

<u>OIL INDIA LIMITED</u> (A Government of India Enterprise) P.O. Duliajan - 786602, Assam, India FAX: 91-0374-2800533; E-mail : <u>material@oilindia.in</u>

A) OIL INDIA LIMITED invites Indigenous Competitive Bid (e-tenders) through its e-Procurement portal <u>-</u> <u>https://etender.srm.oilindia.in/sap/bc/gui/sap/its/bbpstart/?</u> for following e-tender :

E-Tender No.	B.C Date	Material Description & Quantity
SDI3344P15 Dt: 23.04.2014 (SINGLE STAGE COMPOSITE BID SYSTEM)	26.06.2014	LED OUTDOOR DISPLAY BOARD - 02 NOS
SDI3359P15 Dt: 25.04.2014 (SINGLE STAGE TWO BID SYSTEM)	26.06.2014	30 KVA GENERATING SET – 04 NOS
SDI3367P15 Dt: 26.04.2014 (SINGLE STAGE TWO BID SYSTEM)	26.06.2014	TRUCK MOUNTED 250KVA DIESEL ENGINE DRIVEN GENERATING SET – 01 NO.

Application showing full address/email address with Tender Fee (Non-refundable) of Rs. 1,000.00 (Excepting PSUs and SSI units registered with NSIC) in favour of M/s Oil India Limited and payable at Duliajan is to be sent to <u>Head-Materials, Oil India Limited, P.O. Duliajan, Assam-786602.</u> Application shall be accepted one week prior to Bid Closing date. 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 email) 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 <u>www.oil-india.com</u>.



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

TELEPHONE NO. (91-374) 2808719 FAX NO: (91-374) 2800533 Email: tuhin_roy@oilindia.in ; erp_mm@oilindia.in

FORWARDING LETTER

Tender No.	: SDI3367P15 Dt: 26.04.2014
Tender Fee	: Rs 1,000.00
Bid Security Amount	: Rs 74,000.00
Bidding Type	: SINGLE STAGE TWO BID SYSTEM
Bid Closing on	: As mentioned in the e-portal
Bid Opening on	: -do-
Performance Security	: Applicable
Integrity Pact	: Applicable

OIL invites Bids for **Supply of 01 No. Truck Mounted 250 KVA Diesel Engine Driven 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) "General Terms & Conditions" for e-Procurement as per Booklet No. MM/LOCAL/E-01/2005 for E-Procurement LCB Tenders.
- b) Technical specifications and Quantity as per Annexure 1A.
- c) The prescribed Bid Forms for submission of bids are available in the Technical RFx -> External Area > Tender Documents.
- d) In the event of receipt of only a single offer against the tender within B.C. date, OIL reserves the right to extend the B.C. date as deemed fit by the Company. During the extended period, the bidders who have already submitted the bids on or before the original B.C. date, shall not be permitted to revise their quotation.
- e) 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).

f) 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:

a) Annual financial turnover of the firm in any of the last 3 financial years or current financial year should not be less than **Rs 73.77 Lakhs.**

2.0 Application showing full address/email address with Tender Fee (Non-refundable) of Rs. 1,000.00 in favour of M/s Oil India Limited and payable at Duliajan is to be sent to <u>Head-Materials</u>, <u>Oil India Limited</u>, <u>P.O. Duliajan</u>, <u>Assam-786602</u>. Application shall be accepted only upto <u>one week prior to the bid closing date (or as amended in e-portal</u>). 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 SSI units are provided tender documents Free of Cost (as per govt guidelines), however they have to apply to OIL's designated office to issue the tender documents before the last date of sale of tender document mentioned in the tender.

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

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

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

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

Display RFx Response:	al RFx Response Close Withdraw RFx Number TEST2 Status Su al Value 0.00 INR RFx Response otes and Attachmen <u>ts Conditions</u>	Go to this Tab Response" for commercial Un	"Technical RFx Uploading "Techno- npriced Bid".
Event Parameters Currency: Indian Rupee Detailed Price Information: Price with Cond Terms of Payment: 9010 90% a	itions against despatch+10% after receipt	Go to this Tab Attachments" f "Priced Bid" fi	Service and Delive "Notes and for Uploading iles. Last Processed E Last Processed E
▼ Partners and Delivery Information			
Details Send E-Mail Call Clear	Number	Name	Valid fr
i) The table does not contain any data		INGUIS	Valid H

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

Edit RFx Response: Submit Read Only Print Preview Check Tech	nnical RFx <mark>Response Clos</mark> e Sa	Bid on	"EDIT" Mode		
RFx Response Number 60006452 RFx Number TEST2 Status Withdrawn Submission Deadline 13.04.2013 11:00:00 INDIA RFx Owner WIPRO_TEST1 Total Value 0.00 INR RFx Response Version Number 2 RFx Version Number 5					
RFx Information Items Notes and Attachments Conditions Support Notes Notes Area for uploading Techno-Commercial Unpriced Bid*					
Add Clear					
Assigned To Category		Text Preview			
✓ Attachments Sign Attachment Add Attachment Edit Description	n Versioning⊿ Delete Create G	Area f Bid**	or uploading Pric	ed	
Assigned To Category	Description File Name	Version	Processor	Checke	
i The table does not contain any data					

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 <u>Tender no.</u> and <u>Due date</u> to Head Materials, Materials Department, Oil India Limited, Duliajan 786602, Assam on or before the Bid Closing Date and Time mentioned in the Tender.
 - a) Original Bid Security
 - b) Detailed Catalogue (if any)
 - c) Any other document required to be submitted in original as per tender requirement

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

- 5.0 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.
- 6.0 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.
- **7.0**Bid must be submitted electronically only through OIL's e-procurement portal. Bid submitted in any other form will be rejected.
- 8.0 **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.
- 9.0 a) The Integrity Pact is applicable against this tender. 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 returned 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. Any bid not accompanied by Integrity Pact Proforma duly signed (digitally) by the bidder shall be rejected straightway. 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.

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

- i) SHRI N. GOPLASWAMI, I.A.S. (Retd.), Former Chief Election Commissioner of India E-mail Id : gopalaswamin@gmail.com
- ii) SHRI RAMESH CHANDRA AGARWAL, IPS (Retd.) Former Director General of Police E-mail Id : <u>rcagarwal@rediffmail.com</u>
- 10.0 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.

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

NOTE:

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

Yours Faithfully

Sd-(R BARMAN) SR. MANAGER MATERIALS (ID) <u>FOR : HEAD-MATERIALS</u>

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)
<u>1.0</u> <u>BID REJECTION CRITERIA (BRC)</u>:	
The bids must conform to the specifications, terms and conditions given in the NIT. Bid shall be rejected in case the items offered do not conform to the parameters stipulated in the technical specifications and to the national / international standards. Notwithstanding the general conformity of the bids to the stipulated specifications, the following requirements will have to be particularly met by the bidders without which the same will be considered as non-responsive and rejected.	
(A) TECHNICAL:	
 (a) The Diesel engine should be a four stroke, multi cylinder, turbocharged/Natural aspirated , heat exchanger/ radiator cooled engine rated for continuous power and capable of developing at least 290 Net Brake Horse power at 1500 rpm with a maximum compression ratio of 18:1. Only single stage turbo charging is allowable. (b) The model of engine offered should be one that has a proven track record for generating set application which involves supplying continuous power at variable load for unlimited hours, where a 10% overload is allowed for up to 1 hour in any 12 hours of operation. Bidders should have the experience of successfully completing at least 3(three) orders in the last 10 (ten) years as on the bid closing date against supply, installation, commissioning and testing of diesel Engine driven Generating sets of capacity 125 kva or above for offered Genset along with the Control Panels and accessories in PSUs, Central Govt. or any other reputed Public Limited Company. Documentary evidence in this regard must be provided along with the bid. 	
(c) The alternator must be Brush Less type, having a proven track record for continuous duty.(d) Bidder should be an OEM or authorized dealer of OEM for the engine, alternator, the complete generating set or An OEM approved assembler of generating sets.	
(e) If the bidder is an OEM of engine (or their authorized dealer) then they must purchase the Alternator from OEM of Alternator or their authorized dealer and vice versa and necessary documentary certificate from the OEM must be submitted along with the bid.(f) If the bidder is an OEM approved assembler of Generating sets, they must purchase the	
engine and the Alternator from OEM or their authorized dealers. Documentary evidence in	

this regard must be enclosed with the bid.

(B) <u>Commercial</u> :

i). Bids are invited under "Single Stage Two Bid System". Bidders have to submit both the "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 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.

ii). <u>BID SECURITY:</u>

The bid must be accompanied by Bid Security of **Rs 74,000.00** in OIL's prescribed format as Bank Guarantee or a Bank Draft/Cashier cheque in favour of OIL. The Bid Security shall 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. If bid security in ORIGINAL of above mentioned amount is not received 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 Bank Guarantee towards Bid Security shall be valid for 10 months from Bid closing date. (i.e upto 26.04.2015).

iii).<u>PERFORMANCE BANK GUARANTEE:</u>

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.

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

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

v).Validity of the bid shall be minimum 120 days from the Bid Closing Date.

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 (*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" digital certificate, will be rejected.
- ix).Price should be maintained in the "online price schedule" only. The price submitted other than the "online price schedule" shall not be considered.

x).INTEGRITY PACT:

OIL shall be entering into an Integrity Pact with the bidders as per format enclosed vide Annexure V of the tender document. This Integrity Pact proforma has been duly signed digitally by OIL's competent signatory. The proforma has to be returned 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. Any bid not accompanied by Integrity Pact Proforma duly signed (digitally) by the bidder shall be rejected straightway. 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.

2.0 BID EVALUATION CRITERIA (BEC):

The bids conforming to the technical specifications, 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) <u>TECHNICAL</u>:

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

(B) <u>COMMERCIAL</u> :

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".

NOTE:

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

TECHNICAL SPECIFICATIONS WITH QUANTITY Tender No & Date: SDI3367P15 DT: 26.04.2014

<u>SL No.</u>	Item Description	Complied /Not Complied. (Remarks if any)
<u>10</u>	<u>ITEM NO. 10</u>	
	TRUCKMOUNTED250KVADIESELENGINEDRIVENGENERATING SET- QTY= 01 NOS	
	DETAILED TECHNICAL SPECIFICATIONS, SPECIAL NOTES AND OTHER TERMS AND CONDITIONS FOR SILENT TRUCK MOUNTED 250 KVA DIESEL ENGINE DRIVEN GENERATING SET	
	1.0 SCOPE OF SUPPLY : The scope of supply by the bidder shall be truck mounted 1(one)no 250kVA , 415 Volts, 3 Phase, 50 Hz Industrial type, Diesel Engine driven Generating set confirming to BS: 5514 with all accessories , and associated items as mentioned in the tender and housed in an acoustic enclosure (Generating set, control panel and changeover switch panel). The generating sets shall be the used as secondary source of power for the application. The rating applies to supplying continuous power at variable load for unlimited annual hours. A 10% overload is allowed for up to 1 hour in every 12 hours.	
	 2.0 DIESEL ENGINE : The Diesel engine should be a four stroke, multi cylinder, turbocharged/Natural aspirated , heat exchanger/ radiator cooled engine rated for continuous power and capable of developing at least 290 Net Brake Horse power at 1500 rpm with a maximum compression ratio of 18:1. The engine should comprise of the following sub systems. a) Cooling System The cooling system of water cooled engine should comprise of an engine mounted water pump, an industrial type heavy duty radiator/ heat exchanger suitable for operation in ambient temperature of 48 Deg C and a blower fan. (i) Radiator, Engine Mounted: Heat rejected to the engine jacket water shall be discharged to the atmosphere through a close coupled radiator. The radiator shall be sized to cool the engine continuously while operating at full rated load and at site conditions of Max 48 Deg C ambient. (iii) Blower Fan: The radiator cooling fan shall be a blower type driven from the engine. Air shall be drawn from the engine side and exhausted through the radiator core with no more than 12.7 mm(0.5 Inch) of water external restriction in addition to core restrictions. 	
	with punched steel mesh guarding for personnel protection.b) Air Intake System	
	The air intake system should comprise of a heavy duty engine air cleaner	

mounted on the engine with a vacuum indicator and air intake manifold with dry element requiring replacement no more frequently than 500 hours or once each year.

c) Electric Starting System :

The engine should have an electric starting system comprising of a Maintenance Free Heavy Duty Battery pack of reputed make having a minimum capacity 180 ampere hours with a alternator mounted on the engine for a battery charging and a 24 Volt starter (preferably of LUCAS TVS/DELCO REMY make), starter relay, and automatic reset circuit breaker to protect against butt engagement. Batteries shall be maintenance free, 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.

d) Fuel System:

The fuel system should comprise of fuel pump with Governor, fuel pump, fuel injectors,12 volt DC solenoid coil, Replaceable fuel filter. Diesel tank of minimum 200 litres capacity tank fabricated from 14SWG sheet metal built and same would be integrated in the base of the Gen set inside acoustic enclosure complete with drain valve, air vent, and inlet and outlet connection. The fuel tank shall be suitable for minimum 8 hours continuous running of DG set.

e) Exhaust System :

(i)The exhaust system should comprise of water cooled exhaust manifold, stainless steel exhaust flexible connection, residential type exhaust silencer, spark arrestor and piping connections

(ii) Heavy walled piping of schedule 40 with radii of 90 Deg bend at least $1\frac{1}{2}$ times the pipe diameter. Piping should be installed with appropriate insulation and shielding.

(iii) Piping should be supported and braced to prevent weight or thermal growth being transferred to the engine and flexible expansion fittings provided to accommodate thermal growth.

f) Lubricating System

The lubricating system should comprise of lubricating oil pump, lubricating oil filter with a replaceable paper element, lubricating oil cooler, lubricating oil pan and crankcase breather.

(i) The lubricating oil pump shall be a positive displacement type that is integral with the engine and gear driven from the engine gear train. The system shall incorporate full flow filtration with bypass valve to continue lubrication in the event of filter clogging.

(ii) The bypass valve must be integral with the engine filter base of receptacle.

g) Instrument Panel:

The engine mounted instrument panel shall consist of a shock-mounted formed and welded enclosure. Provide Metric marked gauges as above.

The instrument panel / power control command should include the following

a) Lubricating Oil pressure gauge

b) Lubricating oil temperature gauge

c) Water temperature gauge

d) Starting Switch

e) Mechanical/Digital tachometer and hour meter

g) Ampere meter

h) Engine Safety (Controls :	
Engine mounte	ed safety shut off / trip system for tripping the engine in the	
event of		
(a) Low lubricatin	g oil pressure	
(b) High cooling v	water temperature	
(c) Engine over sp	Deed Detterry Voltogo Worning	
(a) Wook Pottomy	Sattery voltage warning	
(e) weak ballery	warning	
(1) Fall 10 Start SI		
i flovible /direct of	ies :	
i. nexible /ullect c	coupling	
iii flywheel with l	housing	
in lifting avos	nousing	
IV. Intilig eyes	guards over helt drives (blower fan drive water numn drive	
v. coupling guard,	ternator drive pulley and timing pulley)	
vii standard paint	inclinator drive puncy and timing puncy).	
viji suitable hand	throttle control	
ix mechanical hor	ur meter	
x. SAE standard r	otation	
N.B.:- Provision o	of guards over belt drives and couplings is mandatory	
as per recon	nmendations of OISD & DGMS bodies.	
(a) The engine sha shall be rated for the continuous po within a period of (b) The bidder sh performance rating Gross HP develop Deduction for fan, Net HP developed Specific fuel cons load ©A suitably selec power from the e the same to meet C (d)The generating conditions :	all conform to ISO 3046/ IS1000 /BS 5514 specifications and continuous power with an over load power rating of 110 % of ower corresponding to engine application , for a period of 1 hr 12hrs of operation. hould submit the following information along with relevant g curves and engine product catalogues bed at rated RPM , charging alternator and other ancillary equipment 1 at rated RPM sumption at rated power as well as 110%, 75%, 50% of rated eted flexible /direct coupling should be incorporated to transfer engine to the alternator. A guard should be provided to cover OISD norms. g sets should be suitable for operation at the following site	
Ν	Aaximum Temperature : 48 Deg C	
N	Annimum Temperature : 05 Deg C	
Ν	Maximum Relative Humidity at : 21 Deg C:100 % $25 \text{ Deg C} = 0.5 \text{ M}$	
	55 Deg C: 95 %	
Ъ <i>Т</i>	41 Deg C: 70%	
Max	ximum Attitude above sea level : 150 Meter	
(e) Gen. Set shor	ald be mounted on an oil field type skid.	
(f) Bidder must	submit filled in data sheet enclosed with the enquiry.	
(g) Bidders must	t undertake that the equipment should not be obsolete for next	

10 years and provision for supplying spares of the equipment will be continued.	
4.0 DETAILS OF ELECTRICAL PART OF THE UNIT	
A. SPECIFICATION OF ALTERNATOR :	
1. Make : KIRLOSKAR / NGEF / STAMFORD/ CROMPTON GREAVES/ CATERPILLAR / KATO/GENERAL ELECTRIC USA	
2. Rated Output: 250 KVA at 0.8 PF at Specified ambient conditions for utility	
and motor loads 3. Pated Voltage: 415 Volta + 5%	
5. Kaled Voltage. 415 Volts $\pm 5\%$	
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: As per engine rated speed	
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 °C Max: 40 °C, RH 95% max	
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 8000 or 8 times the	
maximum exciter annature operating voltage, whichever is higher. At nominal	
ensure self excitation	
25 All windings should be made from electrolytic grade conner 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. 35. Lifting hooks are to be provided for lifting the alternator. 36. 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. 38. Alternator windings and AVR should be suitable for humid atmosphere as per ambient conditions mentioned in the enquiry. 39. 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 iii. Power factor shall conform to the following standards: Latest publications of all IS Standards shall be referred. IS: 12065 Noise limit IS: 12075 Vibration IS: 6362 Cooling 	
IS: 2253 Mounting	
IS: 13364 Specification of Alternator coupled with IC Engines	
B. GENERATOR CONTROL PANEL	
SPECIFICATION:	
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	

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.

The detail description of the panel is as described below:

MAIN COMPONENTS: (Mounted Inside the Control Panel)

a) One no. 415V, 630 A rated Combination fuse switch unit (CMM type of GE make), fitted with 400 A HRC fuses as isolator.

b) One MCCB as main circuit breaker downstream of the fuse switch unit. The MCCB shall be 415v, 630 Amps rated, 4 pole, 50 KA breaking capacity, with inbuilt microprocessor based, adjustable overload & short circuit, earth fault protection and under voltage trip coil. Front door mounted rotary operating handle with door interlocking facility shall be provided on the panel door for manual operation of MCCB. The MCCB shall have motorized spring charging mechanism. 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, short circuit and earth fault/earth leakage- Tripping from generator protection relay, CBCT earth leakage unit and internal trip unit of MCCB

ii) Overvoltage/undervoltage, Overfrequency/ Underfrequency- From Generator Protection relay

iii) Engine fault (Low lube oil, high water temp, over speed)- Trip signal from engine protection system

iv) Fuel gas leakage (from acoustic enclosure gas 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 800 amps (Free air rating of sections) and supported at required intervals to withstand short circuit fault levels up to 50 KA for 1 Sec. 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 240 sq mm cross sectional area, PVC insulated, PVC sheathed, Screened/Armoured cable with copper conductor. Multi-core or single core cables can be used. 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 400/5 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. Generator Protection Relay providing protection against thermal overload, over current, short circuit, earth fault, over and under voltage, over and under frequency, negative phase sequence. Relay type: Micom P127 of AREVA/Sepam Series 40 of Merlin Gerin/ Siprotec Compact 7SJ80 of Siemens. Relay to have potential free output contacts. iii) Earth leakage relay with CBCT, (Make: Merlin Gerin /Legrand); ELR shall be adjustable (sensitivity: 0-3.0A, time: 0-5 sec.) iv) 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) v) Hour meter to record running hours of the genset vi) 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). vii) 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. Make- LED #Binay/ L&T/ Siemens, annunciator- Minilec or reputed. a) Low Engine Speed (From frequency relay) b) Engine fault (overspeed/low lube pr/high water temp./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/earth fault/over/undervoltage/over/underfrequency) f) Trip circuit/indication lamp healthy viii) Push button (momentary contact) for the following shall be provided in the panel: (a) Alarm accept (b) Alarm reset (c) Engine start (d) Engine stop (e) Lamp test viii) Hooter for engine fault shall be provided in the control panel. C. CHANGEOVER SWITCH PANEL (ON-LOAD CHANGEOVER): **SPECIFICATION** 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, 630 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 800amp (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 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 240 sq mm cross sectional area, PVC insulated, PVC sheathed, Screened/Armoured cable with copper conductor. Multi-core or single core cables can be used. 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.

ii) Provision of exhaust fan power supply shall be required if the exhaust fan is fitted inside the acoustic enclosure.

iii) 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.

iv) Control panel and changeover switch panel shall preferably be manufactured by the Genset Manufacturer.

v) Engine protection control scheme will be powered from Starter Battery

supply. All the protection switches (low speed/ overspeed/low lube pr/high water temp./overcrank) of engine will actuate separate control relay/relays (relay powered from battery supply). Engine protection system shall be mounted on a separate panel near the engine and wired with control panel to trip the MCCB in case of an engine fault.

vi) All control and power cables and earthing cables/straps shall be supplied by the manufacturer. OIL will only supply the cable required for tapping the power from the genset to the load centre. Make of power cables: NICCO/RPG/CCI/NECAB/Havells/Universal.

D. WIRING SCHEME

i) Control voltage for generator control: 240v AC. Control system wiring shall be done with 1.5 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/HPL/Universal or equivalent make having BIS approval.

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/ channels 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.

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.

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.

viii) All auxiliary and main contactors shall be mounted on DIN channel. Plug in relays shall not be used.

E. ENCLOSURE ILLUMINATION AND ELECTRICALS:

a) A separate circuit shall be provided for illumination of the acoustic enclosure. Minimum 3 (three) 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.

Make: Philips/Bajaj/Crompton for luminaire & Legrand/ Merlin-Gerin/Havells for MCB/ Metallic plug socket.

F. EARTHING:

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.

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 in external earth pits.

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 earth electrodes in 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) All straps/cables, earth electrodes (100 mm dia, 3 m length, with sufficient hardware and fasteners) and any auxiliaries required for earthing shall be supplied by the manufacturer. OIL will only arrange for the earthing pits.

e) Earth leads and earthing jobs as per IS-3043.

G. 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. 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.

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., 50 kA at 415 volt for 1 second) 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

i) GA drawing

ii) Detailed power & control wiring diagram, detailed enclosure drawings for control panel, earthing

iii) Scheme, 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.

H. GENERAL NOTES FOR ELECTRICAL ITEMS AND WORKS:

1. 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 G.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 G.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 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. 11. 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 within the rated loading limits of the genset for 72 hrs, submission of all documents as per Para G.3 for documents of electrical specifications and supply of all spares as mentioned under para G of electrical specifications. I. SPARES Following spares per genset shall be supplied by the party along with package of Gen sets, mentioned in the tender. The cost of these spares shall 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. 630 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 no./set (as per offered set: if two bearing genset is offered, one DE/One NDE) J. TESTING AND INSPECTION 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

3. Insulation tests (before and after HV tests).

4. Operation of all protections.

For details on pre-despatch inspection and testing, see Section- #Installation and Commissioning#.

K. 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 including supply of cables and other materials, termination of cables for genset and control panel shall be done by the supplier. OIL shall supply only cables from changeover switch panel to OIL#s load centre (PCC/MCC panel) and arrange for earth pits. Any other item required for the job but not specified shall be supplied by party without any cost to OIL. 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 Genset 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 G.3 of Documents and all spares as per para G above.

L. GUARANTEE

Generator and control panel shall be guaranteed for 12 months after commissioning of Gen set or 18 months after supply, whichever is earlier.

5.0 OTHER ITEMS:

FOLLOWING ITEMS SHALL BE SUPPLIED BY THE PARTY ALONG WITH GENSET. THESE ITEMS SHALL BE INSTALLED AND COMMISSIONED BY THE PARTY AT MENTIONED IN THE ITEM DESCRIPTION AND AS MENTIONED UNDER ITEM SL NO.9.0 (INSTALLATION AND COMMISSIONING) OF THE TENDER.

A. MISCELLANEOUS ITEMS : MISCELLANEOUS ITEMS: Diesel filling pump : One no hand operated diesel filling pump needs to be fitted on the platform . (nearby genset) to fill diesel from ground level . 6.0 ACOUSTIC ENCLOSURE:

The salient features of the acoustic enclosure shall be as follows :

The generating set comprising of engine coupled with alternator, control panel, changeover switch panel should be placed inside an acoustic enclosure having the following salient features :

1. 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

2. The engine generator shall be factory enclosed in not less than a 12 gauge 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, phosphated and finally powder coated for long lasting finish. The sheet metal components should preferably be hot dip, seven tank pretreated before powder coating with special pure polyester based powder .

3. The sound proofing of the enclosure should be done with self extinguishing high quality rock wool / mineral wool conforming to IS 8183. The rock wool should be further covered with fiber glass tissue and perforated sheet. The silencer must be such that sound level is 75 dbA at 1 meter from the enclosure surface.

4. 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.

5. 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.

6. 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. Suitable continuous on line Temperature Monitoring and Control System with Alarm and Shut Down Mechanism should be provided.
7. A separate Blower of suitable size should be provided and it will be in operation even if the thermostatically controlled blower stops / fails.
8. There should be a provision of emergency shut down of the generating set (Prime Mover) from outside the enclosure .

9. The enclosure should be complete with power and control wiring between control panel and alternator and other components like changeover switch panel, blowers etc with proper size copper cable. The cables should be terminated using gland and tinned copper sweating sockets and run through guard pipe.

10. The enclosure should have the sufficient space in and around the generating set to facilitate maintenance and operation of the set

11. Acoustic Enclosures base frame should incorporate necessary facilities for handling and inter location transfer through oil field trucks and its overall dimension should not exceed 9M x 2.5 M x 2.5M (Length x Width x Height).

12. All the terminal boxes/Junction boxes etc, the battery and self starter connection terminals / and its components should be housed inside DGMS approved intrinsically safe enclosure.

13. A panel viewing window should be provided to facilitate visual monitoring of the equipment from outside.

NOTE :

A. 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.

B. Enclosure design should be such that for any major maintenance activities the enclosures from any side can be easily dismantled and re-erected.

C. 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.

7.0 DETAILS OF TRUCK UNIT :

1.0 Brand New Full Forward Control truck unit as per specification, terms & conditions, etc. as under -

1.1 Specifications -

A Chassis -

a. Drive - 4 x 2 drive

b. Cowl - Full Forward Control.

c. Engine - Min. 4 cylinder Water-cooled diesel engine.

Max. Output Power - Approx. 90HP at rated RPM Max. Output Torque - Approx. 275Nm at 1400-2000 rpm.

Emission Norms - EURO-III / BS-III or equivalent.

d. Wheelbase - Preferably in the range 3600-4300mm

e. Max. Permissible GVW - Around 12000Kg..

f.

g Laden Weight

Transmission -

- Not more than 85% of Max. Permissible GVW.

Minimum 5 forward & 1 reverse.

h. Brake - Full air or Hydraulic power assisted Duel Circuit Service Brake and suitable Parking Brake.

i. Wheels & Tyres - Front - 2, Rear - 4 & Spare # 1(Size #minimum 8.25 X 20) j. Electrical - 12 V system

Make & Model of the offered chassis shall clearly be indicated in the bid.

B Driver#s Cabin -

Factory built driver#s cabin (i.e. originally built/fabricated in all respects at chassis manufacturer#s factory that comes along with the chassis and without requiring any subsequent additional fabrication, fitment job on it.)

a. Construction - All Steel Structure construction.

b. Seating capacity - Min. 3(three) person.

c. Seating layout - Driver#s seat and 1(one) Bench Seat for 2(two) passengers at front.

d. Windows - In addition to all standard windows, 1(one) sliding glass window with wire-mesh guard from outside at rear. Non-splinter/toughen type glass-panes lockable from inside for all windows.

C Rear Gen Set Cab -

a. Construction - All Metallic Structure construction.

b. Mounting to chassis - Through sufficient number of heavy duty U-bolts and adequate numbers of underneath cross member channels of appropriate size. Mounting should be rugged enough to overcome the stresses resulting during movement in rural / oilfield road.

Mounting diagram of the sub frame to the main chassis is to be enclosed with the bid.

d. Rear Overhang (ROH) - As per original design. No overhang of genset cab beyond the original chassis. Any extension of chassis to accommodate Gen Set Cab is not acceptable.

D Dimensions -

a. OverallLength - Approx. 6500 mm Width - Max. 2250 mm

Height - Max.3000 mm from ground b. Gen. Set Cab Length - Approx. 4000 mm E. Other features -

a. All lights, gauges, fittings, etc. as per standard.

b. Lockable fuel tank, Standard Tool Kit, Hydraulic Jack with handle, Wheel wrench, Rear-view mirrors, Mud flaps, Well-covered battery box, Toolbox, Suitable storage box.

c. Suitable Towing hook/s, mounting arrangement for spare wheel.

d. Reversing Alarm/Horn.

e. A gap of approx. 200 mm between the driver#s cab and the Rear Gen Set Cab. f. First Aid Box, Fire Extinguisher at suitable locations and other fittings as per MV Act.

g. Supply of 2(Two) sets of Spare Parts Catalogue, Workshop & Service Manual for the chassis along with the unit.

F. Painting -

Exterior - AS per standard

Interior - As per standard (light shade).

Chassis & undercarriage - Rust proof painting.

For paining works, min. 1(one) coat of primer and 3(three) coats of paints shall be applied.

G. Sufficient space need to provided on all four sides of the truck for maintenance of genset by maintenance crew with hand railing for crew safety with at-least one mtr . height .

2.0 Documentation -

A. The following documents/literatures shall be submitted along with the bid -

a. Chassis Technical Leaflet clearly indicating the Make & Model of the chassis to support the specifications provided in the bid. All specifications, as desired, as well as Make & Model description of the chassis shall clearly be defined in the bid; submission of Technical Leaflet alone is not sufficient).

b. Detailed Dimensional Drawing (Plan, Elevation & Side view) showing driver#s cabin, Rear Gen Set Cab, positioning of different components of generating set, overhang, seating arrangement, etc.

c. A list indicating weight of all major components/units of the generating set. Approx. weight of the Rear Gen Cab shall also be indicated in the list.

B. The following documents/literatures shall be submitted along with the supply -

a. Temporary Registration, Insurance, Road Tax, Sale Letter, Engine Emission Certificate, etc. in Form 21 & 22(A) as per MV Act for onward registration of the unit in the name of M/s. OIL INDIA LIMITED, Duliajan.Care should be taken at the time of procurement of the chassis to avoid any confusion in getting temporary registration of the unit.

b. Notwithstanding any clause mentioned elsewhere in the NIT/Tender, the Invoice for the complete unit shall be submitted in 2(two) parts separately as under -

i. Invoice for truck chassis and cabins - it shall include the cost of the truck chassis with Driver#s Cabin only. The truck chassis should be purchased in favor of OIL INDIA LTD & invoice should be obtained accordingly from vendor.

ii. Invoice for Generating Set & its components - it shall include cost of all equipments/components of the generating set mounted on the truck as well as

supplied separately, if any, as part of the complete offer.	
c. 2(1wo) sets of Spare Parts Catalogue, workshop & Service Manual for	
chassis.	
3.0 Warranty/ Guarantee -	
Notwithstanding any Guarantee / Warranty clause(s) mentioned elsewhere in the	
NIT, the truck unit shall be under guarantee/warranty by the bidder for a	
minimum period of 1(one) year from the date of successful commissioning of	
the complete unit at site.	
4.0 Bid must meet the following specifications.	
Factory built Driver#s Cabin.	
a. Full Forward Control Cowl.	
b. Twin-wheel rear axle.	
c. Emission norms - EURO-III/BS-III Emission or equivalent.	
d. GVW not less than 11000Kg.	
e. No extension of rear overhang (ROH) to accommodate the Gen Set Cabin.	
f. Chassis meant for truck use only; not for bus or any other use.	
8.0 INSPECTION AND TESTING :	
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	
The inspection and witness testing shall be at no extra cost to OU. The hidder	
The inspection and witness testing shall be at no extra cost to OIL. The bluder	

b) 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 along with truck 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.

shall make their offer with this in view.

Any modification/s recommended during inspection to comply with order specifications shall be carried out by the supplier at no additional cost to OIL.

c) 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:

(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.	
d) 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.	
e) The documents/certificates given below shall be submitted for verification by	
the purchaser during the inspection. All such documents/ certificates shall be	
auly signed and stamped by the manufacturer's representative prior to	
submission to OIL:	
1) Rated BHP of the engine, continuous power, overload power, fuel stop power	
ii) Droke Specific fuel consumption at the roted Output 1100/ 750/ 500/ and	
1) Brake Specific fuel consumption at the fated Output, 110% , 75% , 50% and 25% of rotad output	
25% of fated output.	
Crankshaft Connecting rod, Cylinder Plack, Cylinder Head	
iv) CPCB norms compliance certificates	
v) Noise level certificate of the Accustic Enclosure	
vi) DGMS approval certificate for Detectors / Sensors of Acoustic Enclosure	
0.0 INSTALLATION AND COMMISSIONING.	
3.0 INSTALLATION AND COMMISSIONING .	
Installation and Commissioning of the generating sets control nanels	
Acoustic Enclosure truck etc shall be carried out by the bidder in the presence	
of OIL representatives at its fields at Duliaian Assam (India) Services of	
qualified and competent personnel from equipment manufacturer are 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. A person who is authorised for supervision of all	
electrical works should have supervisory license.	

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 of the unit to OIL's earth system using four nos. earth loops provided inside the unit.

Installation / commissioning charges should be quoted separately which shall be considered for evaluation of the offers. These charges should included amongst others to an from fares, boarding/ lodging and other expenses of the commissioning engineers during their stay at Duliajan, Assam (India).

Any offer not quoting the installation/ commissioning and Inspection/ testing charges shall be loaded with a maximum charges for the same received against the tender for the evaluation purposes.

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 H.3 of Documents and all spares as per para H of electrical specifications.

Installation and Commissioning of generating set and other electrical items as per details mentioned under these items and as mentioned in item Sl. No. 2 of the Tender (Installation and Commissioning).

10.0 PARTS LIST, INSTRUCTION MANUAL & DRAWING :

A. The supplier should provide two sets each of the manuals and books listed below for each unit:

1.OPERATING INSTRUCTIONS- with description and illustration of all switchgear controls and indicators and engine and generator controls.

2. PARTS BOOKS- that illustrate and list all assemblies, subassemblies and components, except standard fastening hardware (nuts, bolt, washers etc.).

3. PREVENTIVE MAINTENANCE INSTRUCTIONS- on the complete system that cover daily, weekly, monthly, biannual, and annual maintenance requirements and include a complete lubrication chrt.

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

B. All manuals and books described above shall be contained in rigid plastic pouches and in digital form along with the genset.

Compulsory electrical spares and documents as per description mentioned under para 4.0

11.0 AFTER SALES SERVICE :

i) The supplier should provide after sales service during initial commissioning and thereafter for a period of 10(ten) years.

ii) As undertaken by the supplier the equipment to be supplied are not going to be obsolete for next 10 years and provision for supplying spares related to the generating sets and their accessories shall be available for a period of at least 10 years from the date of commissioning.

12.0MARKING :

The truck mounted genset system should be clearly and permanently painted with the following information:

- (a) Year of manufacture :
- (b) WBS no: PI.12ASFE.014
- (c) Order no:

13.0 PACKING :

Packing should be sufficiently robust to withstand rough handling during transit. All items should have their respective identification tag and should be suitably packed to provide ease of handling / storage and offer maximum protection during transit.

Crates and boxes should have a list secured to the exterior wherein the items contained inside should be mentioned in addition to a duplicate list inside. The sling points on the crates should be properly indicated. Internal parts should be sprayed with a rust inhibitor and all openings should be covered with masking tapes to prevent ingress of water. Manuals/ packing cases containing electrical equipment should be lined with water proof material.

14.0 WARRANTY / GUARANTEE :

The warranty period for the complete set including Engine, Alternator, Control Panel, changeover switch panel and all other accessories should be a minimum of 18 months from the date of dispatch / shipment or 12 months from the date of commissioning against any defect, failure and below rated performance of the unit. Party will repair/replace, as desired by OIL, all the defects items during guarantee period. The relevant warranty /guarantee certificate should be submitted at the time delivery of the Engine, Alternator & Control Panel. Test certificate of the Alternator should submit at time of delivery.

20		
<u>20</u>	INSTALLATION AND COMMISIONING – TAU	
	Installation and Commissioning of the generating sets, control panels, Acoustic Enclosure, truck etc shall be carried out by the bidder in the presence of OIL representatives at its fields at Duliajan, Assam (India). Services of qualified and competent personnel from equipment manufacturer are 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. A person who is authorised for supervision of all electrical works should have supervisory license.	
	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 of the unit to OIL's earth system using four nos. earth loops provided inside the unit.	
	Installation / commissioning charges should be quoted separately which shall be considered for evaluation of the offers. These charges should included amongst others to an from fares, boarding/ lodging and other expenses of the commissioning engineers during their stay at Duliajan, Assam (India).	
	Any offer not quoting the installation/ commissioning and Inspection/ testing charges shall be loaded with a maximum charges for the same received against the tender for the evaluation purposes.	
	The genset will be treated as successfully commissioned from all side after successful load test of the unit at OIL's field site with available load for 72 hrs.	

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

DATA SHEET :

DATA SHEET (ENGINE) :

MAKE MODEL NUMBER OF CYLINDERS **ASPIRATION** DISPLACEMENT BORE X STROKE LENGTH X WIDTH X HEIGHT RATED SPEED GROSS HP AT RATED RPM DEDUCTION FOR FAN, ALTITUDE, TEMPR NET HP AVAILABLE AT RATED RPM SPECIFIC FUEL CONSUMPTION AT 110 % LOAD 100 % LOAD 75 % LOAD 50 % LOAD 13. LUBRICATING OIL CONSUMPTION (LT/HR) 14. MAKE AND TYPE OF GOVERNOR 15. ACCURACY CLASS 16. SPEED DROOP **17. SPEED RANGE** NGTH X WIDTH X HEIGHT DRY WEIGHT

DATA SHEET OF 250 KVA BRUSH LESS ALTERNATOR

- 1. Make
- 2. Rated output
- 3. Rated voltage
- 4. Phase
- 5. Type
- 6. Frequency rated / cycle
- 7. Rated power factor
- 8. No. of poles
- 9. Class of insulation
- 10. RPM
- 11. Phase sequence
- 12. Conform to IS
- 13. Rating
- 14. connection
- 15. Ambient temperature
- 16. Alternator Internal Protection (enclosure)
- 17. Alternator Terminal Box Protection
- 18. Amplitude of vibration at no load
- 19. Excitation system
- 20. Mounting
- 21. Permissible voltage variation
- 22. Permissible frequency variation
- 23. Frame size
- 24. Motor starting ability
- 25. Unbalanced current carrying capacity
- 26. Short circuit current withstand capacity
- 27. Over load capability
- 28. Over speed capability
- 29. Over voltage capability
- 30. Range of over voltage
- 31. Automatic voltage regulation from no load and power factor
- 32. Short circuit capability
- 33. Harmonic distortion factor
- 34. Alternator vibration pad required
- 35. Terminal box specification
- 36. No. of earth studs
- 37. No. of lifting hooks
- 38. AVR will be mounted in control panel
- 39. Efficiency of the alternator
- 40. Power factor of the alternator
- 41. Motor starting capability

TECHNICAL CHECKLIST :

[The following check list 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 properly evaluated. Please tick mark Yes or No. to the following question, in the right hand column]

1. Whether quoted as OEM of engine and whether documentary evidences submitted? YES/NO

2. Whether quoted as OEM of Alternator and whether documentary evidences 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? YES/ NO

5. Whether separately highlighted and deviation from the technical specification? YES/NO

6. Whether detail specifications of Alternator with manufacture#s technical literature/ catalogue enclosed? YES/NO

7. Whether Test Certificates of Alternator and Control Panel will be submitted? YES/NO

8. Whether two 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 rated for continuous power? YES/NO

14. Whether Net HP of the offered engine is as per NIT ? YES/NO

17. Whether offered engine conforms to ISO 3046 specifications? YES/NO

18. Wheather offred truck along with the genset is as per NIT ?YES/NO

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. **SDI3367P15** 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.
 - 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.
 - 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)	For the Bidder/Contractor	
For the Principal		
Place. Duliajan.	Witness 1 :	

Date 27.04.2014 .

Witness 2 :

Bidders Response Sheet

Annexure-FFF

Tender No. Bidders Name

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

NOTE: Please fill up the greyed cells only.

Annexure-EEE

Bidder's Name :			
		Comp	liance 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 excention/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 biding format been filled		
	in by the bidders for the items quoted by them.		
7	Confirm that the the price bid is in conformity with OIL's online bidding		
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 accentable Certifying Authority		
	(CA) as per Indian IT Act 2000.		
10	CONFIRM THAT YOU HAVE SUBMITTED THE DULY SIGNED INTEGRITY		
	PACT DOCUMENT (Wherever Applicable)		
11	CONFIRM THAT YOU HAVE SHALL SUBMIT PERFORMANCE BANK		
	GUARANTEE AS PER NIT IN THE EVENT OF PLACEMENT OF ORDER ON		
	YOU (Wherever Applicable)		
12	CONFIRM THAT YOU HAVE SUBMITTED DOCUMENTS AS PER GENERAL		
	QUALIFICATION CRITERIA		

Technical Bid Checklist

NOTE: Please fill up the greyed cells only.

Tender No.

(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.