled in by the bidders for the items quoted by them.		
7	Confirm that the the price bid is in conformity with OIL's online bidding format ?		
8	Confirm that the Bid comply with all the terms & conditions ?		
9	Confirm that the offers and all attached documents are digitally signed using digital signatures issued by an acceptable Certifying Authority (CA) as per Indian IT Act 2000.		
10	CONFIRM THAT YOU HAVE SUBMITTED THE DULY SIGNED INTEGRITY PACT DOCUMENT (Wherever Applicable)		
11	CONFIRM THAT YOU HAVE SHALL SUBMIT PERFORMANCE BANK GUARANTEE AS PER NIT IN THE EVENT OF PLACEMENT OF ORDER ON YOU (Wherever Applicable)		
12	CONFIRM THAT YOU HAVE SUBMITTED DOCUMENTS AS PER GENERAL QUALIFICATION CRITERIA		

NOTE: Please fill up the greyed cells only.

**(TO BE FILLED UP BY ALL THE VENDOR IN THEIR OWN LETER HEAD)
(ALL FIELDS ARE MANDATORY)**

Tender No. :.....
Name of Beneficiary :M/s.....
Vendor Code :.....
Address :.....
:.....
Phone No. (Land Line) :.....
Mobile No. :.....
E-mail address :.....
**Bank Account No. (Minimum
Eleven Digit No.)** :.....
Bank Name :.....
Branch :.....
**Complete Address of your
Bank** :.....
IFSC Code of your Bank
 a) RTGS :.....
 b) NEFT :.....
PAN :.....
VAT Registration No. :.....
CST Registration No. :.....
Service Tax Registration No. :.....
Provident Fund Registration :.....

I/We confirm and agree that all payments due to me/us from Oil India Limited can be remitted to our above mentioned account directly and we shall not hold Oil India Limited responsible if the amount due from Oil India Limited is remitted to wrong account due to incorrec details furnished by us.

Office Seal

.....
Signature of Vendor

**Counter Signed by Banker:
Seal of Bank:**

Enclosure: Self attested photocopies of the following documents-

- 1) PAN Card**
- 2) VAT Registration Certificate**
- 3) Service Tax Registration**
- 4) CST Registration**
- 5) Provident Registration Certificate**
- 6) Cancelled cheque of the bank account mentioned above (in original).**
- 7) Bank Statement not older than 15 days on the date of submission.**