OIL INDIA LIMITED
(A Government of India Enterprises)
4, India Exchange Place
Kolkata -1

TELEPHONE NO. (033) 22301657
FAX NO: (033) 22302596
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FORWARDING LETTER

Tender No & Date	:	**SKI 9620 P16 DATE 15.12.2015**
Tender Fee	:	**Rs 1,000.00**
Bid Security Amount	:	**Rs 1,61,400.00**
Bidding Type	:	**Single Stage Two Bid**
Bid Closing on	:	As mentioned in the Basic Data of e-portal
Bid Opening on	:	As mentioned in the Basic Data of e-portal
Performance Guarantee	:	Applicable @ 10 % of order value
Integrity Pact	:	Applicable
Delivery Required	:	**At DULIAJAN, ASSAM**

OIL invites Bids for Generating sets are **as per Annexure II & III** through its E-Procurement site. The bidding documents and other terms and conditions are available at Booklet No. MM/CALCUTTA/E-01/2010. 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 is invited with firm price for the specified quantity. Further details of tender are given below:-

1. Details of Items with Quantity and Unit of measurement are as under:

SLNO & MATERIAL CODE	MATERIAL DESCRIPTION.	QUANTITY	UNIT

10 ---------- **0C000242**	**Diesel Engine Driven Generating Set (details as per annexure- II & III)**	10	NO.
20	**Installation & Commissioning**	1	AU

The tender will be governed by:

a) "General Terms & Conditions" for e-Procurement as per Booklet NO. MM/CALCUTTA/E-01/2010 for E-procurement (LCB Tenders).

b) Technical specifications with BEC/BRC and Qty. as per **ANNEXURE II & III** .

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.

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** and **RESPONSE SHEET** 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) Bidders should have the experiences of successfully completing at least 3(three) orders (value of at least one order not less than Rs. 4839600.00) in the last 10(ten) years as on bid closing date of this tender for supply, installation, commissioning & testing of diesel engine driven generating set of capacity 62.5/ 63kVA or higher to organizations namely PSU (State/Central Government of India) or State/Central Govt. Deptt. of India or any other Public Limited Company.

b) Annual financial turnover of the firm in any of the last 3 financial years or current financial year should not be less than Rs. 1,61,32,000.00.

Note : For proof of Annual Turnover, any one of the following documents /photocopies (self attested/attested) must be submitted along with the bid :-

(a) A certificate issued by a practicing Chartered/ Cost Accountants Firm with membership no. and Firm's registration no certifying the Average Annual Turnover and nature of business.

or

(b) Audited balance sheet and profit & loss account

2.0 Application showing full address / e-mail address with Tender fee (non-refundable) of Rs. 1000.00 per tender (excepting PSU and SSI units registered with NSIC) by Demand Draft in favour of M/s. Oil India Limited payable at Kolkata and to be sent to Head-Calcutta Branch, Oil India Limited, 4, India Exchange Place, Kolkata – 700 001. Application shall be accepted only upto 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 **SKI 9620P16 dated 15.12.2015** for easy identification and timely issue of authorisation. On receipt of requisite tender fee and subject to fulfilment of eligibility criteria, 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. USER_ID AND INITIAL PASSWORD WILL BE ISSUED TILL ONE WEEK PRIOR TO THE BID CLOSING DATE.

Alternatively, applicants already having User ID & Password for OIL's e-portal can pay the requisite tender fee and bid security against this tender through the online payment gateway.

On receipt of request from applicants who do not have USER_ID and initial PASSWORD, it will be communicated to the bidder (through-e-mail) and will be allowed to participate in the tender through OIL's e-Procurement portal on payment of requisite tender fees. No physical tender documents will be provided. USER_ID AND INITIAL PASSWORD WILL BE ISSUED TILL ONE WEEK PRIOR TO THE BID CLOSING DATE.

PSU's and SSI units registered with NSIC claiming exemption from payment of tender fee should submit their request with all credentials at least 7 days prior to bid closing date for participation in the tender

3.0 Please note that all tender forms and supporting documents are to be submitted through OIL's e-Procurement site only except following documents which are to be submitted manually in sealed envelope super scribed with Tender no. and Due date to **Head-Calcutta Branch, Oil India Limited, 4, India Exchange Place, Kolkata – 700 001** only 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

4.0 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.

5.0 All the Bids must be Digitally Signed using "Class 3" digital certificate (e-commerce application) with organisation name 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.

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 The tender shall be governed by the Bid Rejection & Bid Evaluation Criteria given in enclosed Annexure-II. However, if any of the Clauses of the Bid Rejection Criteria / Bid Evaluation Criteria contradict the Clauses of the tender and / or "General Terms & Conditions" as per Booklet No. MM/CALCUTTA/E-01/2010 for E procurement (LCB Tenders) to General Terms and Conditions for Indigenous E-Tender elsewhere, those in the BEC / BRC shall prevail.

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

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

11. The "**PRICE BID**" must contain the price schedule. **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"**

12. Bidders must fill the Check list (Annexure III)

NOTE:

1. Bidders should submit their bids explicitly mentioning compliance / non compliance to all the NIT terms and conditions.

2. 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. SSI unit to submit valid NSIC certificate specifying the tendered item or its equivalent in their manufacturing range.

3. Bids are invited under Single Stage Two Bid System. Bidders shall quote accordingly under Single Stage Two Bid System. Please note that no price details should be furnished in the Technical (i.e. Unpriced) bid. The "Unpriced Bid" shall contain all techno-commercial details including quantity offered except the prices, which shall be kept blank. The "Price Bid" must contain the price schedule and the bidder's commercial terms and conditions.

4. **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. In the event bidder declines to submit the integrity pact, their offer shall be rejected straightaway. 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

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

1. SHRI RAGHAW SHARAN PANDEY, IAS(Retd.),
   e-Mail ID : rspandey_99@yahoo.com

2. SHRI RAJIV MATHUR, IPS(Retd.),
   e-Mail ID : rajivmathur23@gmail.com

Yours Faithfully,

Sd-
(A.GOGOI)
SPO
For Head-Calcutta Branch

OIL INDIA LIMITED
(A Government of India Enterprise)
4, India Exchange Place, 4th floor,
Kolkata 700001
West Bengal (India)

TELEPHONE NO. (033) 2230 1657 / 58 / 59
FAX NO:(033) 2230 2596
Email :kolpur2@oilindia.in
oilcalmn@oilindia.in

ANNEXURE-II

Tender No : SKI9620P16 DATED 15.12.2015

OIL INDIA LIMITED invites Indigenous tenders for items detailed below:

TECHNICAL SPECIFICATIONS WITH QUANTITY

SLNO & MATERIAL CODE	MATERIAL DESCRIPTION.	QUANTITY	UNIT
10 ---------- 0C000242	Factory assembled 62.5kva/ 63 KVA, 3 phase, 415 volts, 50 Hz, 0.8 Power Factor, silent (acoustically insulated) Diesel Engine (1500 RPM) Driven Generating Set	10	NO.
20	Installation & Commissioning	1	AU

Details of Technical Specifications are as per Annexure -III.

Note: The bidders are to fill in the "Bidder's Remarks" column of Annexure –III (extra sheet if required may please be attached) of the tender and must submit the same.

SPECIAL TERMS AND CONDITIONS:

1) The offered DG set should have valid Type Approval / Conformity of Production Certificate from Certification Agencies as per latest CPCBII notification for Noise Limit. A copy of the same has to be furnished along with the offer.

Also certificate/conformity number alongwith equipment(engine&alternator details) are to be displayed suitably as per the acccordance of CPCB .

[Certification agencies/Authorised agencies of certification are- 1)ARAI,Pune,2) Naval Science & Technology Laboratory, Visakhapatanam ,3). Fluid Control Research Institute, Palghat ,4). National Aerospace Laboratory, Bangalore; 5). International Centre for Automotive Technology, Manesar, Haryana ,6). National Test House (Northern Region), Ghaziabad, Uttar Pradesh].

2). OIL's Purchase Order No must be permanently marked on two sides of the enclosure in 8 Inch (200MM) sized lettering.

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/CALCUTTA/E-01/2010 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/CALCUTTA/E-01/2010 elsewhere, those in the BRC / BEC shall prevail.

BID REJECTION CRITERIA (BRC):

BID REJECTION CRITERIA(BRC) (TECHNICAL):

The bid must conform to the specifications and terms and conditions given in the enquiry. Bid will be rejected in case the items offered do not conform to all the required technical parameters stipulated in the technical specifications and to the respective international / national standards wherever stipulated. Notwithstanding the general conformity of the bids to the stipulated specifications and terms and conditions, the following requirements shall have to be particularly met by the bidders, without which the offer will be considered as non-responsive and rejected.

1.0 The Diesel engine should be a proven engine of generating set application with a four stroke, Multi cylinder, naturally aspirated /Turbocharged, air cooled/water cooled , inline engine , conforming to ISO 3046 / BS 5514 / IS 10000 or relevant standards and capable of developing a net Horse Power(at 1500 rpm) require to drive a generating set of capacity 62.5/63 KVA rated for Prime Duty as per ISO 8528 standard.

1.1 Certification/declaration to be enclosed from the engine OEM,mentioning the net HP available to drive the alternator and compliance of above standard. In this regard the copy of such record to be furnished as per the following:1). Certificate from OEM(engine) mentioning the net BHP, 2).Proven certificate of the engine for generating set application from OEM(Engine).

2.0. 62.5KVA / 63 KVA Diesel generating sets should be enclosed in Acoustic Enclosure, and meet the latest CPCB norm. (Copy of documents/certificates for due Compliances of the relevant norms to be enclosed).

Note-The latest version of the emission norm as applicable,shall be valid for evaluation purpose.

3.0 The Alternator must be brushless type.

4.0 Bidder's Qualification :

4.1 Bidder may be an Original Equipment Manufacturer (OEM) of Generating set/Engine/Alternator.

OR

Bidder may be an authorized dealer of OEM for the Engine/Alternator /Generating set.

OR

Bidder may be an OEM approved assembler of Generating set. or its authorised dealer.

4.2 In case the bidder is an OEM of Engine or their authorized dealer, Alternator must be purchased from the OEM of Alternator or their authorized dealer and vice versa.

OR

In case the bidder is an OEM approved assembler of Generating sets, Engine and Alternator must be purchased from OEM or their authorized dealers.
Note: But whatever may be their status in para 4.1 & 4.2 above, bidder will have to enclose Documentary evidence along with the offer, failing which offer will be rejected.

5.0 Bidders should have the experiences of successfully completing at least 3(three) orders (value of at least one order not less than Rs. 4839600.00) in the last 10(ten) years as on bid closing date of this tender for supply, installation, commissioning & testing of diesel engine driven generating set of capacity 62.5/ 63kVA or higher to organizations namely PSU (State/Central Government of India) or State/Central Govt. Deptt. of India or any other Public Limited Company.

At least two of the generating sets supplied in the above orders must have the offered engine model as prime mover with minimum 3000 running hours.

Documentary evidences (in the form of Purchase order copy with invoice or Satisfactory performance certificate from the customer) of past orders must be provided along with the bid, failing which offer will be rejected.

6.0 The bidder must undertake and confirm from OEM that the equipment to be supplied are not going to become obsolete for the next 10 years and provisioning of spares will be continued.

Note:1. Relevant documentary evidences in support of conditions mentioned in support of Sl no 1 to 6(as applicable) must be duly enclosed with the offer failing which the offer shall be summarily rejected.

B:COMMERCIAL

i) Bids are invited under **Single Stage Two Bid System**. Bidders shall quote accordingly under Single Stage Two Bid System. **Please note that no price details should be furnished in the Technical (i.e. Unpriced) bid**. The "Unpriced Bid" shall contain all techno-commercial details except the prices, which shall be kept blank. The "Price Bid" must contain the price schedule and the bidder's commercial terms and conditions.

Bidder not complying with above submission procedure will be rejected.

ii. Bid security amounting to **Rs. 1,61,400.00** can be paid in three modes, viz., Bank Guarantee/ DD/ Online. Bid security in

the form of Bank Guarantee as per format given in the LCB booklet MM/CALCUTTA/E-01/2010 of **Rs. 1,61,400.00** shall be submitted manually in sealed envelope superscribed with BID SECURITY AGAINST Tender no. SKI 9620 P16 dated 15.12.2015 to Head Calcutta Branch, Oil India Limited, 4 India Exchange Place, Kolkata-700001 only 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 , the bid submitted through electronic form will be rejected without any further consideration. In lieu, Bid Security of **Rs. 1,61,400.00** can also be paid online through our e-procurement portal as per procedure given in user manual in OIL"s e-procurement portal. For exemption for submission of Bid Security, please refer relevant para of General Terms and Conditions vide MM/CALCUTTA/E-01/2010 for E-Procurement LCB Tenders. **The Bid Security if submitted in the form of Bank Guarantee shall be valid for 180 days more than the Bid validity, i.e., for 300 days from the date of bid opening.**

ii) 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.

iii) The annual turnover in any of the last 3 (three) financial years or current financial year should not be less than **Rs. 1,61,32,000.00.**

Note : For proof of Annual Turnover, any one of the following documents /photocopies (self attested/attested) must be submitted along with the bid :-

(a) A certificate issued by a practicing Chartered/ Cost Accountants Firm with membership no. and Firm's registration no certifying the Average Annual Turnover and nature of business.

or

(b) Audited balance sheet and profit & loss account

iv) Successful bidder will be required to furnish a **Performance Bank Guarantee** @10% of the order value. For exemption for submission of Performance Bank Guarantee, please refer relevant para of General Terms and Conditions vide MM / CALCUTTA / E-01 / 2010 for E – Procurement LCB Tenders. The Performance Bank Guarantee must be valid for one year from the date of successful commissioning of the equipment or 18 months from the date of despatch whichever is earlier. 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.
The Bank Guarantee should be allowed to be encashed at all branches within India.

vi). Bids received after the bid closing date and time will be rejected. Similarly, modifications to bids received after the bid closing date & time will not be considered.

vii). **Validity of the bid shall be minimum 120 days from the Bid Closing Date. Bids with lesser validity will be rejected.**

viii). Bids containing incorrect statement will be rejected.

ix). 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.

x). **INTEGRITY PACT:**
OIL shall be entering into an Integrity Pact with the bidders as per format enclosed with 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.

C. GENERAL:

i) The Compliance statement must be filled up by bidders and to be submitted/uploaded along with their bids. In case bidder takes exception to any clause of the bidding document not covered under BEC/BRC, then the Company has the discretion to load or reject the offer on account of such exception if the bidder does not withdraw/modify the deviation when/as advised by Company. The loading so done by the company will be final and binding on the bidders.

ii) If any of the clauses in the BRC contradicts with other clauses of bidding document elsewhere, then the clauses in the BRC shall prevail.

2.0 BID EVALUATION CRITERIA (BEC):

A. TECHNICAL:

The bids conforming to the technical specifications, terms and conditions stipulated in the bidding document and considered to be responsive after subjecting to Bid Rejection Criteria (BRC) will be considered for further evaluation as per the Bid Evaluation Criteria given below.

B. COMMERCIAL:

i) To evaluate the inter-se-ranking of the offers, Assam entry tax on purchase value will be loaded as per prevailing Govt. of Assam guidelines as applicable on bid closing date. Bidders may check this with the appropriate authority while submitting their offer.

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

iii) In the event of computational error between unit rate and total price, the unit rate as quoted by the bidder shall prevail.

iv) Similarly in the event of discrepancy between words and quoted figure, words will prevail.

v) To ascertain the inter-se-ranking, the comparison of the responsive bids will be made as under, subject to corrections / adjustments given herein:

(A) Total material cost of Main Equipment:
(B) Packing and Forwarding Charges
(C) Total Ex-works value, (A+B) above :
(D) Excise Duty including Cess
(E) Sales Tax, (Please indicate applicable rate of Tax)
(F) Total FOR Despatching station price, (C+D+E) above
(G) Road Transportation charges to Duliajan
(H) Insurance Charges @0.5% of Total For Despatching StationValue (F) above
(I) Assam Entry Tax
(J) Total FOR Duliajan value, (F+G+H+I) above
(K) Installation/Commissioning Charges including Service

Tax, if any :

(L) Grand Total value, (J+K)

Standard Notes:

A. "General Terms & Conditions" for e-Procurement as per Booklet NO. MM/CALCUTTA/E-01/2010 for E-procurement (LCB Tenders).

B.0 A bid shall be rejected straightway if it does not conform to any one of the following clauses:

(a) Validity of bid shorter than the validity indicated in the Tender.

(b) Original Bid Security not received within the stipulated date & time mentioned in the Tender.

(c) Bid Security with

(i) validity shorter than the validity indicated in Tender and/or

(ii) Bid Security amount lesser than the amount indicated in the Tender.

(d) In case the Party refuses to sign Integrity Pact.

(e) Annual Turnover of a bidder lower than the Annual turnover mentioned in the Tender.

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Sl no	Description	Specifications	Bidder's Remarks **(To be duly signed and stamped on each page)** *(Attach Separate Sheet if necessary)*
I.	**General**	Factory assembled 62.5 KVA/ 63 KVA, 3 phase, 415 volts, 50 Hz, 0.8 Power Factor, silent (acoustically insulated) Diesel Engine (1500 RPM) Driven Generating Set – 10 (ten) nos.	
II.	**Statutory Norms**	**1)Engine:** The emission limit of the Diesel engine of the generating set must comply with the latest CPCBII norms or as notified by Govt of India as per **G.S.R. 771(E). –**sections 6 and 25 of the Environment (Protection) Act, (i) 1986 (29 of 1986), the Central Government(Govt of India) and subsequent notifications as applicable. Note-The latest version of the emission norm as applicable,shall be valid for evaluation purpose.	
		(ii) The offered Engine of the DG set should have valid Conformity of Production Verification for Emission Compliance from Certification Agencies as per latest CPCBII notification. A copy of the same has to be furnished along with the offer. Note-The latest version of the emission norm as applicable,shall be valid for evaluation purpose.	
		2) Acoustic Enclosure(Canopy) : (i) The offered DG sets should be enclosed in Acoustic Enclosure mounted on to common base frame with provision of easy portability of the whole generating set. The maximum permissible sound pressure level for the diesel generator (DG) sets with must be 75 dB(A) at 1 meter away from the enclosure surface and must conform to the latest CPCB norms.[As notified by Environment (Protection) second Amendment Rules vide GSR 371(E), dated 17th May 2002 at serial no.94 and its amendments vide GSR No 520(E) dated 1st July 2003; GSR 448(E), dated 12th July 2004; GSR 315(E) dated 16th May 2005; GSR 464(E) dated 7th August 2006; GSR 566(E) dated 29th August 2007 and GSR 752(E) dated 24th October 2008; G.S.R. 215 (E), dated 15th March, 2011 under the Environment (Protection) Act, 1986)]	
		(ii) The offered DG set should have valid Type Approval / Conformity of Production Certificate from Certification Agencies as per latest CPCBII notification for Noise	

Sl no	Description	Specifications	Bidder's Remarks (To be duly signed and stamped on each page) *(Attach Separate Sheet if necessary)*
		Limit. A copy of the same has to be furnished along with the offer.	
		3)The bidder must confirm the following in their bid, failing which their bid shall be rejected: (i) In the event of any new CPCB norms/regulations governing Diesel Engine driven Generating set are made effective prior to delivery of the Set (but after bid closing date) the supplied DG set shall comply with the latest CPCB norms/regulations. (ii) The compliance report from Govt. approved agencies, if any, must be submitted prior to dispatch of the pump set for OIL's scrutiny and acceptance.	
III.	**PRIME MOVER (DIESEL ENGINE)**	1) **General Site Conditions:** ➢ Maximum Temperature : 45 Deg.C, Minimum Temperature : 5 Dec.C ➢ Maximum Relative Humidity at 21 Deg C : 100 %, at 35 Deg C : 95 %, at 41 Deg C : 70% ➢ Maximum Altitude above mean Sea Level : 150M	
		2) **Governing Standards:** (a) Engine: IS:10001/BS:5514 or applicable standard. (b) Governing: Class A-1 specifications of IS: 10000 / BS: 5514. OR Governing class (As per ISO 8528 Part-V)	
		3) **Make of engine:**	
		4) **Model of engine:**	
		5) **Duty:** Continuous	
		6) **RPM:** 1500	
		7) **Fuel:** HSD	
		8) **Start:** Electric Start	
		9) **Cycle:** Four Stroke	
		10) **Cylinder:** Multi cylinder (Bidder to specify number of cylinders of the offered engine)	
		11) **Engine Arrangement:** Vertical Inline Engine	
		12) **Compression Ratio:**	
		13) **Size (bore & stroke):**	
		14) **Displacement:**	
		15) **Aspiration:** Naturally Aspirated or Turbocharged.	
		16) **Engine Cooling System:** Water Cooled(fitted with Blower Type Radiator Cooling System)	

Sl no	Description	Specifications	Bidder's Remarks (To be duly signed and stamped on each page) *(Attach Separate Sheet if necessary)*
		17) **Gross HP at 1500 RPM:**	
		18) **HP Deductions:** (Please specify the considered deductions)	
		19) **Net Minimum Available Horse Power:**. Engine should be able to develop power required for driving a generating set of 63KVA rated for Prime Duty at 1500 rpm (Output available with varying load for an unlimited time) with an overload capacity of 10% for a period not exceeding One Hour in any 12 hours running when running at 1500 R.P.M.). The Supplier should mention the NET available power for Genset for Prime duty application.	
		20) **Power for Prime Duty:** 63 KVA (Output available with varying load for an unlimited time). The engine shall be capable of delivering the rated output without undue heating of the engine or any other mechanical trouble, as per site conditions given at (i) above.	
		21) **Specific Fuel Consumption at:**	
		a. 100% Load	
		b. 75% Load	
		c. 50% Load	
		22) **Lube Oil Consumption(LT/HR):**	
		23) **Air Intake System:** Type of Air cleaner of the offered engine to be furnished.	
		24) **Starting System:** The Starting System should comprise of Maintenance Free Lead – Acid Batteries with 180 AH Capacity of Reputed Make, Engine mounted Battery charging Alternator (Make: LUCASTVS). 12 Volt Starter (Make: LUCAS TVS/ DELCO REMY) and Starting ring fitted to the Engine Flywheel.	
		25) **Engine Exhaust System:** The Exhaust System should comprise of: Exhaust Manifold, Stainless steel Exhaust Flexible connection, Exhaust Silencer, Spark Arrestor and associated Piping connections with proper clamping arrangement with all exposed parts properly insulated.	
		26) **Fuel System:** The Fuel System should comprise of Mechanical Governor, Fuel Injectors, Fuel Pump, Fuel Filter Assembly, Fuel lines and Fuel Tank having storage capacity to meet the Fuel requirements of 12 hours of full load operations. The fuel system should include fuel level indicator and external arrangement for filling / topping up with anti theft locking arrangement.	
		27) **Lubricating System:** The Lubricating System should comprise of Gear driven	

Sl no	Description	Specifications	Bidder's Remarks (To be duly signed and stamped on each page) *(Attach Separate Sheet if necessary)*
		lubricating Oil Pump. Lubricating Oil Filter with a replaceable Filter Element. Lubricating Oil Cooler, Lubricating Oil Pan, Oil level dipstick and Crankcase breather.	
		28) **Gauges and Instruments:** The Engine instrument Panel should include the following: i) Lubricating oil pressure gauge ii) Lubricating oil temperature gauge iii) Starting Switch iv) Digital/Mechanical Tachometer and Hour Meter v) Ammeter / Battery Charging Indicator vi) Engine Low Lube Oil Pressure indication display red lamp Vii) Engine Over Temperature / Cooling System Failure indication display red lamp vii) Emergency Stop Switch (Mounted on exterior of the Acoustic Canopy) NB: All the Gauges and Instruments should be easily visible from outside of the Acoustic Enclosure/ Canopy.	
		29) **Engine Safety Controls:** The following Safety shut off/trip system should be incorporated to Shut Down the Engine in the event of: i) Low Lubricating oil pressure. ii) Engine over speed. iii) Engine over Temperature / Cooling System Failure. NB: The Safety shut off/trip system should indicated the type of trip in case of activation and also should have an audible alarm/ hooter to indicate Tripping of the Engine.	
		30) **Other Features should be as under:** i) Flywheel ii) Flexible Coupling iii) Lifting eyes iv) Standard Guards over Belt Drives (Blower Fan Drive, charging Alternator drives pulley and flexible coupling). v) Standard Painting vi) SAE standard rotation	

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		31) **The engine of the offered DG Set should have** (i) Proven track record for DG Set applications in Central/State PSUs or Central Govt. Organisations of India or any other Public Limited Company. Relevant documentary evidence in this regard to be furnished. (ii) Should have logged minimum successful 6000 hours of running or should have completed one year of successful running from its date of commissioning prior to the bid closing date of this tender. Satisfactory performance certificate from end user in this regard to be furnished.	
IV.	**ALTERNATOR**	1) **General Description:** Brushless type alternator of around 63 KVA rating when coupled to suitable water cooled or air cooled Diesel Engine will develop 63 KVA at 3 phases, 0.8 power factor, 415 Volt when running at 1500 rpm under NTP conditions.	
		2) **Make:** Crompton Greaves/Stamford/Kirloskar/NGEF/ABB/Kato/Caterpillar	
		3) **Rated Output:62.5 TO** 63 kVA continuous rating at 0.8 PF at specified ambient conditions.	
		4) **Rated Voltage:** 415 Volts,Phase-to-Phase	
		5) **Phase :** 3, (4 wire) i.e. neutral point has to be brought out to terminal box	
		6) **Type :** Brush less	
		7) **Frequency rated / cycle :** 50 Hz	
		8) **Rated power factor :** 0.8 lagging	
		9) **No. of Poles :** 4	
		10) **Class of insulation :** Class F/H,Temp rise limited to Class B.	
		11) **RPM :** 1500	
		12) **Phase sequence :** UVW	
		13) **Conform to:** IS:4722, IS: 13364 with latest amendments.	
		14) **Rating :** Continuous duty suitable for Motor loads.	
		15) **Connection :** Y (Star)	
		16) **Ambient :** 45 ºC max, 5^0 C min, RH 98%	
		17) **Alternator Enclosure Protection:** IP 23	
		18) **Alternator Terminal Box Protection:** IP 54	

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		19) **Mounting : ** Foot mounted	
		20) **Excitation system : Excitation system:** Brush less, self excited, self Regulated with solid state AVR. Voltage characteristics- VG3 as per Table-1, IS-13364 (Part-2). Exciters shall be rated 1.25 times the full load (rated) conditions. The brush less alternator shall have exciter and rotating rectifier-bridge mounted on shaft complete with diodes and surge suppressor, main field windings and stator windings. PIV of exciter diodes must be 800v or 8 times the maximum exciter armature operating voltage, whichever is higher. At nominal speed the excitation system must produce sufficient residual voltage in order to ensure self excitation. 21) **AVR:** 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. In the event of any fault due to over voltage/high bearing temperature/high winding temperature, or an external fault, the AVR shall remove the excitation voltage to the alternator. An emergency trip PB shall also be provided. 22) **Permissible voltage variation:** As per Table-1, IS-13364 (Part-2)	
		23) **Permissible Waveform deviation:** As per IS-13364 (Part-2)	
		24) **Permissible frequency variation:** As per IS-13364(Part-2)	
		25) **Permissible Unbalanced current:** As per IS-13364 (Part-2) 26) **Permissible Short circuit current:** As per IS-13364 (Part-2)	
		27) **Frame size : ** Bidder to confirm	
		28) **Permissible voltage swing (Transient response):** As per IS-13364 (Part-1/2) 29) **Permissible harmonic distortion factor:** As per IS-13364 (Part-1/2) 30) **Permissible vibration:** As per IS-12075 31) **Motor starting ability : ** 200 % of FLC for 10 sec with max. voltage dip of 20%.	
		32) **Cooling:** Air cooled by integral fan 33) All windings should be made from electrolytic grade copper of high purity	
		34) The alternator shaft should be supported on rolling element bearings at DE and NDE. Single bearing design will also be considered.	
		35) The brushless alternator shall be composed of 3 phase AC exciter with rotating diodes, surge suppressor, static voltage regulator with voltage adjuster	

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		potentiometer, main field windings and stator windings. PIV of exciter diodes must be minimum 6 times the maximum exciter armature operating voltage or 1200v whichever is higher. All windings should be made from electrolytic grade copper of high purity.	
		36) The alternator shaft should be supported on rolling element bearings at DE and NDE.	
		37) Voltage swing (Transient response) when rated load is suddenly switched on: As per IS: 13364 (Part-2)	
		38) The alternator should be capable of sustaining a 10 % over load for one hour in any 12 hours operation.	
		39) The alternator should be capable of withstanding 1.2 times the rated speed without any damage.	
		40) The alternator should be capable of continuous operation over a range of 110 % of rated voltage.	
		41) Automatic voltage regulation ± 0.5 % to ± 1.0 % from no load to full load.	
		42) Total harmonic distortion factor should be less than 3 % between phases at no load.	
		43) Alternator stator winding terminals are to be connected to 4 nos. of suitably rated terminals supported on sheet molding compound (SMC) supports inside the alternator terminal box.	
		44) The alternator terminal box should be suitable and should have sufficient space for terminating one no 4 core X 25 sq.mm, 1000V grade PVC insulated and PVC sheathed, armoured, stranded copper cable. Separate cable box shall be provided for supporting power cable. Suitable size of cable gland should be fitted in the terminal box. Cable gland and entry hole shall also be required for AVR cables as AVR shall be mounted in the control panel.	
		45) 02 (two) nos. of earth studs are to be provided on both sides of the alternator.	
		46) Lifting hooks are to be provided for lifting the alternator.	
		47) Automatic voltage regulator should be mounted in the control panel with approved rubber bushes under AVR mounting holes to reduce vibration. AVR should have under speed, over excitation protection features with LED display.	
		48) Alternator windings and AVR should be suitable for humid atmosphere as per	

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		ambient conditions mentioned in the enquiry. AVRV should be suitable for motor load duty.	
		49) Bidder to mention efficiency of the alternator at 25 %, 50 %, 80 % load at 0.8 pf.	
		50) Alternator frame should be made from MS or Cast steel.	
V.	**SPECIFICATION OF CONTROL PANEL**	Sheet steel clad, self supporting, floor mounting, cubicle type, dust and vermin proof generating set control panel made of 2mm thick MS CRCA sheet and built upon rigid framework, 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, double earthing studs on two sides, complete with suitably sized zinc passivated hardwares with heavy plain and spring washers. The panel doors should have neoprene rubber gasket. The panel should be designed and manufactured as per IS-8623. 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. The bottom cable entry plate should be at suitable height (min. 300mm) from floor of the unit for easy and safe entry of power and control cables. The frame should be able to withstand the stress and vibration during transportation. The detail description of the panel is as described below:	
		1) AVR of the alternator shall be mounted inside the control panel with vibration proof supports.	
		2) Generator control panel MCCB should trip on the following faults:	
		i) Earth leakage, through earth leakage relay.	
		ii) Over load & short circuit. Tripping from inbuilt trip unit of MCCB.	
		3) Instruments and Switches: (Mounted on front hinged door)	
		i) 1 No. Power & Energy monitor (Multi-function meter) 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).	
		ii) 01 No. Hour meter to indicate engine run hours (AEL / L&T make)	
		(iii) The control panel should have following indication lamps mounted on panel	

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		front door. All lamps shall be of LED type, 240v AC having long life and low energy consumption. Binay/L & T/Telemecanique/Siemens Make.	
		a) Trip on earth fault.	
		b) Set running.	
		4) Main Components : (Mounted Inside the Panel)	
		(i) Panel should have one set of TP & N electrolytic grade, high conductivity, tinned copper bus-bars, made from electrolytic grade copper of 99.0 % purity, rated 100 amps and supported at required intervals to withstand short circuit fault levels up to 10 KA for 3 secs. Bus-bar support shall be non- hygroscope SMC / FRP and the Bus-bar shall be insulated with heat shrinkable PVC sleeves. Incoming and outgoing power cable shall terminate on tinned copper links rated for 100amp.	
		(ii) 01No. 125 Amps TP & N (Neutral bus to have removable link with bolt) CFS unit, fitted with 63 Amps HRC fuse, type : CMM (GEPC make).	
		(iii) 01 No. 100 Amps, 4 pole, MCCB, 25 KA breaking capacity, with inbuilt electronic type adjustable overload & short circuit protection. 240v AC shunt trip coil is required for external tripping. Front Drive kit with door interlocking facility to ensure that the door can be opened only when the MCCB is in the OFF position. Overload should be adjustable from 50% to 100% and short circuit setting should be also adjustable from 4 I_n to 10 I_n. Make: Legrand/ Merlin-Gerin/ABB	
		(iv) 01No. CBCT along with Earth leakage relay for protection against earth leakage should be provided. Relay adjustable settings: 0.1 - 0.3- 1.0-3.0-10.0 Amp & 0.06-0.1-0.3-1.0- 5.0 Sec in steps. In case of earth leakage fault the relay should trip the MCCB through shunt trip coil. The CBCT (ID 35mm) size should be such that relay should not trip during shortcircuit due to saturation (Make: GE /Legrand/ Merlin Gerin).	
		(v) 01 KWH meter integrating, electronic type suitable for balanced and unbalanced loads, C.T. operated, 3 ph, 4 wire. (Alsthom/L&T make)	
		(vi) 06 # Bar Primary Resin cast CT of 50/5 ratio , 15 VA , class-1 conforming to IS 2705 (3 nos. for ammeter and KW meter , 3 nos. for KWH meter (AEL / Kappa make)	

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		(vii) Auxiliary Relay / Contactor 240 AC with some spare contacts. Quantity should be as per the control circuit requirement. (L&T /Siemens/ Schnieder make)	
		(viii) HRC instrument fuse holders NS type 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 (GEPC make).	
		(ix) Terminal strips for terminating the AVR cable from Alternator.	
VI.	**WIRING SCHEME**	1) Control system will work on 240v AC. Control panel inside wiring shall be done with 2.5 sqmm, 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 sqmm, flexible copper, 1100v grade PVC insulated wires approved by ISI, TAC, FIA& have ring type lugs. Colour code for wires shall be followed. Make: Finolex/ Havells/reputed	
		2) Output from the Alternator terminal box should be connected to control panel input with heavy duty 4X 25 sq.mm, 1100v grade, PVC insulated and PVC sheathed, armoured, strandedcopper cable approved by IS-1554. Cablesare to be connected using copper lugs. Make: NICCO/ CCI/Incab/Universal/Necab/Polycab/RPG/Finolex/Havells.	
		3) AVR shall also be wired from alternator terminal box to control panel by the party using heavy duty PVC insulated and PVC sheathed, 1100 v grade armoured, stranded, ISI approved copper cable of suitable size. Cables are to be connected using copper lugs. 4) Make: NICCO/ CCI/Incab/Universal/Necab/Polycab/RPG/Finolex/Havells.	
		5) Heavy duty Single Compression Cable Glands shall be provided at all cable entries for power and control cables. Cable Glands shall also be provided for the outgoing power cable. Make: Baliga/FCG/GMI/Dowells.	
		6) All power and control cable terminal ends will have suitable heavy duty crimping lugs. Make: Dowells.	
		7) Alternator to panel power cable, AVR cable shall be protected in their run from unit to control panel to avoid any damage.	

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		8) Suitable provision shall be made for safe routing of output cable from panel to outside of the unit.	
		9) All cables and accessories like lugs, glands for the cables used etc. shall be in the scope of the supplier, including the outgoing power cable glands from the control panel. OIL shall supply the outgoing power cable only.	
VII.	**ENCLOSURE ILLUMINATION AND POWER OUTLET**	Enclosure will have one no. of 125w MV Bulkhead type luminaries mounted on enclosure wall and wired with heavy duty PVC insulated and PVC sheathed armored, stranded copper cable approved by IS. Light will be switched from individual MCB, 6amp, C curve, mounted on control panel cover & have back-up HRC fuse and neutral link of 16 amp rating. One no. industrial type metallic plug socket of 10amp rating with 10 amp SP MCB as switch should also be fed from lighting circuit fuse. The socket should be mounted on the enclosure side. Power for lighting circuit and socket outlet should be taken from the main bus through HRC fuses. Make: Philips for luminaire &Legrand/ Merlin-Gerin for MCB/ Metallic plug socket.	
VIII.	**EARTHING**	1) The earthing scheme for the unit should be as per IS-3043.	
		2) Two nos. 25x5mm GI straps shall be suitably fixed inside the unit near the floor. Strap galvanisation thickness should be min. 85 micron and as per IS. Alternator earth terminals, control panel earth terminals, enclosure chassis shall each be connected with two nos. separate cables to both the straps with independent connections at separate points. The neutral of the alternator will be earthed by connecting two nos. of earthing cables from neutral bus inside the panel to separate earth electrodes outside. Suitable provision is required in the panel base plate for safe entry of neutral earth cable. Heavy duty PVC insulated, PVC sheathed, flexible, single core, IS approved copper cables of 25 sqmm size shall be used for each earth connection. The cables to be terminated with lugs and suitably protected against mechanical damage. Earth cable shall be protected to avoid any damage and to be run in galvanized, flexible MS conduit. Make: NICCO/ CCI/Incab/Universal/Necab/Polycab/RPG/Finolex/Havells.	
		3) Both the straps shall extend upto the back side of the enclosure and each strap will have one no. of zinc coated terminal stud of 10mm dia provided at end of the straps for connection to system earth. Two nos. of earthing cables	

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		of size & type mentioned in point no.2 above and individual length of 5.0 mtr shall be provided and connected to these two straps for external earthing. The free ends of these cables shall be crimped with heavy duty, tinned copper tubular lugs. Suitable opening with hinged cover shall be provided in the rear side of the unit to facilitate the entry of outgoing power cable and earth leads.	
IX.	**Panel Painting**	Panels should be thoroughly cleaned before applying two coats of rust preventive paints. This shall be followed by three coats of paint light grey Shade No. 631 as per IS: 5.	
X.	**CHANGE OVER SWITCH PANEL**	1) One no change over switch panel (COSP) should be provided, which have to be incorporated into the acoustic enclosure itself with provision of easy operation from outside. The switching panel will comprise of:	
		a) On load change over switch: 1 no. 415 Volts, 100 Amps, 3 phase (with neutral), 4 pole Make: GEPC / L & T / Crompton Greaves / Siemens	
		b) Wall mounting type fuse switch unit with HRC fuse and SM type fuse holder: 2 nos. 415 Volts, 100 Amps, 3 phases (with neutral) Make: GEPC / L & T / Crompton Greaves / Siemens.	
		c) One no 40W lamp with MCB	
		2) The COS panel should be fabricated with sheet steel, dust and vermin- proof, self-supporting, suitable for outdoor installation (with canopy), industrial type conforming to IP-54. It should be fabricated from 2mm MS CRCA sheet steel and suitable size rigid M.S. angle iron / M.S. channel frame work to have sufficient strength. Panel door should be of double leaf arrangement with heavy-duty hinges and lockable. A neoprene gasket is to be provided around the periphery of panel door to make it dust and vermin-proof. Panel should be floor mounted. An earth bar of 50 mm x 6 mm of G.I. strap is to be provided on the backside of the COS panel for earth connection. Danger plates are to be provided on front and rear side of the panel. Detachable gland plate is to be provided for glanding of heavy duty 4X 25 sq.mm, 1100v grade, PVC insulated and PVC sheathed, armoured, stranded incoming and outgoing copper cables. Suitable size of cable gland are to be provided at cable entry point of the COS	

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		panel. Layout of the components inside the panel should be systematic and arranged in such a manner that sufficient space inside the panel is available for maintenance. The total height of the panel from ground level should not be more than 1.8 meters. Output from the Alternator control panel should be connected to one of the COS input terminal with heavy duty 4X 25 sq.mm, 1100v grade, PVC insulated and PVC sheathed, armoured, stranded copper cable approved by IS-1554. Cable to be supplied & connected by the bidder using copper lugs. Make: NICCO, CCI, Finolex, Havells. Other two terminals, one for terminating outgoing cable and other as incomer from second alternator are to be placed separately by putting partitions.	
		3) COS Panel Painting: COS Panel should be thoroughly cleaned before applying two coats of rust preventive paints. This shall be followed by three coats of paint light grey Shade No. 631 as per IS: 5, thickness - 50 Microns.	
		4) Suitable electrical connection with 4 core x 35 mm2 PVC insulated armored copper cable between control panels of gensets to incomer (main) fuse switch unit and then to changeover switch of COSP shall be done. Acoustic enclosure and COS panel shall be interconnected with 50mmX6mm GI strap for earthing. There should be provision for connecting common points of earthing system to local earth electrodes.	
XI.	**NOTES (Alternator and Control Panel)**	1) The bidder shall submit all indicative power and control wiring diagram for the offered alternator.	
		2) Offered alternator should be of proven design / model.	
		3) Bidder shall submit the following information regarding alternator along with the offer failing which offer is liable for rejection:	
		a) Frame size	
		b) Dimensional drawing	
		c) Technical datasheet	
		d) Catalogue	
		4) Alternator and control panel are to be guaranteed for period of 12 months from the date of commissioning against any manufacturing defects.	
		5) Guaranty Certificate shall be submitted at the time of delivery of alternator	

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		and control panel.	
		6) Test certificate of alternators shall be furnished at the time of delivery of alternator.	
		7) Bidder shall submit the drawings (Dimensional, schematic, GA, component layout and wiring layout) of control panel to OIL on placement of order and shall proceed for manufacturing of the panel only after getting due approval from OIL.	
		8) Packing should be adequate to avoid transit damage.	
		9) Three sets of control circuit diagram of control panel and commissioning cum maintenance manual for alternator should be provided along with the material.	
		10) Any items/ points not included in the specifications but necessary for efficient control and operation of the alternator shall be stated by the bidder.	
		11) Spare parts list along with the price should be provided along with the quotation.	
XII.	**SKID / BASE FRAME**	The engine and alternator are to be close coupled and both be mounted on a suitably designed skid as a base frame fitted with requisite number of suitably designed Anti Vibration Mountings(AVM) for making the DG set vibration free.	
XIII.	**Acoustic Enclosure**	The generating set comprising of engine coupled with alternator, control panel etc for each set should be placed inside an acoustic enclosure having the following salient features:	
		The offered DG sets should be enclosed in Acoustic Enclosure mounted on to common base frame with provision of easy portability of the whole generating set. The maximum permissible sound pressure level for the diesel generator (DG) sets with must be 75 dB(A) at 1 meter away from the enclosure surface and must conform to the latest CPCBII norms[**G.S.R. 771(E). –** The emission limit of the Diesel engine of the generating set must comply with the latest CPCBII norms as notified by Govt of India as per **G.S.R. 771(E). –**sections 6 and 25 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government(Govt of India) and subsequent notifications as applicable.	

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		1) The offered DG set should have valid Type Approval / Conformity of Production Certificate from Certification Agencies as per latest CPCBII notification for Noise Limit. A copy of the same has to be furnished along with the offer. [Certification agencies/Authorised agencies of certification are-1)ARAI,Pune,2) Naval Science & Technology Laboratory, Visakhapatanam ,3). Fluid Control Research Institute, Palghat ,4). National Aerospace Laboratory, Bangalore; 5). International Centre for Automotive Technology, Manesar, Haryana ,6). National Test House (Northern Region), Ghaziabad, Uttar Pradesh].	
		2) The acoustic enclosure should be modular type. This should facilitate easy assembling/dismantling	
		3) 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.	
		4) The enclosure should have the sufficient space in and around the generating set to facilitate maintenance and operation of the set	
		5) Acoustic Enclosure's base frame should incorporate necessary facilities for handling and inter location transfer through oil field trucks .	
		6) OIL's Purchase Order No must be permanently marked on two sides of the enclosure in 8 Inch (200MM) sized lettering.	
		7) Enclosure Illumination: See Clause No VII above.	
		8) 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.	
		9) Exhaust silencer shall have to 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 and suitably designed Spark Arrestor.	

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		10) The acoustic enclosure with skid should also incorporate:	
		a) Locking arrangement(Provision for fitting external lock and key)	
		b) Lifting arrangement for entire skid/genset with enclosure.	
		c) Draining arrangement for fuel and lubeoil.	
		d) Air breather.	
		e) Hood for rain protection	
		f) Emergency stop button	
		g) Panel meter viewing window	
XIV.	**SKID**	The skid should be of oilfield type and suitably fabricated for carrying the generating set from one place to another from time to time. The engine and alternator should be unitized and mounted on the skid before dispatch. The generator housing shall be one piece and mount directly to the engine flywheel housing without bolted adopter.	
XV.	**SPARE PARTS**	1) Bidder should have to confirm the availability of all the spares for the complete Gen Sets for minimum 10 years from the date of delivery of materials.	
		2) Spares for two years normal operation in addition to the normal commissioning spares of the generating set should be included in the offer. Item wise breakdown price of spares should also be provided but that will not be considered for price evaluation.	
		3) The following items shall have to be offered as MANDATORY SPARES and to be supplied alongwith the complete package (The cost of the same to be included in the main offer):	
		(a) Engine Spares:	
		i. Fuel filter - 06 nos (per genset)	
		ii. Lub. oil filter - 06 nos (per genset)	
		iii. Air filter- 06 nos (per genset)	
		iv. Complete Set of Belts – 04 Sets (per genset)	
		v. Coolant for each engine	
		(b) Electrical Spares:	
		i. Automatic voltage regulator unit (along with any other component used with AVR) – 02 sets	

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		ii. Standard (forward) diode for rotating rectifier assembly – 06 nos	
		iii. Reverse diode for rotating rectifier assembly – 06 nos.	
		iv. Varistor/ surge protector – 03 nos	
XVI.	**INSPECTION AND TESTING**	1) The complete unit of engine and alternator along with control panel shall be inspected and tested at manufacturer's works / factory by a team of OIL's Engineers prior to dispatch. Amongst others, all routine tests of the alternator and control panel shall be witnessed during the inspection. Intimation for inspection of complete unit must be sent to OIL at least 15 days in advance. All routine tests of the alternator and control panel shall be witness during the inspection at respective manufacturer's works. Prior information to be given to OIL. Any modification suggested during inspection shall be carried out by supplier at no additional cost. Supplier shall affect dispatch of the unit to OIL, Duliajan only on receipt of OIL's dispatch advice. Inspection/testing charges, if any, shall be quoted separately which shall be considered for evaluation of the offers. To and fro fares, boarding/ lodging and other en-route expenses of OIL's Inspection team for carrying our inspection shall be borne by OIL.	
		2) A draft copy of Composite Operating Instructions of the complete Generator Set-with description and illustration of all switchgear controls and indicators and engine and generator controls shall have to be submitted to OIL's inspection team during the time of pre-dispatch inspection for approval. The approved copy to be supplied along with the Documents as detailed in para- XIX below.	
XVII.	**TEST CERTIFICATES**	The supplier shall have to submit detailed records and certificates of the foregoing tests to the purchaser. The certificates/records shall have to be supplied in quadruplicate and those for electrical equipment shall have to be endorsed suitable for use in the climatic conditions specified.	
XVIII.	**PACKING**	The packing shall be sufficiently robust to withstand rough handling. Boxes/packing cases containing electrical equipment shall be water proof lined. All the matters on the control panel should be packed separately for mounting at site or mounted in such a manner to prevent transit damage.	
XIX.	**DOCUMENTS TO BE ATTACHED WITH**	The following documents [**atleast 03 bound sets** (if not specified otherwise hereunder)] are to be **separately packed and forwarded to HEAD- FIELD**	

Sl no	Description	Specifications	Bidder's Remarks **(To be duly signed and stamped on each page)** *(Attach Separate Sheet if necessary)*
	THE FINAL SHIPMENT	**ENGINEERING, OIL INDIA LIMITED, DULIAJAN- 786602, ASSAM**, clearly indicating the OIL's Purchase order no and the description.	
		1. COMPOSITE OPERATING INSTRUCTIONS- with description and illustration of all switchgear controls and indicators and engine and generator controls. Draft copy of the same to be submitted to OIL's inspection team during the time of pre-dispatch inspection for approval.	
		2. PARTS BOOKS- that illustrate and list all assemblies, subassemblies and components.	
		3. PREVENTIVE MAINTENANCE INSTRUCTIONS- on the complete system that cover daily, weekly, monthly, biannual, and annual maintenance requirements and include a complete lubrication chart.	
		4. ROUTINE TEST PROCEDURES- for all electronic and electrical circuits and for the main AC generator.	
		5. TROUBLESHOOTING CHART- covering the complete generator set showing description of trouble, probable cause and suggested remedy.	
		6. RECOMMENDED SPARE PARTS LIST- showing all consumables anticipated to be required during routine maintenance and test.	
		7. WIRING DIAGRAM AND SCHEMATICS- showing function of all electrical components.	
		8. One set of drawing showing installation details of the generating set, oilfield type skid, wiring diagram for the control panel (inclusive of float charger) and wiring drawing between the alternator and control panel should be provided with each generating set. All control panel diagram and schematic diagram are to be sent to us before supply of order materials.	
		9. Warranty documents, test certificates, requisite certificates as specified and all other relevant documents specified in OIL's purchase order.	
		10. **Three(03) sets** of following documents shall be submitted in bound form along with the supply of the genset (s) # GA drawing # Detailed power & control wiring diagram, detailed enclosure drawings for control panel, earthing # Scheme, layout plan of the unit showing all parts.	

Sl no	Description	Specifications	Bidder's Remarks (To be duly signed and stamped on each page) *(Attach Separate Sheet if necessary)*
		# Details of power cables, control cable and their routes. # Bill of materials of all components. # Technical literature of alternator. # Composite O&M manual of the generator covering all sub-systems. #Part Manual for Engine and Alternator. # Catalogues of various components. # All test certificates for tests done at manufacturer's works for alternator, control panel and complete unit. # Tests to be done during commissioning. # Guarantee certificate for alternator and control panel. Guarantee shall be for 12 months after commissioning of genset or 18 months after supply, whichever is earlier. # List of recommended spares for two years including part nos and descriptions.	
XX.	**INSTALLATION AND COMMISSIONING OF UNIT**	Installation and Commissioning of the generating sets, control panels mounted on skid shall be carried out by the bidder in the presence of OIL representatives at its fields at Duliajan, Assam (India). 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 issued by State Licensing Board. A person who is authorized for supervision of all electrical works should have valid 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 (Four nos) of the unit to OIL#s earth system using the10.0 M long earth loops provided inside the unit. Materials such as line pipes, fittings necessary for fabricating fuel/ water lines If required), supports for engine exhaust shall be provided by OIL . However bidder has to arrange welding and cutting facilities that may be required during installation and commissioning the generating sets. OIL will provide necessary statutory permits for welding and cutting jobs in classified areas as and when required. Installation / commissioning charges should have to be quoted separately which shall be considered for evaluation of the offers. These charges should include amongst others to and fro fares, boarding/ lodging and other expenses of the	

Sl no	Description	Specifications	Bidder's Remarks (To be duly signed and stamped on each page) *(Attach Separate Sheet if necessary)*
		commissioning engineers during their stay at Duliajan, Assam (India). All Personal, Income and Service Tax etc. towards the services provided by the supplier shall be borne by the supplier and will be deducted at source. Bidders should also confirm about installation/ commissioning in the Technical Bid. 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 and all spares as per Purchase Order. Note : Once commissioned at designated site the generating set will be subjected to a trial run (reliability run) on available load for a minimum period of 72 hrs continuously and on satisfactory performance shall be subsequently handed over to OIL.	
XXI.	**RESPONSIBILITY**	The responsibility for performance to the specifications shall not be divided among individual component manufacturers, but must be assumed solely by the supplier. This includes generating system design, manufacture, test, and having a local supplier responsible for service, parts and warranty for the total system.	
XXII.	**SERVICE AND WARRANTY**	1) The manufacturer shall have a local (placed in Assam) authorized dealer who can provide factory trained servicemen, the required stock of replacement parts, technical assistance, and warranty administration.	
		2) The warranty period for the Gen set and ancillary equipment should be a minimum of 18 months from the date of dispatch/ shipment or 12 months from the date of commissioning of the equipment whichever is earlier. Any defects in the Engine or Alternator during warranty period shall be replaced by the supplier at his cost without any extra charge to OIL	
		3) The bidder must undertake and confirm from OEMs that the equipment to be supplied are not going to become obsolete for the next 10 years and provisioning of spares can be continued.	
XXIII.	**BID REJECTION CRITERIA(BRC) / BID EVALUATION CRITERIA (BEC)**	BID REJECTION CRITERIA(BRC) (TECHNICAL): The bid must conform to the specifications and terms and conditions given in the enquiry. Bid will be rejected in case the items offered do not conform to all the required technical parameters stipulated in the technical specifications and to the respective international / national standards wherever stipulated. Notwithstanding the general conformity of the bids to the stipulated specifications and terms and	

Sl no	Description	Specifications	Bidder's Remarks (To be duly signed and stamped on each page) *(Attach Separate Sheet if necessary)*
		conditions, the following requirements shall have to be particularly met by the bidders, without which the offer will be considered as non-responsive and rejected.	
		1.0 The Diesel engine should be a proven engine of generating set application with a four stroke, Multi cylinder, naturally aspirated /Turbocharged, air cooled/water cooled , inline engine , conforming to ISO 3046 / BS 5514 / IS 10000 or relevant standards and capable of developing a net Horse Power(at 1500 rpm) require to drive a generating set of capacity 62.5/ 63 KVA rated for Prime Duty as per ISO 8528 standard. 1.1 Certification/declaration to be enclosed from the engine OEM,mentioning the net HP available to drive the alternator and compliance of above standard. In this regard the copy of such record to be furnished as per the following: 1). Certificate from OEM(engine) mentioning the net BHP, 2).Proven certificate of the engine for generating set application from OEM(Engine).	
		2. 62.5KVA / 63 KVA Diesel generating sets should be enclosed in Acoustic Enclosure, and meet the latest CPCB norm. (Copy of documents/certificates for due Compliances of the relevant norms to be enclosed). Note-The latest version of the emission norm as applicable,shall be valid for evaluation purpose.	
		3.0 The Alternator must be brushless type.	
		4.0 Bidder's Qualification : 4.1 Bidder may be an Original Equipment Manufacturer (OEM) of Generating set/Engine/Alternator. OR Bidder may be an authorized dealer of OEM for the Engine/Alternator /Generating set. OR Bidder may be an OEM approved assembler of Generating set. or its authorised dealer.	

Sl no	Description	Specifications	Bidder's Remarks (To be duly signed and stamped on each page) *(Attach Separate Sheet if necessary)*
		4.2 In case the bidder is an OEM of Engine or their authorized dealer, Alternator must be purchased from the OEM of Alternator or their authorized dealer and vice versa. OR In case the bidder is an OEM approved assembler of Generating sets, Engine and Alternator must be purchased from OEM or their authorized dealers. Note: But whatever may be their status in para 4.1 & 4.2 above, bidder will have to enclose Documentary evidence along with the offer, failing which offer will be rejected.	
		5.0. Bidders should have the experiences of successfully completing at least 3(three) orders (value of at least one order not less than Rs. 4839600.00) in the last 10(ten) years as on bid closing date of this tender for supply, installation, commissioning & testing of diesel engine driven generating set of capacity 62.5/ 63kVA or higher to organizations namely PSU (State/Central Government of India) or State/Central Govt. Deptt. of India or any other Public Limited Company. At least two of the generating sets supplied in the above orders must have the offered engine model as prime mover with minimum 3000 running hours. Documentary evidences (in the form of Purchase order copy with invoice or Satisfactory performance certificate from the customer) of past orders must be provided along with the bid, failing which offer will be rejected.	
		6.0 The bidder must undertake and confirm from OEM that the equipment to be supplied are not going to become obsolete for the next 10 years and provisioning of spares will be continued. **Note**:1. Relevant documentary evidences in support of conditions mentioned in support of Sl no 1 to 6(as applicable) must be duly enclosed with the offer failing which the offer shall be summarily rejected.	
XXIV.	**DATA SHEETS**	(a) Engine	
		1) MAKE	

Sl no	Description	Specifications	Bidder's Remarks (To be duly signed and stamped on each page) *(Attach Separate Sheet if necessary)*
		2) MODEL	
		3) NUMBER OF CYLINDER	
		4) ASPIRATION	
		5) COMPRESSION RATIO	
		6) SIZE (BORE & STROKE)	
		7) DISPLACEMENT	
		8) DUTY	
		9) GROSS HP AT 1500 RPM	
		10) DEDUCTION FOR FAN, ALT & TEMP.	
		11) NETT HP AVAILABLE AT 1500 RPM	
		12) SPECIFIC FUEL CONSUMPTION AT a. # 100% LOAD	
		b. # 75% LOAD	
		c. # 50% LOAD	
		13) LUBOIL CONSUMPTION(LT/HR)	
		14) ENGINE SUMP CAPACITY	
		15) MAKE & TYPE OF GOVERNOR	
		16) LENGTHX WIDTH X HEIGHT	
		(b) Alternator	
		Make : Rated Output : Phase : Frequency : No. of Poles : RPM Rated power factor : Conductor Material. : Type : Duty : Class of insulation : Connection : Site Condition :	

Sl no	Description	Specifications	Bidder's Remarks (To be duly signed and stamped on each page) *(Attach Separate Sheet if necessary)*
		Alternators Internal Protection (Enclosure): Alternators Terminal Box protection: Cooling : Excitation system : Automatic Voltage Regulation: Permissible voltage variation at rated : speed, and power factor Voltage swing (transient response) : Permissible Engine Speed variation: Permissible frequency variation at rated : Speed and power factor Period for taking load from start impulse: Motor starting ability : Overload capacity : Unbalanced current carrying capacity: Short circuit current withstand capacity: Over voltage : Mounting : Amplitude of vibration at no load: 20.0 DATA SHEET OF PANEL AND INSTRUMENTS: 1 MCCB a) Make b) Rating c) Cat No/Type 2 Power and Energy monitor a) Make b) Rating c) Cat No/Type 3 Frequency relay	

Sl no	Description	Specifications	Bidder's Remarks (To be duly signed and stamped on each page) *(Attach Separate Sheet if necessary)*
		a) Make b) Rating c) Cat No/Type 4 Change over switch a) Make b) Rating c) Cat No 5 Auxiliary relays a) Make b) Rating c) Cat No 6 Hour meter and RPM meter (mechanical/digital) a) Make b) Rating c) Cat No 7 CT a) Make b) Rating c) Cat No 8 LED a) Make b) Rating c) Cat No 9 Earth Leakage Relay a) Make b) Range	

Sl no	Description	Specifications	Bidder's Remarks (To be duly signed and stamped on each page) *(Attach Separate Sheet if necessary)*
		c) Cat No/Type 10 Voltage Monitoring Relay a) Make b) Range c) Cat No/Type 11 Digital RPM Meter a) Make b) Range c) Cat No. 12 COS a) Make b) Rating c) Cat No All the components including CT, indicating meters, fuses, push buttons etc shall be as per NIT	

XXV.	**CHECK LIST**	PLEASE TICK				
		1. Whether quoted as OEM of Engine and whether documentary evidence submitted?	Yes		No	
		2. Whether quoted as OEM of Alternator & whether documentary evidence submitted?	Yes		No	
		3. Whether quoted as Authorized Dealer of OEM (Engine/Alternator) and whether documentary evidences submitted?	Yes		No	
		4. Whether quoted as Assembler , OEM of Gen Set manufacturer or authorized dealer of OEM (Gen Set Manufacturer)	Yes		No	
		5. Whether valid Type Approval / Conformity of Production Certificate from Certification Agencies as per latest CPCB notification for Engine Emission and DG Set Noise Limit submitted?	Yes		No	
		6. Whether documentary evidence w.r.t. experience of successful completion of orders as stipulated in clause no XXIII. 8.0 above submitted?	Yes		No	
		7. Whether documentary evidence w.r.t. proven track record of the offered engine and alternator as stipulated in clause no XXIII. 9.0 above submitted?	Yes		No	

Sl no	Description	Specifications	Bidder's Remarks (To be duly signed and stamped on each page) *(Attach Separate Sheet if necessary)*		
		8. Whether Satisfactory Performance Certificate of the offered engine and alternator from end user as stipulated in clause no XXIII. 10.0 above submitted?	Yes		No
		9. Whether the bid submitted in the prescribed format by duly filling up the "Bidder's Remarks" column as stipulated in clause no XXIII. 12.0 above?	Yes		No
		10. Whether separately highlighted any deviation from the technical specification?	Yes		No
		11. Whether detail specification of Alternator with manufacturer's technical literature/catalogue enclosed?	Yes		No
		12. Whether test certificate of Alternator and Control Panel will be submitted?	Yes		No
		13. Whether two sets of installation/ commission, Maintenance Manual shall be submitted?	Yes		No
		14. Whether spare parts for 10 years shall be supplied?	Yes		No
		15. Whether power and Wiring diagram of Alternator Control Panel submitted?	Yes		No
		16. Whether bill of Materials of Control Panel submitted?	Yes		No
		17. Whether confirmed that control panel drawing shall be approved by OIL before manufacturing in the event of placement of order?	Yes		No
		18. Whether offered engine is as per NIT ?	Yes		No
		19. Whether quoted for supply, installation, commissioning & handing over of genset?	Yes		No

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

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

Bidders to Affix Stamp here