Annexure-I

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	Bid Closing/ Opening Date	Item & Qty
SDI0418P16 DT: 01.03.2015 (SINGLE STAGE TWO BID SYSTEM)	21.04.2016	PRE FABRICATED SUBSTATION – 01 NO
SDI0389P16 DT: 29.02.2016 (SINGLE STAGE TWO BID SYSTEM)	21.04.2016	30 KVA GENERATING SET-12NOS
SDI0241P16 DT: 12.02.2016 (SINGLE STAGE COMPOSITE BID SYSTEM)	21.04.2016	CABINET & DENTAL CHAIR
SDI0289P16 DT: 19.02.2016 (SINGLE STAGE COMPOSITE BID SYSTEM)	21.04.2016	05 NOS VEHICLE
SDI0467P16 DT: 04.03.2016 (SINGLE STAGE COMPOSITE BID SYSTEM)	28.04.2016	UTP CAT6 CABLE
SDI9994P16 DT: 22.01.2016 (SINGLE STAGE COMPOSITE BID SYSTEM)	28.04.2016	HOB CUTTER TOOLS
SDI0375P16 DT: 27.02.2016 (SINGLE STAGE COMPOSITE BID SYSTEM)	28.04.2016	ELECTRO SURGICAL UNIT
SDI0471P16 DT. 04.03.2016 (SINGLE STAGE TWO BID SYSTEM)	28.04.2016	NEUTRAL GROUNDING RESISTOR
SDI0470P16 DT: 04.03.2016 (SINGLE STAGE COMPOSITE BID SYSTEM)	28.04.2016	POLYCARBONATE PANEL

Tender fee (Non-refundable): Rs 1,000.00; Bid Closing/Opening Time: **(11 Hrs.) IST/(14 Hrs.) IST**; Period of sale of documents **till 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: ranjanbarman@oilindia.in ; erp_mm@oilindia.in

FORWARDING LETTER

Tender No. : **SDI0389P16 DT:29.02.2016**

Tender Fee : **Rs 1,000.00**

Bid Security Amount : **Applicable**

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 **SUPPLY, INSTALLATION & COMMISIONING OF 12 NOS 30 KVA GENERATING SET** 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) For technical support on various matters viz. Online registration of vendors, Resetting of Passwords, submission of online bids etc, vendors should contact OIL's ERP MM Deptt at following: Tel Nos = 0374-2807171 , 0374-2807192. Email id = erp_mm@oilindia.in.

b) OIL's office timings are as below:

	Time (in IST)
Monday – Friday	**07.00 AM to 11.00 AM; 12.30 PM to 03.30 PM**
Saturday	**07.00 AM to 11.00 AM**
Sunday and Holidays	**Closed**

Vendors should contact OIL officials at above timings only.

c) "General Terms & Conditions" for e-Procurement as per Booklet No. MM/LOCAL/E-01/2005 for E-Procurement LCB Tenders.

d) Technical specifications and Quantity as per **Annexure – 1A**.

e) The prescribed Bid Forms for submission of bids are available in the Technical RFx -> External Area - > Tender Documents.

f) 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.

g) 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.

h) 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).

i) 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.** **Documentary evidence submitted / not submitted**
a) Bidder should have experience of successfully executing single similar order of Rs **24.48 Lakhs** during last 3 years.	
b) Annual financial turnover of the firm in any of the last 3 financial years or current financial year should not be less than **Rs 81.60 Lakhs.**	

Note: Documentary evidence in respect of the above should be submitted in the form of copies of relevant Purchase Orders along with copies of any of the documents in respect of satisfactory execution of each of those Purchase Orders, such as – (i) Satisfactory Inspection Report (OR) (ii) Satisfactory Supply Completion / Installation Report (OR) (iii) Consignee Receipted Delivery Challans (OR) (iv) Central Excise Gate Pass / Tax , Invoices issued under relevant rules of Central Excise / VAT (OR) (v) any other documentary evidence that can substantiate the

satisfactory execution of each of the purchase orders cited above. For Annual financial turnover enclose the audited Annual Reports or balance sheet certified by a chartered accountant.

2.0 Vendors having OIL's User ID & password shall purchase bid documents on-line through OIL's electronic Payment Gateway upto one week prior to the Bid closing date (or as amended in e-portal).

Vendors who do not have OIL's User ID & password shall obtain User ID & password through online vendor registration system in e-portal and can subsequently purchase bid documents through OIL's electronic Payment Gateway upto one week prior to the Bid closing date (or as amended in e-portal).

Alternatively 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.

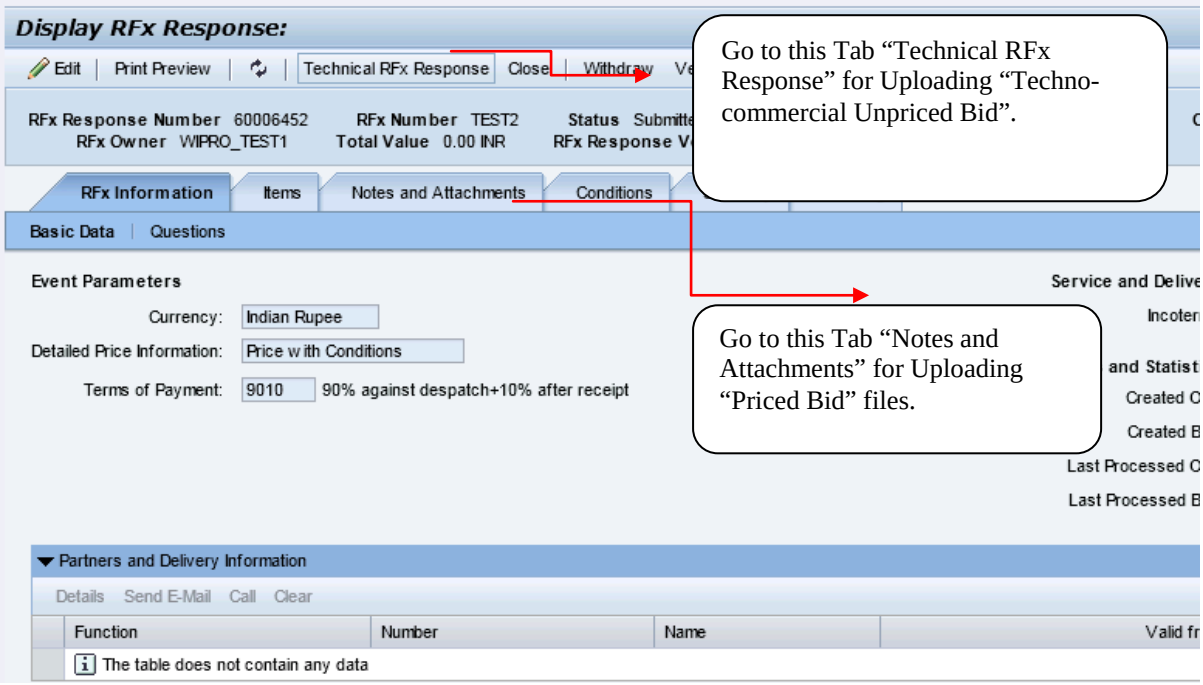
NOTE:
PSUs and MSE units are provided tender documents Free of Cost (as per govt guidelines), however they have to apply to OIL's designated office to issue the tender documents one week prior to the Bid closing date (or as amended in e-portal).

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.

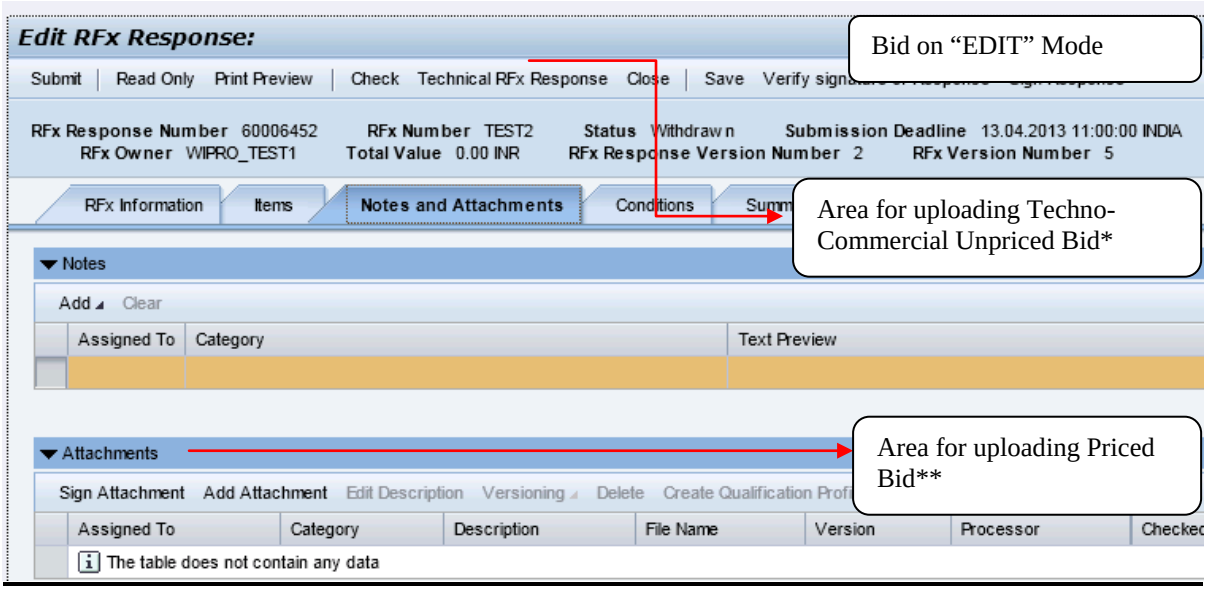
3.1 Please ensure that Technical Bid / all technical related documents related to the tender are uploaded in the Technical RFx Response-> User - > Technical Bid only**.** The "**TECHNO-COMMERCIAL UNPRICED BID**" shall contain all techno-commercial details **except the prices**. **Please note that no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



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 Atachment, a browser window will open, select the .SSIG signed file from the PC and name the file under Description, Assigned to General Data and clock 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 Duplicate.

5.0 Benefits to Micro & Small Enterprises (MSEs) as per OIL's Public Procurement Policy for Micro and Small Enterprises (MSEs) shall be given. Bidders are requested to go though ANNEXURE – I of General Terms and Conditions for E- PROCUREMENT LCB TENDERS (MM/LOCAL/E-01/2005) for more details. MSE bidders are exempted from submission of Tender Fees and Bid Security/Earnest Money provided they are registered for the items they intend to quote.

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 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.

14.0 If Bank Guarantee is submitted towards 'Bid Security', then bidders have to ensure that the Bank Guarantee issuing bank indicate the name and detailed address (including e-mail) of their higher office from where confirmation towards genuineness of the Bank Guarantee can be obtained.

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-
(R BARMAN)
SR MANAGER MATERIALS (IP)
FOR : HEAD-MATERIALS

Annexure - CCC

Tender No & Date: SDI0389P16 DT: 29.02.2016

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.

Criteria	Complied / Not Complied. (Remarks if any)
1.0 BID REJECTION CRITERIA (BRC): **A) COMMERCIAL:** i) Validity of the bid shall be minimum 120 days from the Bid Closing Date. ii) Bid security: The bid must be accompanied by Bid Security of **Rs 81,600.00** in OIL's prescribed format as Bank Guarantee or a Bank Draft/Cashier cheque in 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 21.02.2017).** **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.**	

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.

iv) Performance Security:

Successful bidder will be required to furnish a Performance Security @10% of the order value. The Performance Security must be valid for 12 months from the date of commissioning or 18 months from the date of despatch whichever concludes earlier. Bidder must confirm the same in their bid. Offers not complying with this clause will be rejected.

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.

v) The Bank Guarantee should be allowed to be encashed at all branches within India.

vi) 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.

vii) 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.
viii) 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.
ix) 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.
x) 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:

1. The manufactured product should be strictly as per OIL's tender specification.

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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ANNEXURE-IA

TECHNICAL SPECIFICATIONS WITH QUANTITY

Tender No & Date: SDI0389P16 DT; 29.02.2016

	Complied / Not Complied. (Remarks if any)
ITEM NO. 10 **Factory Assembled 30 KVA Diesel Engine Generating set as per the following descriptions:-QTY = 12 NOS (10 nos for Prod-Oil & 02 nos for Prod-Gas Dept)** Power Out Put : 30 KVA, 3 Phase, 415 Volts, 50 Hz, 0.8 Power Factor Engine RPM : 1500 ,Diesel Engine. Electric Start WITH 10 % Overloading for one hour in twelve hours duration having following accessories and descriptions as the scope of supply. Under N.T.P. conditions having Engine and Alternator directly coupled to each other through a Tyre Flex or equivalent coupling suitably Guarded. **Detail description given in Annexure – (A)**	
ITEM NO. 20 **INSTALLATION AND COMMISSIONING – QTY = 01 AU** Installation and commissioning of CPCBII Compliant 30 KVA acoustic genset as per item description no 10 above.	

NOTE:

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

Sl No.	Description	Specifications	Bidder's Remarks
I.	General	Factory Assembled 30 KVA Diesel Engine Generating set as per the following descriptions: Power Out Put : 30 KVA, 3 Phase, 415 Volts, 50 Hz, 0.8 Power Factor Engine RPM : 1500 ,Diesel Engine. Electric Start WITH 10 % Overloading for one hour in twelve hours duration having following accessories and descriptions as the scope of supply. Under N.T.P. conditions having Engine and Alternator directly coupled to each other through a Tyre Flex or equivalent coupling suitably Guarded.	
		i. 30 KVA DG sets should be enclosed in Acoustic Enclosure (ARAI, Pune/ NPL, New Delhi/ NSTL, Visakapatnam/ FCRI, Palghat / NAL, Bangalore approved) mounted on to common base frame. The maximum permissible sound pressure level for the diesel generator (DG) sets with must be of specified sound level at 1 metre from the enclosure surface ,and must conform to the latest CPCB norms.	
		ii. The emission limit of the Diesel engine of the generating set must comply with the latest CPCB norms shall be as per the notification issued by the **MINISTRY OF ENVIRONMENT AND FORESTS NOTIFICATION** New Delhi, the 11th December, 2013, **G.S.R. 771(E).Requirement of conformance labelling.-** (1) All the engines, individually or as part of the product shall be clearly engraved 'Genset Engine' on the cylinder block. (2) The engine or the product shall be affixed with a conformance label meeting the following requirements, namely:- (a) the label shall be durable and legible; THE GAZETTE OF INDIA : EXTRAORDINARY [PART II—SEC. 3(i)] or latest notification as applicable. (b) the label shall be affixed on a part necessary for normal operation of the engine or the product and not normally requiring replacement during the life of the engine or the product.	

Sl No.	Description	Specifications	Bidder's Remarks
		The conformance label shall contain the following information, namely:- (a) name and address of the manufacturer of engine or product, as the case may be; (b) statement that the engine or product conforms to the Environment (Protection) Rules, 1986; (c) Type Approval certificate number; (d) date of manufacture of engine and the product or in case of import, the date of import of the engine and the product; and (e) rated speed and corresponding gross power in kW. (Herein it will be 30 KVA). **Note: Labels as specified alongwith Purchase order No should be embossed in Nameplate during the delivery supply of the equipments.**	
II.	PRIME MOVER (DIESEL ENGINE)	A. General: i. Multi cylinder (please specify number of cylinders of the offered engine) ii. four Stroke cycle iii. naturally aspirated or Turbocharged. iv. Air cooled . v. Vertical Inline Engine vi. Power for Prime Duty: Engine should be able to develop power required for driving a generating set of 30KVA rated for Prime Duty at 1500 rpm (Output available with varying load for an unlimited time) with an overload capacity of 10% for a period not exceeding One Hour in any 12 hours running when running at 1500 R.P.M.)as per site conditions given below. vii. Conforming Standards: IS:10000/BS:5514 and the Governing is to be in accordance with Class A-2 specifications to IS:10000 / BS: 5514.	
		viii. General Site Conditions: Maximum Temperature : 45 Deg.C, Minimum Temperature : 5 Dec.C Maximum Relative Humidity at 21 Deg C : 100 %, at 35 Deg C : 95 %, at 41 Deg C : 70%	

Sl No.	Description	Specifications	Bidder's Remarks
		Maximum Altitude above mean Sea Level : 150M HSD conforming to IS: 1593:1982.	
		B. Cooling System: The Cooling System of the air cooled engine should comprise of Belt/ Pulley Driven Blower Fan Assembly etc as necessary items.	
		C. Air Intake System: The Air Intake System should comprise of: Heavy duty Oil Bath type Air Cleaner and Air intake manifold.	
		D. Starting System: The Starting System should comprise of Maintenance Free Battery of Reputed Make with **180 AH Battery**,, Engine mounted Battery charging Alternator (Make: LUCASTVS). 12 Volt Starter (Make: LUCAS TVS/ DELCO REMY) and Starting ring fitted to the Engine Flywheel. Batteries shall be low maintenance, lead acid type mounted near the alternator. Batteries should be housed in a hard rubber or polypropylene case with provision for venting. Required cables should be furnished and sized to satisfy circuit requirements.	
		E. Exhaust System: The Exhaust System should comprise of: Exhaust Manifold, Stainless steel Exhaust Flexible connection, Exhaust Silencer, Spark Arrestor and associated Piping connections with proper clamping arrangement with all exposed parts properly insulated.	
		F. Fuel System: The Fuel System should comprise of Mechanical Governor, Fuel Injectors, Fuel Pump, Fuel Filter Assembly, Fuel lines and Fuel Tank having storage capacity to meet the Fuel requirements of 12 hours of full load operations. The fuel system should include fuel level indicator.	
		G. Lubricating System: The Lubricating System should comprise of Gear driven lubricating Oil Pump. Lubricating Oil Filter with a replaceable Filter Element. Lubricating Oil Cooler, Lubricating Oil Pan, Oil level dipstick and Crankcase breather.	
		H. Instrument Panel: The instrument Panel should include the following: i) Lubricating oil pressure gauge ii) Lubricating oil temperature gauge iii) Starting Switch iv) Digital/Mechanical Tachometer and Hour Meter v) Ammeter vi) Engine Low Lube Oil Pressure indication display red lamp	
		I. Engine Safety Controls: Safety shut off/trip system for tripping the Engine in the event of: i) Low Lubricating oil pressure ii) Engine over speed	
		J. Other Features should be as under i) Flywheel	

Sl No.	Description	Specifications	Bidder's Remarks
		ii) Flexible Coupling iii) Lifting eyes iv) Standard Guards over Belt Drives (Blower Fan Drive, charging Alternator drives pulley and flexible coupling). v) Standard Painting vi) SAE standard rotation	
		K. GENERAL NOTES ON ENGINE : a.) The bidder should submit the following information along with relevant performance rating curves and engine product catalogues. i) Gross HP developed at rated RPM ii) Deduction of blower fan, charging alternator and other ancillary equipment. iii) Net HP developed at rated RPM iv) Fuel consumption at rated power as 110%, 75%, and 50% of rated load. b) The set should be ready for operation after carrying out initial servicing and making provision for fuel. c) The engine and alternator should be mounted on suitably selected and sized Anti vibration Mounting onto a common skid and coupled to each other through a flexible coupling to make the DG set vibration free.(Make of Antivibration pad should be specified). d) Make:GREAVES COTTON/KIRLOSKAR/CUMMINS/CATERPILLAR/WAUKESHA OR Equivalent make.	
III.	A. SPECIFICATION OF ALTERNATOR	1. Make: KIRLOSKAR/NGEF/STAMFORD/CROMPTON GREAVES/CATERPILLAR/KATO/ GENERAL ELECTRIC USA	
		2. Rated Output : 30 KVA at 0.8 PF at Specified ambient conditions for utility and motor loads	
		3. Rated Voltage : 415 Volts ± 5%	
		4. Armature Winding : 3 Phase, 4 wire type	
		5. Rated Frequency : 50 Hz ± 3%	
		6. Rated power factor : 0.8 lagging	
		7. Class of insulation : Class F/H but temp rise limited to class B	
		8. RPM : 1500	
		9. Phase sequence: UVW - phase sequence and direction of rotation shall be clearly marked on the alternator.	
		10. Duty/load: Continuous duty rated Alternator	
		11. Winding Connection: Y connected. Separate neutral terminal shall be provided in the alternator terminal box.	
		12. Ambient: Min: 5 ºC Max: 40 ºC, RH 95% max	

Sl No.	Description	Specifications	Bidder's Remarks
		13. Alternators Enclosure Protection: IP 23	
		14. Alternators Terminal Box Protection: IP 54	
		15. Excitation system: Brush less, self excited, self Regulated with solid state AVR. Voltage characteristics- VG3 as per Table-1, IS-13364 (Part-2)	
		16. Mounting: Foot mounted on Gen set skid that has been mounted on anti vibration pad.	
		17. Permissible voltage variation: As per Table-1, IS-13364 (Part-2)	
		18. Permissible frequency variation: As per IS-13364(Part-2)	
		19. Frame size: Bidder to confirm	
		20. Waveform deviation: As per IS-13364 (Part-2)	
		21. Unbalanced current: As per IS-13364 (Part-2)	
		22. Short circuit current: As per IS-13364 (Part-2)	
		23. Cooling: Air cooled by integral fan	
		24. The brush less alternator shall have exciter and rotating rectifier-bridge mounted on shaft complete with diodes and surge suppressor, main field windings and stator windings. PIV of exciter diodes must be 800v or 8 times the maximum exciter armature operating voltage, whichever is higher. At nominal speed the excitation system must produce sufficient residual voltage in order to ensure self excitation.	
		25. All windings should be made from electrolytic grade copper of high purity.	
		26. The alternator shaft shall be supported on rolling element bearings at NDE.	
		27. Voltage swing (Transient response): As per IS-13364 (Part-2).	
		28. The alternator should be capable of sustaining a 10 % over load for one hour in any 12 hours operation.	
		29. Total voltage harmonic distortion should be less than 3 % between phases at no load.	
		30. The alternator should be capable of withstanding 1.2 times the rated speed for two minutes without any damage.	
		31. Alternator stator winding terminals are to be connected to 4 nos. of suitably rated tinned copper terminals, supported on SMC/GRP supports inside the alternator terminal box.	
		32. The alternator terminal box should be of suitable size and should be suitable for terminating power cables of alternator.	
		33. 2 nos. of earth points are to be provided on both sides of the alternator.	
		34. Lifting hooks are to be provided for lifting the alternator.	
		35. Automatic voltage regulator should be mounted with approved rubber bushes under AVR mounting holes to reduce vibration. AVR shall be suitable for motor loads, VG3 regulation.	

Sl No.	Description	Specifications	Bidder's Remarks
		36. Alternator windings and AVR should be suitable for humid atmosphere as per ambient conditions mentioned in the enquiry.	
		37. Bidder to mention/submit the following information in offer i. Unbalanced current carrying capacity ii. Efficiency of the alternator at 25%, 50%, 75% and 100% load iii. Power factor of the alternator at 25%, 50%, 75% and 100% load iv. Dimensional drawings	
		38. Alternator frame and enclosure shall be made from MS or Cast steel.	
		39. The permissible vibration of the alternator shall be as per IS-12075.	
		40. The alternator shall conform to the following standards: Latest publications of all IS Standards shall be referred. IS: 12065 Noise limit IS: 12075 Vibration IS: 4691 Enclosure Protection IS: 6362 Cooling IS: 2253 Mounting IS: 13364 Specification of Alternator coupled with IC Engines	
	B. SPECIFICATION OF CONTROL PANEL	1. Sheet steel clad, self supporting, floor mounting, cubicle type, dust and vermin proof generating set control panel made of 2 mm thick MS CRCA sheet and built upon rigid framework of channels and beams as required, having front and rear hinged doors with danger plate fitted on both sides, lifting lugs on top, ventilation louvers on both sides, bottom detachable gland plates (3 mm thick). The panel doors shall have neoprene rubber gasket. The panel should be designed and manufactured as per IS-8623. The panel enclosure will be as per IP54 except for the open part of cooling louvers at bottom and top of the panel sides. Suitable wire mesh should be provided on the inner side of the louvers to prevent entry of insects. The metal surface of the panel should be given minimum seven tanks anti corrosion treatment and then powder coated in DA grey colour (Min. 50 micron thick paint). The frame should be able to withstand the stress and vibration during transportation and operation. All cable entry shall be from bottom side. Separate removable gland plates shall be provided for all cables. The panel shall be provided with double earthing straps of 50x6 mm GI on two sides at the bottom, complete with suitably sized zinc passivated hardware with heavy plain and spring washers for connection to enclosure earth buses.	
		2. MAIN COMPONENTS: (Mounted Inside the Control Panel):	
		a) One no. 415V, 4 P, 100 A rated Combination fuse switch unit, fitted with 63 A HRC fuses as isolator. Make: GE/Siemens	

Sl No.	Description	Specifications	Bidder's Remarks
		b) One MCCB as main circuit breaker downstream of the fuse switch unit. The MCCB shall be 415V, 63 Amps rated, 4 pole, 25 KA breaking capacity, with inbuilt microprocessor based, adjustable overload & short circuit and shunt trip coil. Rotary operating handle shall be provided on the panel door for manual operation of MCCB. MCCB shall have suitable indication in case of trip from trip unit of MCCB. Make: Merlin Gerin/ Legrand/Siemens. The MCCB should trip on the following faults:	
		i)Over load and short circuit from internal trip unit of MCCB	
		ii)Earth leakage from CBCT earth leakage unit	
		iii)Overvoltage/undervoltage, Overfrequency/ Underfrequency- from voltage monitoring and frequency monitoring relays	
		iv)Engine fault (Low lube oil, over speed)- from engine protection system	
		iv) Enclosure over temperature (from acoustic enclosure temperature detection system)	
		c) One set of TP & N electrolytic grade, high conductivity, electro- tinned copper bus-bars, made from rectangular sections conforming to IS, rated 100 amps (Free air rating of sections) and supported at required intervals to withstand short circuit fault levels up to 25 KA for 3 Seconds. Rating of neutral bus shall be minimum 50% of phase bus rating. Bus-bar support shall be non- hygroscope GRP/FRP and the Bus-bar shall be insulated with heat shrinkable PVC sleeves. Incoming and outgoing power cables shall terminate on electrolytic grade, high conductivity electro tinned copper links liberally sized for termination of all power cables. Neutral bar shall also have provision for connection of neutral earth cables. Power cable from alternator terminal box to control panel input shall be supplied and connected by the manufacturer/supplier. The power cables shall be 4 core 16 sq mm cross sectional area, PVC insulated, PVC sheathed, Screened/Armoured cable with copper conductor. Exposed portions of the cable runs on the floor (outside the panel enclosures) shall be further protected with covered steel cable ducts or steel rigid conduits.	
		d) PROTECTIVE AND METERING DEVICES AND INDICATING LAMPS: (Mounted on front hinged door of Control Panel) i) 1 No. Power & Energy monitor showing Voltage, current, power (KW), Power factor, KWH & Maximum demand, 5 elements of power showing at a glance with communication port compatible to PCs. Make of Meter - Siemens (Sentron PAC 3200)/ SOCOMEC -HPL (Model -DIRIS A 40/A41)/ Schneider Group (Model- PM700). Bar Primary Resin Cast CT of 50/5 ratio, 15 VA burden, class-1, conforming to IS 2705. No. of CTs as per circuit requirement. Make of CT: AEI/ kappa / L&T	
		ii) 1 No. 3 phase, 4 wire, Micro processor based Voltage Monitoring Relay. Range: Over voltage -	

Sl No.	Description	Specifications	Bidder's Remarks
		110 %, Under voltage - 85 % adjustable in steps, with 1- 10 Sec time setting (adjustable), Incorrect phase rotation. Relay to have potential free output contacts. Make: Telemecanique (Model RM3 TR114VS7) / Prok Dvs (Model-LVM11-34- 2CF)/Siemens (U/O voltage relay, Display-3UG46151CR20)	
		iii) 1 No. Digital microcontroller based Frequency Relay. Relay shall have digital display, tropicalised design. Frequency and time settings adjustable in steps. Relay to have potential free output contacts, 240V AC, 6 amps. Make: Prok Dvs/ ABB/ Siemens.	
		iv) 1 No. CBCT along with Earth Leakage Relay for protection against earth leakage. Relay settings: 0.1 – 0.3- 1.0-3.0 Amp & 0.06-0.1-0.3-1.0– 5.0 Sec in steps. In case of earth leakage fault the relay should trip the MCCB through shunt trip coil. The CBCT core size should be such that relay should not trip during external short circuit due to core saturation. Similar to Cat No. (26092+ 26091) of Legrand. Make: Legrand/ Merlin Gerin.	
		v) Contactor type Auxiliary Relay, all relays with minimum 2 nos. spare contacts. No. of relays should be as per the control circuit requirement. Plug in type relays and contactors shall not be used. Current rating of aux. contacts shall be as per control circuit requirement. (Make-Siemens/ GE)	
		vi) Hour meter to record running hours of the genset	
		vii) HRC instrument fuse holders phenol moulded with suitable fuses & links for different circuits. Separate fuses and neutral links should be provided for control circuit indicating system lamps, instruments, enclosure illumination and tripping circuit (Make-GE).	
		viii) Bar Primary Resin Cast CT of 50/5 ratio, 15 VA burden, class-1, conforming to IS 2705. No. of CTs as per circuit requirement. Make: AEI/ kappa / Conzerv/ L&T	
		ix) The control panel should have indication lamps (or annunciator window) mounted on panel front door for following faults and indications. All lamps shall be of LED type, mounted in front of the panel, shall have long life and low energy consumption. Lamps shall remain ON after tripping of MCCB. However, on engine fault the engine will stop and the fault indicating LED shall remain on. Make- LED – Binay/ L&T/ Siemens, annunciator- Minilec or reputed	
		a) Low Engine Speed (From frequency relay)	
		b) Engine fault (overspeed/low lube pr./overcrank)	
		c) Three nos. Red/ Yellow/ Blue for Incoming Supply	
		d) Set on load	
		e) Electrical fault (From aux contact of trip unit of MCCB for overcurrent/from CBCT for earth fault/from voltage and frequency relay for over- & undervoltage and over- & underfrequency)	
		f) Trip circuit/indication lamp healthy	
		x) Push button (momentary contact) for the following shall be provided in the panel:	

Sl No.	Description	Specifications	Bidder's Remarks
		(a) Alarm accept	
		(b) Alarm reset	
		(c) Engine start	
		(d) Engine stop	
		(e) Lamp test	
		xi) Hooter for engine fault shall be provided in the control panel.	
	C. CHANGEOVER SWITCH PANEL (ON-LOAD CHANGEOVER)	a)Sheet steel clad, self supporting, floor mounting, cubicle type, dust and vermin proof changeover switch panel made of 2 mm thick MS CRCA sheet and built upon rigid framework of channels and beams as required, having front hinged doors with danger plate fitted on both sides, lifting lugs on top, ventilation louvers on both sides, bottom detachable gland plates (3 mm thick). The panel doors should have neoprene rubber gasket. The panel should be designed and manufactured as per IS-8623. The panel enclosure will be as per IP54 except for the open part of cooling louvers at bottom and top of the panel sides. Suitable wire mesh should be provided on the inner side of the louvers to prevent entry of insects. The metal surface of the panel should be given minimum seven tanks anti corrosion treatment and then powder coated in DA grey colour (Min. 50 micron thick paint). The frame should be able to withstand the stress and vibration during transportation and operation. All cable entry shall be from bottom side. Separate removable gland plates shall be provided for all cables. Two nos. earth points with welded studs of 10 mm dia for connecting 25x6 mm GI straps and complete with suitably sized zinc passivated hardware with heavy plain and spring washers shall be provided outside the enclosure for earthing.	
		b) One no. four pole on-load changeover type switch, open execution type, rated for 415 V, 63 amps, AC-23A duty shall be provided inside the panel. The switch shall conform to IS-13947/ IEC 947. The changeover switch shall provide the means for changing over from main supply to standby supply to the load centre. The operating handle shall be fixed on the front door for operation from outside. The switch assembly shall have tinned copper bus bars of rectangular section connected at all the twelve switch terminals and brought out and supported on suitable FRP/DMC supports near the bottom cable entry plate. The current rating of copper bus sections shall be 100amp (rating of unassembled sections in air). Bus bars shall be PVC insulated. Sufficient space shall be available inside the panel for bottom entry and safe termination of 3 sets (two incoming- main and standby supply and one outgoing) of heavy duty, armoured, PVC insulated, PVC sheathed, 1100 V grade, IS approved, stranded copper conductor cable. Connection links shall be provided with the changeover switch for proper termination of all power cables. Power cable from control panel to COS shall be supplied and connected by the	

Sl No.	Description	Specifications	Bidder's Remarks
		manufacturer/supplier. Sufficient space and arrangement shall also be provided in COS enclosure for entry and termination of outgoing main power cable. The power cables shall be minimum 16 sq mm cross sectional area, PVC insulated, PVC sheathed, Screened/Armoured cable with copper conductor. Exposed portions of the cable runs on the floor (outside the panel enclosures) shall be further protected with covered steel cable ducts or steel rigid conduits. Make of changeover switch: HPL- Socomec/ GE/ Siemens.	
		OTHERS: i) Engine battery charger, battery voltmeter/ammeter, charging indicator etc. are to be provided preferably in the changeover switch panel.	
		ii) Audio-visual alarm system for fuel gas leakage inside the acoustic enclosure shall also be provided preferably in the changeover switch panel with necessary indication and hooter.	
		iii) Provision of exhaust fan power supply shall be required if the exhaust fan is fitted inside the acoustic enclosure.	
		iv) Power supply arrangement with switching and protection shall also be provided by the supplier/manufacturer for any auxiliary motor, if installed for genset operation. These may be provided inside the enclosure or outside of it, with suitable mounting arrangement. All materials for such switchgear shall be supplied by the supplier/manufacturer along with the supply of the genset. The same shall be commissioned at site by the supplier.	
		v) Control panel and changeover switch panel shall preferably be manufactured by the Genset Manufacturer.	
	D. WIRING SCHEME	i) Control voltage for generator control: 240v AC. Control system wiring shall be done with 2.5 sq mm, flexible copper, 1100v grade PVC insulated wires approved by ISI, TAC, FIA. All wiring will have copper lugs & terminal blocks as required. Wiring for lighting circuit MCB, power outlet and wiring for CT will be done with 2.5 sq mm, flexible copper, 1100v grade PVC insulated wires approved by ISI, TAC, FIA & have copper lugs. Colour code for wires shall be followed as per IS. Make: Finolex, Havells, L&T.	
		ii) All power and control wiring inside the enclosure shall be done at manufacturer's works. Power cabling shall be done with armoured/screened cables laid in metallic conduits/ ductings wherever required. Heavy duty Single Compression Cable Glands shall be provided at all cable entries for armoured cables. Cables with conduit wiring shall have suitable entry clamp. All cables shall be with stranded copper conductor and shall be of 1100v grade and approved by ISI. Make: NICCO/ CCI/ Finolex/Universal.	
		iii) All control cable terminal ends will have suitable heavy duty crimping lugs of tinned copper. Ferrules shall be provided for identification of cables. All components shall be labeled for easy identification.	

Sl No.	Description	Specifications	Bidder's Remarks
		iv) Separate gland plates shall be provided for power and control cables.	
		v) Separate TB shall be provided for all interconnection cables between control panel and engine.	
		vi) Engine control wiring will run from engine to control panel in heavy duty ISI approved galvanized flexible conduit.	
		vii)Suitable provision shall be made for safe routing of output cable from panel to outside of the unit. Opening in the acoustic enclosure should be guarded with rubber bush for safe passage of the outgoing power cable.	
		viii) All auxiliary and main contactors shall be mounted on DIN channel. Plug in relays shall not be used.	
	E. Documents	1. The following Documents / drawings shall be submitted with the offer i) GA drawing of the alternator, control panel and changeover panel ii) Indicative control and power circuit diagrams iii) Indicative bill of materials of the control panel and changeover panel with catalogues iv) Copy of type test certificate for the busbar rating and voltage level of the control panel from reputed government/NABL approved test laboratory v) Technical literature of alternator vi) Confirmation that the party agrees to all the points mentioned under electrical specification of genset. Any deviation from the electrical specifications of the tender will be specifically mentioned by the party with proper justification. Acceptance of deviations shall be at discretion of OIL. Type and make of components shall be as per tender. Party to also specifically confirm even if there is no deviation in their offer from technical specifications.	
		2. The successful bidder shall obtain approval for the following drawings / documents prior to manufacturing of alternator, control panel and changeover switch panel within 30 days of placement of order. i) GA drawing of alternator, control panel and changeover switch panel ii) Documentary evidence from the manufacturer of generator confirming that the alternator to be supplied will meet all specifications as mentioned in the order and technical catalogue of generator. iii) Detailed power & control wiring diagram, detail enclosure drawings for control panel, Changeover switch panel, earthing scheme. iv) Layout plan of the unit showing all parts, cable routes. v) Illumination scheme. vi) Details of power cables, control cable and their routes. vii) Bill of materials of all components.	

Sl No.	Description	Specifications	Bidder's Remarks
		viii) Copy of type test certificate (if not already submitted with the offer) for busbar rating and voltage level of the control panel (i.e., 25 kA at 415 volt for 3 seconds) from reputed government/NABL approved test laboratory for bus fault level and temperature rise ix) List of recommended spares for the control panel components for two years	
		3. Three sets of following as-built documents per genset shall be submitted in bound form and soft copy, along with the materials: i) GA drawing ii) Detailed power & control wiring diagram, detailed enclosure drawings for control panel, earthing scheme iii)Layout plan of the unit showing all parts iv) Details of power cables, control cable and their routes v) Bill of materials of all components vi) Technical literature of alternator vii) O&M manual for Alternator and main components of control panel viii) Catalogues of various components ix) All test certificates for tests done at manufacturer's works for alternator, control panel and complete unit x) Tests done during commissioning xi) Guarantee certificate for alternator and control panel. Guarantee shall be for 12 months after commissioning of Gen set or 18 months after supply, whichever is earlier. xii) List of recommended spares with cat nos. and description for two years	
	F. GENERAL NOTES FOR ELECTRICAL ITEMS AND WORKS:	1. Any deviation from the electrical specifications of the tender will be specifically mentioned by the party with proper justification. Acceptance of deviations shall be at discretion of OIL. Type and make of components shall be mentioned and shall be as per tender. In case of an order the complete electrical specification of the tender shall be mentioned in the order. However, deviations from tender specifications, if mentioned by bidder in their offer and if accepted by OIL in writing, shall also be mentioned in the order. 2. In the event of an order the bidder will submit all documents as per Para E.2 under DOCUMENTS for OIL's approval. 3. The manufacture of the unit shall start only after written approval of the drawings/ documents (as per Para E.2 for Documents) by OIL. 4. The Control Panel shall be designed, manufactured and tested as per the latest applicable codes and standards and stringent quality control checks to be carried out at every stage. 5. The control wiring shall be done with PVC insulated flexible copper wires of 2.5 sq.mm and each	

Sl No.	Description	Specifications	Bidder's Remarks
		wire shall have a ferrule number. The entire wiring will be properly dressed and tested. 6. All control wires shall be brought to terminal strips and from there taken to different controls/devices. All connections shall be done through properly rated lugs. 7. Suitable inscription plates should be provided for the indication lamps, push buttons, selector switches, terminal strips etc. 8. The panels will be so placed in the enclosure that sufficient space shall be available in the front and rear of the panels for inspection & maintenance works on the panels. 9. Neoprene gaskets to be provided wherever required. 10. Earth Strips of 50 X 6 mm GI shall be provided as earth bus at the rear of the switchgear for the earth connections complete with adequate Nos of zinc plated and passivated studs, nuts, and spring washers.	
	G. SPARES (ELECTRICAL)	Following spares shall be supplied by the party along with package of Gen sets, mentioned in the tender. The cost of these spares may suitably be adjusted with the individual genset cost.	
		1. AVR Unit for Alternator- one no.	
		2. Rotating rectifier assembly fitted with complete set of forward and reverse diodes- one set.	
		3. 63 Amp MCCB with door mounted operating handle as fitted in control panel- one no.	
		4. Changeover switch unit without enclosure- one no.	
		5. Bearings: one set	
	H. INSPECTION AND TESTING FOR ALTERNATOR AND CONTROL PANEL	The routine test of the alternator will include the following minimum tests/measurements: 1. Measurement of winding resistances for generator armature, field, exciter armature and exciter field. 2. Measurement of insulation resistance (before and after HV tests) for generator armature and field, exciter armature and field. 3. High voltage (HV) test. 4. Phase sequence test. 5. Voltage regulation test. 6. Vibration measurement. 7. Measurement of noise level. 8. Overload test. 9. Measurement of open circuit and short circuit characteristics.	
		The routine test of the panels will include the following minimum tests/measurements: - 1. Physical checks & Operation check of all components 2. HV tests	

Sl No.	Description	Specifications	Bidder's Remarks
		3. Insulation tests (before and after HV tests). 4. Operation of all protections. For details on pre-despatch inspection and testing, see Section- VI.	
	I. COMMISSIONING OF ELECTRICAL PART OF THE UNIT	1. Installation and Commissioning of the generating set, control panels, Auxiliary Motors, if provided, and their controlling switchgear shall be carried out by the supplier as per NEC, ISI, CEA Regulations at OIL's field area around Duliajan, Assam (India). Services of qualified and competent personnel of supplier are essential during commissioning of the generating sets. All tools, instruments, test kits, drill machine, vice, hardware, clamps etc. required for the job shall be provided by the supplier. Operational tests of all devices and their settings shall also be carried out during commissioning job by the supplier. Accommodation and travel to site for supplier's all persons shall be arranged by supplier.	
		2. All cabling and earthing jobs, termination of cables, making of earth pits with brick/concrete enclosure at field site for genset and control panel shall be done by the supplier. This will include laying and commissioning of power cables from changeover switch panel to OIL's load centre, laying and connection of earth straps to earth electrodes and terminations. OIL shall supply only cables from changeover switch panel to OIL's load centre (PCC/MCC panel), GI Straps from main earth points on the acoustic enclosure to earth electrodes, Earth electrodes, Lugs, Glands, and make road crossings with pipes and prepare cable trenches as required for the complete installation and commissioning work. Any other item required for the job but not specified shall be supplied by party without any cost to OIL. However, necessary electrical interconnection drawing for wiring between genset and panel shall be submitted by party along with dispatch documents.	
		3. All protective devices shall be tested for proper operation and setting shall be done during commissioning by the commissioning personnel of party. All working persons of party shall possess valid electrical license issued by licensing board, Assam.	
		4. The Gen set will be treated as successfully commissioned from electrical side after successful load test (reliability run) of the unit at OIL's field site with available load for 72 hrs continuous running without any breakdown and submission of all documents as per Para E.3 of Documents and all spares as per para G above.	
IV.	ACOUSTIC ENCLOSURE	A. The generating set comprising of engine coupled with alternator, control panel etc for each set should be placed inside an acoustic enclosure having the following salient features:	
		i. The maximum permissible sound pressure level for the diesel generator (DG) sets with must be 75 dB(A) at 1 metre from the enclosure surface and must conform to the latest CPCB norms. [As notified by Environment (Protection) second Amendment Rules vide GSR 371(E), dated 17th May 2002 at serial no.94 and its amendments vide GSR No 520(E) dated 1st July 2003; GSR 448(E), dated 12th July 2004; GSR 315(E) dated 16th May 2005; GSR 464(E) dated 7th August 2006; GSR	

Sl No.	Description	Specifications	Bidder's Remarks
		566(E) dated 29th August 2007 and GSR 752(E) dated 24th October 2008; G.S.R. 215 (E), dated 15th March, 2011 under the Environment (Protection) Act, 1986)]	
		ii. The acoustic enclosure should be of modular construction with the provision to assemble and disassemble easily at site. There should also be adequate provision of taking out the equipment for maintenance / repairing jobs and reinstalling the same after necessary corrective action	
		iii. The engine generator shall be factory enclosed in not less than 14 swg / 2mm thick cold rolled steel enclosure constructed with corner posts, uprights and headers. The roof shall aid in the runoff of water and include a drip edge. The weather- proof and corrosion resistant acoustic enclosure should be duly surface treated.	
		iv. Exhaust silencer shall be provided of the size as recommended by the manufacturer and shall attenuate the sound to the level noted above. It shall be supplied with a flexible , seamless, stainless steel exhaust connection as well as with all internal pipe work. A rain cap will be supplied to terminate the exhaust pipe. These components must be properly sized to assure operation with minimum back pressure and high sound when installed. The canopy should be finished in synthetic enamel paint incorporating rust inhibitors and aluminum sprayed silencers and spark arrestors to guarantee a superior and long lasting finish.	
		v. There should be carefully designed inlet and outlet baffles / attenuators with corresponding weather louvers and bird mesh allowing sufficient air flow, for the set to operate even under the harshest ambient conditions whilst maintaining specified noise levels. Suitably sized blower should be incorporated to meet total air requirement.	
		vi. The temperature inside the enclosure should be suitable for human comfort. The temperature of exhaust line should not exceed the self ignition temperature of fuel. A high temperature trip system (to shut down the engine by cutting off fuel supply to the engine through the solenoid valve) with variable setting connected to a thermostatically controlled blower must be provided for eliminating excessive heat dissipated by the engine within the acoustic enclosure.	
		vii. A separate Blower of suitable size should be provided and it will be in operation even if the thermostatically controlled blower stops / fails.	
		viii. There should be a provision of emergency shut down of the generating set (Prime Mover) from outside the enclosure .	
		ix. The enclosure should be complete with power and control wiring between control panel and alternator and other components like blowers etc with proper size copper cable. The cables should be terminated using gland and tinned copper sweating sockets and run through guard pipe.	
		x. The enclosure should have the sufficient space in and around the generating set to facilitate	

Sl No.	Description	Specifications	Bidder's Remarks
		maintenance and operation of the set	
		xi. Acoustic Enclosures' base frame should incorporate necessary facilities for handling and inter location transfer through oil field trucks.	
		xii. The control panel for the Generating set should be installed separately on the same skid inside the same acoustic enclosure. The connection from the alternator and control panel should be carried out with 3.5 core 120 sq. mm PVC insulated, PVC sheathed armored copper cable and cable should be terminated with proper size of tinned copper sweating socket and cable glands at alternator and panel end.	
		xiii. OIL's Purchase Order No must be permanently marked on two sides of the enclosure in 8Inch (200MM) sized lettering.	
		B.ENCLOSURE ELECTRICALS:	
		i)ENCLOSURE ILLUMINATION AND POWER SUPPLY:	
		a) A separate circuit shall be provided for lighting of the acoustic enclosure. Minimum 2 (two) nos. wall mounted/bulkhead type light fittings with BC holder type CFL lamps shall be fitted inside the enclosure. The light fittings shall have cover for lamp protection. These light fittings shall be wired with heavy duty PVC insulated, PVC sheathed, armoured, 3x4 sq mm stranded copper cables through proper glands. Lights will be switched from one MCB, 6amp, C curve, mounted on control panel cover & have back-up HRC fuse and neutral link of 6 amp rating.	
		b) One no. industrial type metallic plug socket of 20 Amp rating with 10 Amp SP MCB for switching shall be provided which shall be mounted on the side of the enclosure and fed from the lighting circuit.	
		c) Power supply to the heavy duty blower/exhaust fan (thermostatically controlled) in the enclosure (and manually controlled exhaust fan, if separately provided) shall be provided with necessary cabling and glanding, separate on/off switches and isolation devices. Cabling shall be as per lighting circuit described above. Blower/exhaust Fan control shall be such that fan starts automatically through suitable starter and protection, whenever the genset is running.	
		ii) ENCLOSURE AND ALTERNATOR EARTHING ARRANGEMENT:	
		a) Two nos. of 50x6 mm GI straps shall be provided inside the enclosure and fixed on the skid floor as two independent earth bus. Alternator earth terminals, control panel earth terminals, changeover panel earth terminals and enclosure shall each be connected through two nos. separate 25 x 6 mm GI straps to both the main straps/buses with independent connections at separate points. All Galvanization thickness shall be min. 85 micron as per BIS.	

Sl No.	Description	Specifications	Bidder's Remarks
		Both the earth main straps/buses shall extend up to the back of the enclosure and each earth strap shall be provided at the end with one no. zinc coated terminal stud of 10 mm dia for connection of the bus to earth. Two nos. of earth cables (10 metre minimum length each) of heavy duty PVC insulated, sheathed, flexible single core ISI approved copper conductor of minimum 50 mm2 CSA shall be provided for external earthing from these studs to earth electrodes.	
		b) The neutral of the alternator will be earthed by connecting two nos. of earthing cables of sufficient length (minimum 15 metres) at alternator neutral point at alternator terminal box (or at neutral bus inside the generator control panel). The other end of these cables shall be brought out of the enclosure for connection to external earth pits. Heavy duty PVC insulated, sheathed, flexible single core ISI approved copper cable of minimum 50 mm2 CSA shall be used for neutral earthing. The cables shall be terminated with lugs and suitably protected against mechanical damage.	
		c) The ends of the earthing cables shall be crimped with heavy duty copper tubular lugs and marked with ferrules. Suitable opening/cut out in the enclosure/base plate with rubber bush/guard gasket shall be provided to facilitate the entry of outgoing power cables and earth leads.	
		d) Earth leads and earthing jobs as per IS-3043.	
		NOTE : 1. Bidders should submit layout drawing of the acoustic enclosure indicating positions of engine, alternator, control panel etc along with the wiring diagram of the package and will have to be approved by OIL before execution of the order. 2. Enclosure design should be such that for any major maintenance activities the enclosures from any side can be easily dismantled and re-erected. 3. Generating set comprising of Engine, Alternator, Control Panel and other auxiliaries should be placed inside an acoustic enclosure (approved by ARAI, Pune/ NPL, New Delhi/ NSTL, Visakapatnam/ FCRI, Palghat / NAL, Bangalore) and the unit should be mounted to a common base frame. The set should have proper arrangement for easy loading /unloading to facilitate ease in transportation. 4. A panel viewing window should be provided to facilitate visual monitoring of the equipment from outside. 5. Manual showing the details of construction of the Acoustic Enclosure and other components making up the Acoustic Enclosure shall be provided with the order. Quantity: 2 copies per Gen set. 6. List spare parts required (if any) for two years normal operation of the Acoustic System shall be provided along with the offer with price breakup. However, the cost of such spare parts shall not be considered for evaluation. 7.If any bidders offering further improvement (if any) from description from above, shall have to be vetted OIL.	

Sl No.	Description	Specifications	Bidder's Remarks
V.	A.SKID	The skid should be of oilfield type and fabricated from sufficiently strong steel section for carrying the generating set from one place to another from time to time. The engine and alternator should be unitized and mounted on the skid before dispatch. The generator housing shall be one piece and mount directly to the engine flywheel housing without bolted adopter.	
	B. PAINTING & ENGRAVING	(i) All metal surfaces shall be thoroughly cleaned and degreased. The under surface shall be prepared by applying a coat of phosphate paint and a coat of yellow zinc chromate primer. After preparation of under surface, the panel shall be spray painted with two coats of epoxy based final paint. Panel finish shall be free from imperfections like pin holes orange peels, run off paint etc.	
		(ii)OIL's Purchase Order Number shall have to be engraved in the Name Plate of the Engine and the Alternator and Painted prominently on the Acoustic Enclosure.	
	C. SPARE PARTS	Spares for two years normal operation of the generating set should be included in the offer. Item wise breakdown price of spares should also be provided but that will not be considered for evaluation.	
VI.	INSPECTION AND TESTING	1. The plant and materials may be subjected for inspection during manufacture at the purchaser's discretion but such inspection shall not relieve the supplier of his responsibility to ensure that the equipment supplied is free from all manufacturing and other defects and conform to correct specifications. The supplier will be notified in advance, if it is intended to inspect plant or material. The inspection and witness testing shall be at no extra cost to OIL. The bidder shall make their offer with this in view.	
		2. OIL shall carry out single stage pre dispatch inspection of complete generating set in unitized condition (i.e. coupled with alternator) and control panel at one place only as arranged by supplier. No separate inspection for the Engine, alternator, control panel and Acoustic Enclosure at respective manufacturer's works shall be done. Full load testing of the generating sets for output and performance shall be carried out for at least 2 (two) hrs. During the inspection in presence of OIL's representatives appointed for the purpose and to their satisfaction. The vendor shall ensure availability of all requirements for testing the output of the generating set to its full capacity. Any modification/s recommended during inspection to comply with order specifications shall be carried out by the supplier at no additional cost to OIL.	
		3. Dispatch clearance for generating set shall be given on successful load testing of the complete generating set during single stage inspection by OIL's representative and satisfactory submission of routine test certificates of alternator and control panel to OIL. All the routine tests on alternator and control panel shall be witnessed by supplier's/manufacturer's representative and routine test certificates shall be duly signed and stamped by the manufacturer /supplier prior to submission to OIL. The routine test of the alternator will include the following minimum tests/measurements:	

Sl No.	Description	Specifications	Bidder's Remarks
		(i) Measurement of winding resistances for generator armature, field, exciter armature and exciter field. (ii) Measurement of insulation resistance (before and after HV tests) for generator armature and field, exciter armature and field. (iii) High voltage (HV) test. (iv) Phase sequence test. (v) Voltage regulation test. (vi) Vibration measurement. (vii) Measurement of noise level. (viii) Overload test. (ix) Measurement of open circuit and short circuit characteristics. The routine test of the panels will include the following minimum tests/measurements: - (i) Physical checks as per approved BoM & Operation check of all components (ii) HV tests (iii) Insulation tests (before and after HV tests). (iv) Operation of all protections.	
		4. The following tests/measurements shall be carried out to the satisfaction of the purchaser: i) Run the generating sets at rated output and RPM till it attains thermal stability and stable operating parameters such as - Lube oil pressure and temperature - Coolant temperature - Exhaust temperature ii) The following functions shall be demonstrated during the run test: - Functioning of the governor - Functioning of Fail safe System of the engine - All functions of the Acoustic Enclosure Note: The duration of the Run Test shall be 2(two) hours at the least.	
		5. The documents/certificates given below shall be submitted for verification by the purchaser during the inspection. All such documents/ certificates shall be duly signed and stamped by the manufacturer's representative prior to submission to OIL: i) Rated BHP of the engine, continuous power, overload power, fuel stop power of the engine ii) Brake Specific fuel consumption at the rated Output, 110%, 75%, 50% and 25% of rated output. iii) Lube oil grade and consumption at the rated output and RPM QAP for Crankshaft, Connecting rod,	

Sl No.	Description	Specifications	Bidder's Remarks
		Cylinder Block, Cylinder Head iv) CPCB norms compliance certificates v) Noise level certificate of the Acoustic Enclosure	
		6. TEST CERTIFICATES: The supplier shall submit detailed records and certificates of the foregoing tests for the engine to the purchaser. The certificates/records shall be supplied in quadruplicate and those for electrical equipment shall be endorsed suitable for use in the climatic conditions specified.	
VII.	GENERAL NOTES:	i. The offer will not be acceptable if the party do not quote for all items of the tender and supply, installation, commissioning of all items and cables.	
		ii. In their offer the bidder must mention their detailed comments point-wise against each point of tender specifications. Any deviation from the tender specification shall be specifically mentioned. Specific type and make of equipment should be mentioned. All the information required as per tender specifications must be submitted.	
		iii. The bidders should provide installation diagram of the set and performance data sheet along with the quotation.	
		iv. The supplier should provide along with the set (a) Dynamic load (b) Static load (c) Any unbalanced load	
		v. **In the event of order,** (a) The bidder will submit to OIL within one month of placement of order all documents and drawings as required against each item. (b) The manufacture of the equipment is to be started only after written approval of the drawings/ documents by OIL as mentioned in tender against all equipment. (c) Bidder will provide list of tools and equipment available with the bidder to carry out the installation and commissioning work as per tender. (d) The bidder will be responsible for safety of its personnel and safety of all the equipment. All the safety gadgets required for safely carrying out the job shall be provided by the bidder. (e) Bidder will be responsible for safe custody of all the items before handing over to OIL. (f) Handing over to OIL means - supply, installation and commissioning of all items as per order and submission of all the documents and drawings as per order.	
VIII.	INSTALLATION AND COMMISSIONING OF UNIT	i. Installation and Commissioning of the generating sets, control panels mounted on skid shall be carried out by the bidder in the presence of OIL representatives at its fields at Duliajan, Assam (India).	

Sl No.	Description	Specifications	Bidder's Remarks
		ii. Services of qualified and competent personnel from equipment manufacturer is essential during installation and commissioning of the generating sets. Persons engaged for installation, testing and commissioning of alternator and control panel should have valid electrical license issued by State Licensing Board.. A person who is authorized for supervision of all electrical works should have valid supervisory license.	
		iii. External power cable from control panel of the unit to the load center shall be provided by OIL and the party will connect the same to the genset control panel. Party shall connect the earthing loops (Four nos) of the unit to OIL#s earth system using the10.0 M long earth loops provided inside the unit.	
		iv. Materials such as line pipes, fittings necessary for fabricating fuel/ water lines If required), supports for engine exhaust shall be provided by OIL . However bidder has to arrange welding and cutting facilities that may be required during installation and commissioning the generating sets. OIL will provide necessary statutory permits for welding and cutting jobs in classified areas as and when required.	
		v. Installation / commissioning charges should be quoted separately which shall be considered for evaluation of the offers. These charges should included amongst others to and from fares, boarding/ lodging and other expenses of the commissioning engineers during their stay at Duliajan, Assam (India). All Personal, Income and Service Tax etc. towards the services provided by the supplier shall be borne by the supplier and will be deducted at source. Bidders should also confirm about installation/ commissioning in the Technical Bid.	
		vi. In case the bidder decides to test the generating set at the purchaser's premises with load bank, then the bidder should arrange for the load bank at their own cost. All other appliances, apparatus and labor etc. necessary for the tests shall have to be provided by the supplier at his cost.	
		vii. The genset will be treated as successfully commissioned from electrical side after successful load test of the unit at OIL#s field site with available load for 72 hrs and submission of all documents as per Para 10.0.3 of Documents and all spares as per para 12.0 of electrical specifications. Note : Once commissioned at designated site the generating set will be subjected to a trial run (reliability run) on available load for a minimum period of 72 hrs continuously and on satisfactory performance shall be subsequently handed over to OIL.	
		viii. During the installation & commissioning job, the bidder shall strictly ensure - a) That all the cut ends of cables, packing materials, leftover items are removed from site after completion of work. b) No environmental damage shall be done while carrying out the job.	

Sl No.	Description	Specifications	Bidder's Remarks
		ix. RESPONSIBILITY: The responsibility for performance to the specifications shall not be divided among individual component manufacturers, but must be assumed solely by the primary manufacturer. This includes generating system design, manufacture, test, and having a local supplier responsible for service, parts and warranty for the total system.	
IX.	SERVICE AND WARRANTY	i. The nature of after sales service, which can be provided by the supplier, during initial erection and commissioning as also subsequent operation should be clearly stated in the quotation.	
		ii. The manufacturer shall have a local authorized dealer who can provide factory trained servicemen, the required stock of replacement parts, technical assistance, and warranty administration.	
		iii. The manufacturer's authorized dealer shall have a parts and service facility within 300 km of the Job Site.	
		iv. The manufacturer shall have a local authorized dealer who can provide factory trained servicemen, the required stock of replacement parts, technical assistance, and warranty administration.	
		v. The generator set supplier shall have factory trained service representatives and tooling necessary to install and commission all provided equipment.	
		vi. The warranty period for the Gen set and ancillary equipment should be a minimum of 18 months from the date of dispatch/ shipment or 12 months from the date of commissioning of the equipment whichever is earlier. Any defects in the Engine or Alternator during warranty period shall be replaced by the supplier at his cost without any extra charge to OIL.	
		vii. The bidder must undertake and confirm from OEMs that the equipment to be supplied are not going to become obsolete for the next 10 years and provisioning of spares can be continued.	
		viii. The nature of after sales service, which can be provided by the supplier, during initial erection and commissioning as also subsequent operation should be clearly stated in the quotation.	
X.	PACKING	The packing shall be sufficiently robust to withstand rough handling. Boxes/packing cases containing electrical equipment shall be water proof lined. All the matters on the control panel should be packed separately for mounting at site or mounted in such a manner to prevent transit damage.	
XI.	DOCUMENTS TO BE ATTACHED WITH THE FINAL SHIPMENT	The following documents [**atleast 03 sets** (if not specified otherwise hereunder)] **are to be separately packed and forwarded to HEAD- FIELD ENGINEERING, OIL INDIA LIMITED, DULIAJAN- 786602, ASSAM,** clearly indicating the OIL's Purchase order no and the description.	
		1. **COMPOSITE OPERATING AND TROUBLESHOOTING INSTRUCTIONS-** with description and illustration of the complete operation process of the whole Gen Set along with pre - checks etc of engine, all switchgear controls and indicators and engine and generator controls	

Sl No.	Description	Specifications	Bidder's Remarks
		2. PARTS BOOKS- that illustrate and list all assemblies, subassemblies and components.	
		3. PREVENTIVE MAINTENANCE INSTRUCTIONS- on the complete system that cover daily, weekly, monthly, biannual, and annual maintenance requirements and include a complete lubrication chart.	
		4. ROUTINE TEST PROCEDURES- for all electronic and electrical circuits and for the main AC generator.	
		5. TROUBLESHOOTING CHART- covering the complete generator set showing description of trouble, probable cause and suggested remedy.	
		6. RECOMMENDED SPARE PARTS LIST- showing all consumables anticipated to be required during routine maintenance and test.	
		7. WIRING DIAGRAM AND SCHEMATICS- showing function of all electrical components.	
		8. One set of drawing showing installation details of the generating set, oilfield type skid, wiring diagram for the control panel (inclusive of float charger) and wiring drawing between the alternator and control panel should be provided with each generating set. All control panel diagram and schematic diagram are to be sent to us before supply of order materials.	
		9. The bidders should provide installation diagram of the set and performance data sheet along with the quotation.	
		10. The supplier should provide along with the set i) Dynamic load ii) Static load iii) Any unbalanced load	
		11. Warranty documents, test certificates, requisite certificates as specified and all other relevant documents specified in OIL's purchase order.	
		12. **Six (06) sets** of following documents shall be submitted in bound form : # GA drawing # Detailed power & control wiring diagram, detailed enclosure drawings for control panel, earthing # scheme, layout plan of the unit showing all parts. # Details of power cables, control cable and their routes. # Bill of materials of all components. # Technical literature of alternator. # O&M manual(For alternator and engine) #Part manual for Alternator and engine.. # Catalogues of various components. # All test certificates for tests done at manufacturer's works for alternator, control panel and complete	

Sl No.	Description	Specifications	Bidder's Remarks
		unit. # Tests to be done during commissioning. # Guarantee certificate for alternator and control panel. Guarantee shall be for 12 months after commissioning of genset or 18 months after supply, whichever is earlier. # List of recommended spares for two years.	
XII.	(I) SPECIAL TERMS & CONDITIONS	The bid must conform to the specifications and terms and conditions given in the enquiry. Bid will be rejected in case the items offered do not conform to all the required technical parameters stipulated in the technical specifications and to the respective international / national standards wherever stipulated. Notwithstanding the general conformity of the bids to the stipulated specifications and terms and conditions, the following requirements shall have to be particularly met by the bidders, without which the offer will be considered as non-responsive and rejected.	
		1.0 The Diesel engine should be a proven engine of generating set application with a four stroke, Multi cylinder, naturally aspirated /Turbocharged, air cooled, inline engine , conforming to ISO 3046 / BS 5514 / IS 10000 or relevant standards and capable of developing a net Horse Power(at 1500 rpm) require to drive a generating set of capacity 30 KVA rated for Prime Duty as per ISO 8528 standard. 1.1 Certification/declaration to be enclosed from the engine OEM,mentioning the net HP available to drive the alternator and compliance of above standard. In this regard the copy of such record to be furnished as per the following:1). Certificate from OEM(engine) mentioning the net BHP, 2).Proven certificate of the engine for generating set application from OEM(Engine).	
		2. 30 KVA DG sets should be enclosed in Acoustic Enclosure, and meet the latest CPCB norm. (Copy of documents/certificates for due Compliances of the relevant norms to be enclosed).	
		3.0 The Alternator must be brushless type.	
		4.0 Bidder's Qualification : 4.1 Bidder may be an Original Equipment Manufacturer (OEM) of Generating set. OR Bidder may be an authorized dealer of OEM for the Engine or Alternator or the complete Generating set. OR Bidder may be an OEM approved assembler of Generating set or their authorized representative. 4.2 In case the bidder is an OEM of Engine or their authorized dealer, Alternator must be purchased from the OEM of Alternator or their authorized dealer and vice versa.	

Sl No.	Description	Specifications	Bidder's Remarks
		OR In case the bidder is an OEM approved assembler of Generating sets, Engine and Alternator must be purchased from OEM or their authorized dealers. Note: But whatever may be their status in para 4.1 & 4.2 above, bidder will have to enclose Documentary evidence along with the offer failing which offer will be rejected.	
		5.0 Bidders should have the experience of successfully completing at least 3(Three) orders in the last 10(Ten) years before the bid closing date of this enquiry against supply, installation, commissioning and testing of Diesel Engine driven Generating sets of capacity 15 KVA or above for offered Genset along with the Control Panels and accessories in PSUs, Central Govt. or any other Public Limited Company. Documentary evidence(in the form of Order copy or Satisfactory performance certificate) in this regard must be provided along with the quotation failing which offer will be rejected.	
		6.0 The bidder must undertake and confirm from OEM that the equipment to be supplied are not going to become obsolete for the next 10 years and provisioning of spares will be continued. **Note**: Relevant documentary evidences in support of conditions mentioned in support of Sl no 1 to 6(as applicable) must be duly enclosed with the offer failing which the offer shall be summarily rejected.	
XIII.	(II) SPECIAL TERMS AND CONDITIONS:	INSPECTION AND TEST: a) The plant and materials may be subjected for inspection during manufacture at the purchaser's discretion but such inspection shall not relieve the supplier of his responsibility to ensure that the equipment supplied is free from all manufacturing and other defects and conform to correct specifications. The supplier will be notified in advance, if it is intended to inspect plant or material. b) Pre dispatch inspection of the sets shall be carried out by us at the works of manufacture. Load testing of the generator sets for output and performance shall be carried out in presence of the purchaser or his representative appointed for the purpose and to his satisfaction. c) The generating set shall be acceptable to the purchaser only after satisfactory load test.	
		TEST CERTIFICATES : The supplier shall submit detailed records and certificates of the foregoing tests to the purchaser. The certificates/records shall be supplied in quadruplicate and those for electrical equipment shall be endorsed # suitable for use in the climatic conditions specified.	
		The bidder must submit the offer in the attached format by duly filling up the "Bidder's Remarks" column.	
XIV.	SUMMERY DATA	**DATA SHEET FOR ENGINE:**	

Sl No.	Description	Specifications	Bidder's Remarks
	SHEETS :	MAKE	
		MODEL	
		NUMBER OF CYLINDER	
		ASPIRATION	
		COMPRESSION RATIO	
		SIZE (BORE & STROKE)	
		DISPLACEMENT	
		DUTY	
		GROSS HP AT 1500 RPM	
		DEDUCTION FOR FAN, ALD & TEMP.	
		NETT HP AVAILABLE AT 1500 RPM	
		SPECIFIC FUEL CONSUMPTION AT # 100% LOAD	
		# 75% LOAD	
		# 50% LOAD	
		LUB OIL CONSUMPTION(LT/HR)	
		ENGINE SUMP CAPACITY	
		MAKE & TYPE OF GOVERNOR	
		LENGTHX WIDTH X HEIGHT	
		As per ISO 8528-1:1993(E) furnish the following:- (i)POWER LIMIT OF THE GEN SET: (ii) 100% PRIME POWER OF THE GEN SET: (iii)PERMISSIBLE AVERAGE POWER OF THE GEN SET DURING 24HOUR PERIOD: (iv) 100% CONTINUOUS POWER OF THE GEN SET	
		DATA SHEET FOR ALTERNATOR:	
		Make	
		Rated Output	
		Phase	
		Frequency	
		No. of Poles	
		RPM	
		Rated power factor	
		Conductor Material	

Sl No.	Description	Specifications	Bidder's Remarks
		Type	
		Duty	
		Class of insulation	
		Connection	
		Site Condition	
		Alternators Internal Protection (Enclosure)	
		Alternators Terminal Box protection	
		Cooling	
		Excitation system	
		Automatic Voltage Regulation	
		Permissible voltage variation at rated speed, and power factor	
		Voltage swing (transient response)	
		Permissible Engine Speed variation	
		Permissible frequency variation at rated Speed and power factor	
		Period for taking load from start impulse	
		Motor starting ability	
		Overload capacity	
		Unbalanced current carrying capacity	
		Short circuit current withstand capacity	
		Over voltage	
		Mounting	
		Amplitude of vibration at no load	
		DATA SHEET OF PANEL AND INSTRUMENTS:	
		1)Fuse switch unit	
		a) Make	
		b) Rating	
		c) Cat No/Type	
		2) MCCB	
		a) Make	
		b) Rating	
		c) Cat No/Type	
		3) Power and Energy monitor	
		a) Make	

Sl No.	Description	Specifications	Bidder's Remarks
		b) Rating	
		c) Cat No/Type	
		4) Frequency relay	
		a) Make	
		b) Rating	
		c) Cat No/Type	
		5) Change over switch	
		a) Make	
		b) Rating	
		c) Cat No	
		6) Auxiliary relays	
		a) Make	
		b) Rating	
		c) Cat No	
		7) Hour meter and RPM meter (mechanical/digital)	
		a) Make	
		b) Rating	
		c) Cat No	
		8) CT	
		a) Make	
		b) Rating	
		c) Cat No	
		9) LED lamp/ Annunciator window	
		a) Make	
		b) Rating	
		c) Cat No	
		10) CBCT and relay	
		a) Make	
		b) Rating	
		c) Cat No	
		NB: All the components including CT, indicating meters, fuses, push buttons etc shall be as per NIT.	
XV.	TECHANICAL CHECK LIST	THE FOLLOWING CHECKLIST MUST BE COMPLETED AND RETURNED WITH THE OFFER. PLEASE ENSURE THAT ALL THESE POINTS ARE COVERED IN YOUR OFFER. THESE WILL ENSURE THAT YOUR OFFER IS	

Sl No.	Description	Specifications	Bidder's Remarks			
		PROPERLY EVALUTED. PLEASE TICK MARK #YES# OR #NO# TO THE FOLLOWING QUESTION, IN THE RIGHT HAND.				
		1. Whether quoted as OEM of Engine and whether documentary evidence submitted?	YES		NO	
		2. Whether quoted as OEM of Alternator & whether documentary evidence submitted?	YES		NO	
		3. Whether quoted as Authorized Dealer of OEM(Engine/Alternator) and whether documentary evidences submitted ?	YES		NO	
		4. Whether quoted as Assembler , OEM of Gen Set manufacturer or authorized dealer of OEM (Gen Set Manufacturer)	YES		NO	
		5. Whether separately highlighted any deviation from the technical specification?	YES		NO	
		6. Whether detail specification of Alternator with manufacturer#s technical literature/catalogue enclosed?	YES		NO	
		7. Whether test certificate of Alternator and Control Panel will be submitted?	YES		NO	
		8. Whether three sets of installation/ commission, Maintenance Manual shall be submitted?	YES		NO	
		9. Whether spare parts for 10 years shall be supplied?	YES		NO	
		10. Whether power and Wiring diagram of Alternator Control Panel submitted?	YES		NO	
		11. Whether bill of Materials of Control Panel submitted?	YES		NO	
		12. Whether confirmed that control panel drawing shall be approved by OIL before manufacturing in the event of placement of order?	YES		NO	
		13. Whether offered engine is as per NIT ?	YES		NO	
		14. Whether quoted for supply, installation, commissioning & handing over of genset?	YES		NO	
		15. Whether facility for full load testing of the Generating Set shall be arranged during the pre-dispatch inspection?	YES		NO	

OIL's Tender No.---------- Signed----------

For & behalf of ---------- Designation----------

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. **SDI0389P16** 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 h e/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 risibility 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 form 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 intensions.

R BARMAN
SR MANAGER MATERIALS (IP)

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For the Principal For the Bidder/Contractor

Place. Duliajan. Witness 1 : .....

Date 03.03.2016 . Witness 2 : .....

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 have been filled in by the bidder 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 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**		
13	**Confirm that you have submitted Name and Full Address of Issuing Bank including Telephone, Fax Nos and Email id of branch manager where Bid security has been submitted as Bank Guarantee.**		

NOTE: Please fill up the greyed cells only.

Response Sheet **Annexure-FFF**

Tender No.	
Bidders Name	

Bidders Response Sheet

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 Payment terms of NIT (if applicable) otherwise 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:	
12	If Bid security submitted as Bank Guarantee, Name and Full Address of Issuing Bank including Telephone, Fax Nos and Email id of branch manager	
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	Whether submitted documents in support of General Qualification criteria of NIT	
17	If bidder is Small scale unit whether you have quoted your own product	
18	If bidder is Small scale unit whether you are eligible for purchase preference (as per Govt guideliness)	
19	Whether filled up the bank details for online payment as per Annexure GGG	

NOTE: Please fill up the greyed cells only.

ANNEXURE - GGG

(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 incorrect 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.**