OIL INDIA LIMITED
(A Govt. of India Enterprise)
4, India Exchange Place,
Kolkata – 700 001.
E-mail : oilcalmn@oilindia.in
INVITATION FOR BID
NATIONAL COMPETITIVE BID

OIL INDIA LIMITED invites National Competitive Bid through its e-procurement portal – https://etender.srm.oilindia.in/irj/portal for the following items :-

E-Tender No.	Bid Closing Date	ITEM
SKI 8862 P19/03	11.09.2018	Supply , Installation & commissioning of Generating set

Tender fee (Non – refundable) amount ,Period of sale of documents, Bid Closing / Opening date, the complete bid documents and details for purchasing bid documents, participation in e-tenders etc. are available on OIL's e-procurement portal https://etender.srm.oilindia.in/irj/portal as well as OIL's website http://www.oil-india.com/.
No separate notification shall be issued in the press. Bidders should regularly visit above website and e-portal to keep themselves updated.

OIL INDIA LIMITED
(A Government of India Enterprises)
4, India Exchange Place
Kolkata -700001

TELEPHONE NO. (033) 22301657
FAX NO: (033) 22302596
Email: kolpur2@oilindia.in

FORWARDING LETTER

Tender No & Date	:	**SKI 8862 P19/03**
Tender Fee	:	**Rs 1,000/-**
Bid Security Amount	:	**Rs. 87,800 /-**
Bidding Type	:	**Single Stage Two Bid**
Bid Closing on	:	As mentioned in the e-portal
Bid Opening on	:	As mentioned in the e-portal
Performance Guarantee	:	Applicable
Integrity Pact	:	Not Applicable
Delivery Required	:	**At Oil India Limited, Moran , ASSAM**

OIL invites Bids for **Supply , Installation & commissioning of 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/CALCUTTA/E-01/2016. The prescribed Bid Forms for submission of bids are available in the Technical RFx -> External Area - > Tender Documents.
The general details of tender can be viewed by opening the RFx [Tender] under RFx and Auctions. The details of items tendered can be found in the Item Data and details uploaded under Technical RFX.

The tender will be governed by:

a) **For technical support on various matters viz. Online registration of vendors, Resetting of Passwords, submission of online bids etc, vendors should contact OIL's ERP-MM Department at following: Tel. No.s = 0374-2807178, 0374-2807171 , 0374-2807192. Email- id = erp_mm@oilindia.in.**

b) "General Terms & Conditions" for e-Procurement as per Booklet NO. MM/CALCUTTA/E-01/2016 for E-procurement (LCB Tenders).

c) **This tender shall be guided by Purchase preference policy-linked with Local Content (PP - LC) notified vide letter no. O-27011/44/2015-ONG-II/FP dated 25.04.2017 of MoP&NG as well as Public Procurement Policy for MSEs-Order 2012. For details of the PP-LC policy, please visit OIL website at www.oil-india.com and it is also provided in Annexure-K of this tender.**

Purchase Preference will be given as per prevailing Government Guidelines as applicable on the bid closing date

Bidders seeking benefits, under Purchase Preference Policy (linked with Local Content) (PP-LC) shall have to comply with all the provisions specified and shall have to submit all undertakings / documents applicable for this policy.

In case a bidder is eligible to seek benefits under PP-LC policy as well as Public Procurement Policy for MSEs-Order 2012, then the bidders should categorically seek benefits against only one of the two policies i.e. either PP-LC or MSE policy. If a bidder seeks free of cost tender document under the MSE policy, then it shall be considered that the bidder has sought benefit against the MSE policy and this option once exercised cannot be modified subsequently.

d) Technical specifications with Quantity and BEC/BRC and Price bid format as per **ANNEXURE AAA, ANNEXURE BBB and ANNEXURE CCC** respectively.

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

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

g) Bidder are advised to fill up the **Technical / Commercial bid check list (Annexure IV, V & EEE) , Response sheet (Annexure FFF) and Bank Details (Annexure GGG)** given in this bidding document uploaded in Technical RFx -> External Area - > Tender Documents. The above filled up documents to be uploaded in the Technical RFX Response.

h) **Amendments to the NIT after its issue will be published on OIL's website only. Revision, clarification, addendum, corrigendum, time extension etc. to the tender will be hosted on OIL website only. No separate notification shall be issued in the press. Prospective bidders are requested to visit website regularly to keep themselves updated.**

Special Note:

1.0 Bidders to take special note of the following conditions:

1.1 Against Tender Fee – **Payment should be made only through online mode** and no other instrument (Cash/DD/Cheques/Cashier Cheque, etc) will be acceptable.

Vendors who do not have OIL's User ID & password, may generate User ID & password online by the Vendor by using the link for supplier enlistment given in OIL's e-tender portal and then pay Tender Fee on-line through OIL's electronic Payment Gateway upto one week prior to the Bid closing date (or as amended in e-portal).

1.2 Against Bid Security/EMD/Performance Bank Guarantee – **Only payments through online mode or Submission of Bank Guarantee will be acceptable.** No DD/Cheques/Cashier Cheque or any other mode will be acceptable.

1.3 A) Bidders submitting bank guarantee as **Bid Security** should note that the bank guarantee issued by the bank must be routed through SFMS platform as per following details:

(i) MT 760 / MT 760 COV for issuance of bank guarantee
(ii) MT 767 / MT 767 COV for amendment of bank guarantee

The above message / intimation shall be sent through SFMS by the BG issuing bank branch to Axis Bank, Corporate Banking Branch, IFSC Code - UTIB0001164. Branch Address - AXIS Bank Ltd, Corporate Banking Branch, 3rd Floor, AC Market, 1, Shakespeare Sarani, Kolkata 700071."

B) The Bidder shall submit to OIL the copy of SFMS message as sent by the issuing bank branch along with the original bank guarantee.

Note : In the event of an order, similar process will be required to be followed by the bidder in case of submission of Performance Security in the form of Bank guarantee.

2.0 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 **GM-Kolkata Office, 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.

3.0 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.

4.0 To participate in OIL's E-procurement tender, bidders should have a legally valid Digital Signature Certificate as per Indian IT Act from the licensed Certifying Authorities operating under the Root Certifying Authority of India (RCAI), Controller of Certifying Authorities (CCA) of India (http://www.cca.gov.in). The digital signature should be of Class 3 digital certificate alongwith encryption certificate for the designated individual with organization name. Please also refer **"Guideline to Bidder for participating in OIL".** All the Bids must be Digitally Signed.

5.0 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.

6.0 The tender is invited under SINGLE STAGE-TWO BID SYSTEM. Bidders shall quote accordingly 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.**

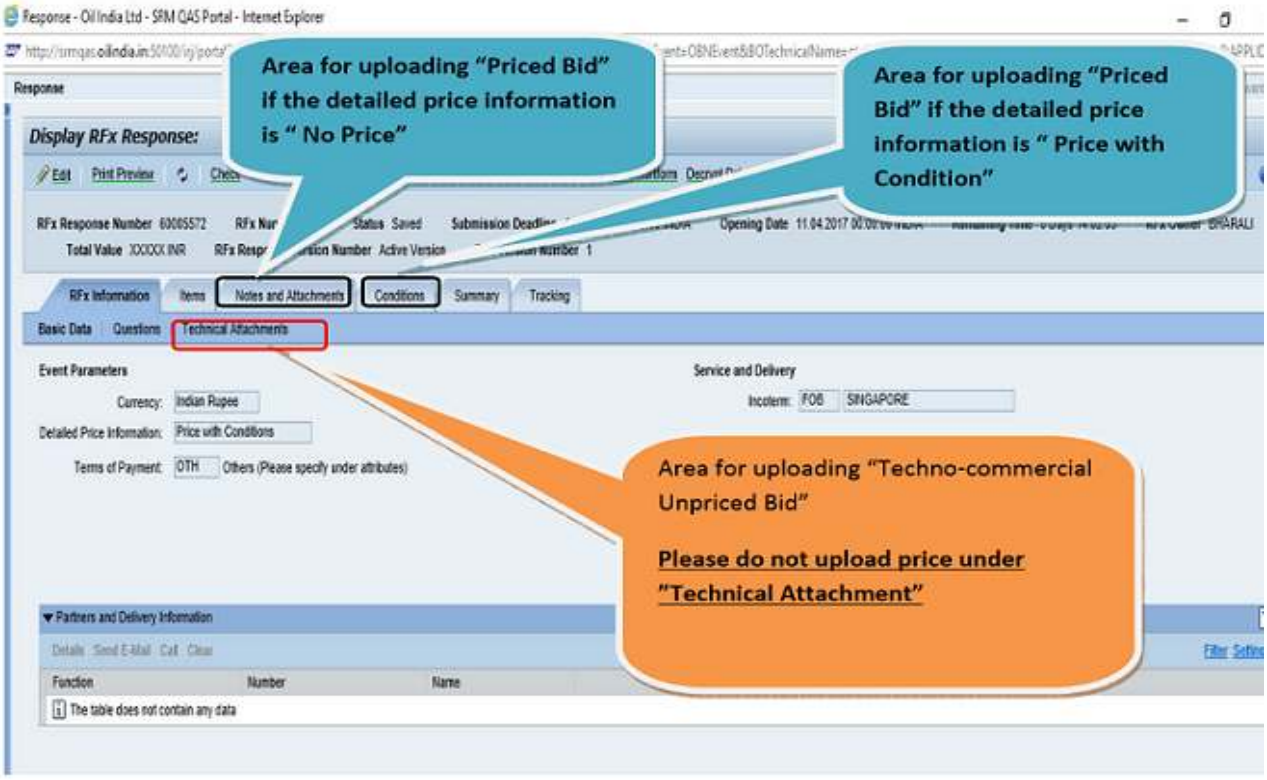
6.1 Please ensure that Techno-commercial Bid / all technical related documents related to the tender are uploaded in the Technical Attachment as shown in the screen shot below. The "**TECHNO-COMMERCIAL UNPRICED BID**" shall contain all techno-commercial details **except the prices**. **Please note that no price details should be uploaded in Technical Attachment.**

6.2 The "**PRICE BID**" must contain the price schedule and the bidder's commercial terms and conditions. **Details of prices as per Price Bid format/Priced bid can be uploaded as Attachment in the attachment option under "Notes & Attachments" tab as shown in the screen shot below.**

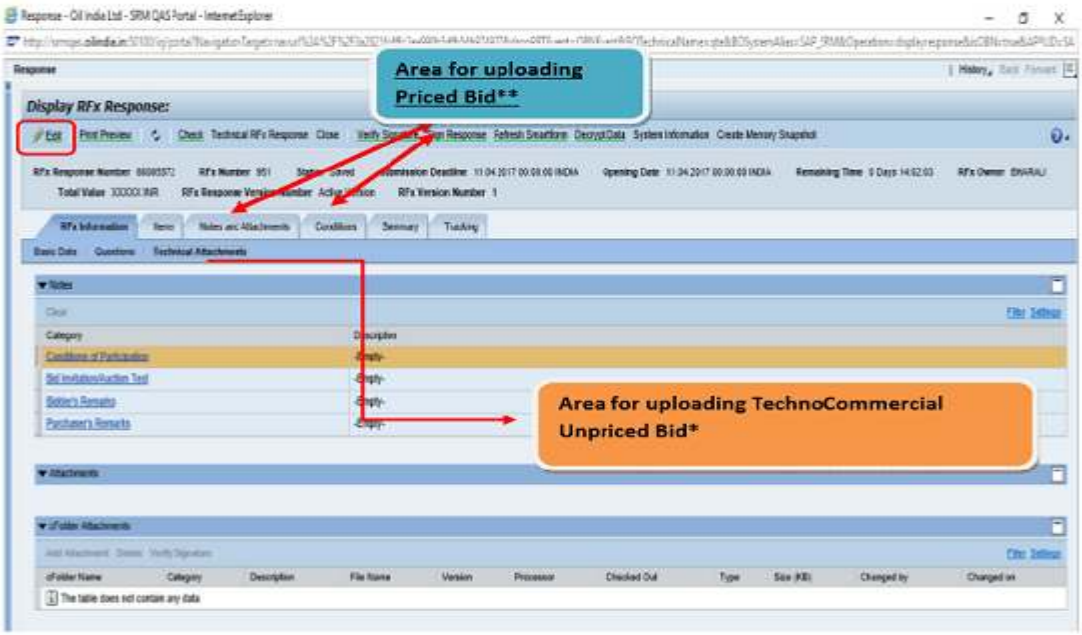
A screen shot in this regard is shown below.

Upload Technical Bid / Price Bid.

1.



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



*The "Techno-Commercial Unpriced Bid" shall contain all technocommercial details except the prices.

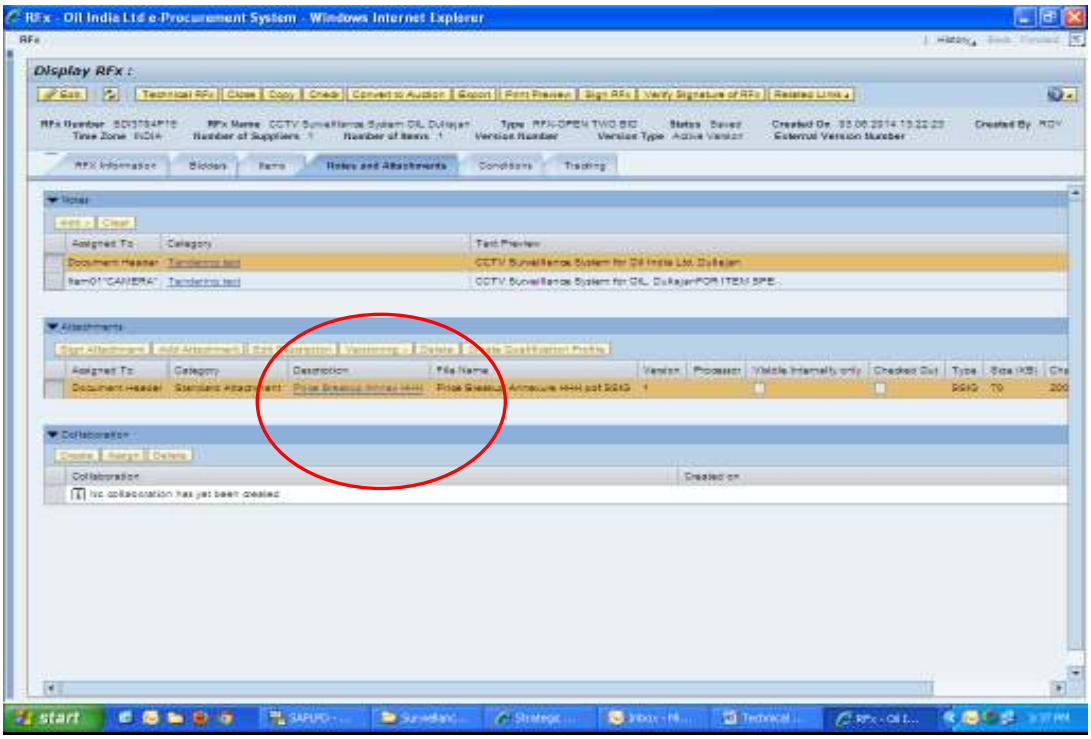
** Please follow the instructions as per Vendor User Manual for Uploading Price under "Notes and Attachment" or "Condition"

6.3 Any Offer not complying with above submission procedure will be rejected as per Bid Rejection Criteria mentioned in the tender.

6.4 Only the price-bids of the bidders whose offers are commercially and technically acceptable shall be opened for further evaluation.

6.5 Price Breakup/format:

Bidders should submit the price breakup/format of all the items as per "Annexure CCC" which has been uploaded under "Notes & Attachments" > "Attachments" as shown below. The price breakup/format "Annexure CCC" should be filled up, signed and uploaded under "Notes & Attachments" > "Attachments" only. **The filled up price breakup/format of all the items should not be uploaded in Technical Attachment.**



Please do refer "NEW INSTRUCTION TO BIDDER FOR SUBMISSION" for the above two points and also please refer " New Vendor Manual (effective 12.04.2017) " available in the login Page of the OIL's E-tender Portal.

NOTE:

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

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-BBB**. However, if any of the Clauses of the Bid Rejection Criteria / Bid Evaluation Criteria (as per **Annexure-BBB**) contradict the Clauses of the tender and / or "General Terms & Conditions" as per Booklet No. MM/CALCUTTA/E-01/2016 for E- Procurement of Indigenous Tenders elsewhere, those in the BEC / BRC shall prevail.

9. 0 Please do refer the User Manual provided on the portal on the procedure-How to create Response for submitting offer.

10.0 In order to bid for OIL e-tenders all the vendors are required to obtain a legally valid Digital Certificate Class III [Organization] along with encryption certificate as per Indian IT act from the licensed certifying authorities(CA) operating under the root certifying Authority of India (RCAI), controller of certifying authorities (CCA) of India. Digital Signature Certificate comes in a pair of Signing/Verification and Encryption /decryption certificate. Bidder should have both the Signing/Verification and Encryption /decryption certificate for signing and Encryption, decryption purpose respectively. The driver needs to be installed once, without which the DSC will not be recognized. While participating on e-Tendering the DSC token should be connected to your system.

Encryption certificate is mandatorily required for submission of bid. In case bidder created response with one certificate (using encryption key) and bidder change his Digital Signature Certificate then old certificate (used for encryption) is required in order to decrypt his encrypted response for getting the edit mode of the response. Once decryption is done, bidder may use new DSC certificate for uploading and submission of their offer. It is the sole responsibility of the bidder to keep their DSC certificate properly. In case of loss of the certificate, OIL INDIA LIMITED is not responsible.

11.0 **For exemption for tender fee**, please refer Clause No. 3.3 (Section A) of "General Terms & Conditions" for e-Procurement as per Booklet No. MM/CALCUTTA/E-01/2016 for E-procurement (LCB Tenders).

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

13.0 In addition to the existing clause of accepting Bid Security and Performance Security in the form of Bank Guarantee in Para No. 8.2 and 9.3 in the "General Terms & Conditions" for e-Procurement as per Booklet No. MM/CALCUTTA/E-01/2016 for E-procurement (LCB Tenders)
to include the below mention point as well:

> **"#Bank Guarantee issued by a Scheduled Bank in India at the request of some other Non -Scheduled Bank of India shall not be acceptable."**

14.0 CLAUSES RELATED TO GST

(A) Taxes:

i. For the purposes of levy and imposition of GST, the expressions shall have the following meanings:

(a) GST - means any tax imposed on the supply of goods and/or services under GST Law.

(b) Cess - means any applicable cess, existing or future on the supply of Goods and Services as per Goods and Services Tax (Compensation to States) Act, 2017.

(c) GST Law - means IGST Act 2017, CGST Act 2017, UTGST Act, 2017and SGST Act, 2017and all related ancillary Rules and Notifications issued in this regard from time to time.

ii. The rates quoted by the bidders shall be inclusive of all taxes, duties and levies. However, bidders are required to provide separately the rate and amount of all types of taxes, duties and levies. In case, the quoted information related to various taxes, duties and levies subsequently proves wrong, incorrect or misleading, OIL will have no liability to reimburse the difference in

the duty/tax, if the finally assessed amount is on the higher side and OIL will have the right to recover the difference in case the rate of duty/ taxes finally assessed is on the lower side. Further, bidders have to clearly show the amount of GST separately in the Tax invoices. Further, it is the responsibility of the bidders to make all possible efforts to make their accounting / IT system GST complaint in order to ensure availability of Input Tax Credit (ITC) to Oil India Ltd.

iii. Offers without giving any of the details of the taxes (including rates and amounts) as specified above will be considered as inclusive of all taxes including GST. When a bidder mentions taxes as extra without specifying the rates and amount, the offer will be loaded with maximum value towards taxes received against the tender for comparison purposes. If the bidder emerges as lowest bidder after such loading, in the event of order on that bidder, taxes mentioned by OIL on the Purchase Order/ contracts will be binding on the bidder.

iv. Bidder is required to pass on the benefit arising out of introduction of GST, including seamless flow of Input Tax Credit, reduction in Tax Rate on inputs as well as final goods by way of reduction of price as contemplated in the provision relating to Anti-Profiteering Measure vide Section 171 of the CGST Act, 2017. Accordingly, for supplies made under GST, the bidder must confirm that benefit of lower costs has been passed on to OIL by way of lower prices/taxes and must also provide details of the same as applicable. OIL reserves the right to examine such details about costs of inputs/input services of the bidder to ensure that the intended benefits of GST have been passed on to OIL.

v. Statutory variation (increase/decrease) of GST within the contractual delivery period will be to the account of OIL subject to documentary evidence. However, any increase in statutory levy after the expiry of the scheduled date of delivery shall be to the supplier's account.

vi. Bidder agrees to do all things but not limited to providing GST compliant Tax Invoices or other documentation as per GST law relating to the supply of goods and/or services covered in the instant contract like raising of and /or acceptance or rejection of credit notes / debit notes as the case may be, payment of taxes, timely filing of valid statutory Returns for the tax period on the Goods and Service Tax Network (GSTN), submission of general information as and when called for by OIL in the customized format shared by OIL in order to enable OIL to update its database etc. that may be necessary to match the invoices on GSTN common portal and also for claiming input tax credit in relation to any GST payable under this Contract or in respect of any supply under this Contract.

vii. In case Input Tax Credit of GST is denied to OIL or demand is recovered from OIL by the Central / State Authorities on account of any non-compliance by Bidder/Supplier, including non-payment of GST charged and recovered, the Bidder/Supplier shall indemnify OIL in respect of all such claims of tax, penalty and/or interest, loss, damages, costs, expenses and liability that may arise due to such non-compliance. OIL, at its discretion, may also withhold/recover such an amount demanded and recovered by the authorities/ state authorities from the pending payments of the Bidder/Supplier.

viii. GST liability, if any on account of supply of free samples against any tender/purchase order (wherever applicable) shall be to bidder's/ supplier's account.

Yours Faithfully,

Sd-
(Aparajita Gogoi)
Sr. Manager Materials (P)
For GM-Kolkata Office

Annexure – AAA

OIL INDIA LIMITED invites Indigenous tenders for items detailed below:

TECHNICAL SPECIFICATIONS WITH QUANTITY

SLNO & MATERIAL CODE NO.	MATERIAL DESCRIPTION.	QUANTITY	UOM
10 ---------- 0C000242	Detail specifications are attached with this tender as below: 1. ANNEXURE-I :SPECIFICATIONS OF DED GENERATOR SET 2. ANNEXURE II: SPECIFICATION OF ELECTRICAL ITEMS 3. ANNEXURE III: SPECIFICATION OF ACOUSTIC ENCLOSURE 4. ANNEXURE-IV EQUIPMENT DATA SHEET 5. ANNEXURE-V TECHNICAL CHECK LIST (FOR BIDDER)	1	NO
20	INSTALLATION AND COMMISSIONING OF ONE NO SILENT DIESEL ENGINE DRIVEN GENERATOR SET.	1	AU

Special Terms & 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.

Annexure – BBB

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

I) BID REJECTION CRITERIA (BRC):

The bid must conform to the specifications, terms and conditions given in the tender specifications. Bids shall be rejected in case the items offered do not conform to the required minimum / maximum 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.

A.(TECHNICAL):

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 in the range 330 KVA – 365 KVA rated for Emergency Standby Duty (ESP) 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:

a. Certificate from OEM(engine) mentioning the net BHP

b. Proven certificate of the engine for generating set application from OEM(Engine).

2.0 330 KVA – 365 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 The bidder must undertake and confirm from OEM that the equipment to be supplied are not going to become obsolete for the next 10 years and provisioning of spares will be continued.

Note: Relevant documentary evidences in support of conditions mentioned in support of Sl no 1 to 4(as applicable) must be duly enclosed with the offer failing which the offer shall be summarily rejected.

5.0) Bidder should have experience of successfully executing at least 1 (one) similar order of value Rs 21,93,272.00 during the last 5 (five) years as on the original Bid Closing Date of the tender.

Note:

(i) Similar Order means Purchase Order against supply, installation, commissioning and testing of Diesel Engine driven Generating sets of capacity 250 KVA or above

along with the Control Panels and accessories in Government/Semi Government/PSU or any Public Limited Company.

(ii) In case the bidder submit documentary evidences of more than one Purchase Order in support of the bid, then the total value of the Purchase Orders should be atleast Rs 21,93,272.00 during the last 5 (five) years as on the original Bid Closing Date of the tender.

(iii) The bidder must submit the following as documentary evidence (attested/self attested) in support of the experience:

a. For OIL Purchase Order, copy of "Purchase Order" of completed supply must be submitted as per BRC Clause 5.0 above.

b. For supply to other Govt/Semi Govt/PSU or Public Limited Company, copy (s) of Purchase Order of the supply along with invoice against the purchase order or Completion certificate of the supply from the end user are/ is to be submitted.

c. In case the bidder submit Completion certificate from the end user, the completion certificate should clearly mention the Purchase Order No(s), Total Value of Supply and complete description of the supplied item.

6.0) Bidder's Qualification:
6.1 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.

6.2 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 6.1 & 6.2 above, bidder will have to enclose Documentary evidence along with the offer, failing which offer will be rejected.

7.0) OIL will not be responsible for delay, loss or non receipt of applications (for bidding documents) sent by mail and will not entertain any correspondence in this regard.

Note: The original Bid Closing date shall be considered by OIL for evaluation of BRC Criteria even in case of any extension of the original Bid closing date. Bidders to quote accordingly.

B) **BID REJECTION CRITERIA (FINANCIAL) :**

1.0 Annual Financial Turnover of the bidder during **any of preceding three financial / accounting years from the original bid closing date** should be at least **Rs 21,93,272 /-.**

1.1Net worth of bidder must be positive for preceding financial/ accounting year.

2.0Considering the time required for preparation of Financial Statements, if the last date of preceding financial / accounting year falls within the preceding six months reckoned from the original bid closing date and the Financial Statements of the preceding financial / accounting year are not available with the bidder, then the financial turnover of the previous three financial / accounting years excluding the preceding financial / accounting year will be considered. In such cases, the Net worth of the previous financial / accounting year excluding the preceding financial / accounting year will be considered. However, the bidder has to submit an affidavit/undertaking certifying that 'the balance sheet/Financial Statements for the financial year…… (as the case may be) has actually not been audited so far'.

Note: (a) For proof of Annual Turnover & Net worth any one of the following document must be submitted along with the bid:-

i) A certificate issued by a practicing Chartered/ Cost Accountant (with Membership Number and Firm Registration Number), certifying the Annual turnover & Net worth as per format prescribed in ANNEXURE-B.

OR

ii) Audited Balance Sheet along with Profit & Loss account."

b) In case the bidder is a Central Govt. Organization/PSU/State Govt. Organization/Semi-State Govt. Organization or any other Central/State Govt. Undertaking, where the auditor is appointed only after the approval of Comptroller and Auditor General of India and the Central Government, their certificates may be accepted even though FRN is not available. However, bidder to provide documentary evidence for the same.

Note: The original Bid Closing date shall be considered by OIL for evaluation of BRC Criteria even in case of any extension of the original Bid closing date. Bidders to quote accordingly.

C) COMMERCIAL:

1.0 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. Technical RFx Response folder is meant for Technical bid only. Therefore, No price should be given in Technical RFx Response folder, otherwise the offer will be rejected.

The bidder has to submit both the "TECHNO-COMMERCIAL UNPRICED BID" and "PRICED BID" bid through electronic form in the OIL's e-Tender portal within the Bid Closing Date and Time stipulated in the e-Tender.

1.1 In Technical Bid opening, only Technical Rfx will be opened. Therefore, the bidder should ensure that "TECHNO-COMMERCIAL UNPRICED BID should contain details as mentioned in the technical specifications as well as BEC/ BRC , techno-commercial details including quantity offered except prices which shall be kept blank and upload the same in the Technical RFx Response-> User - > Technical Bid. No

price should be given in above Technical Rfx otherwise the offer will be rejected. Please go through the help document in details before uploading the document and ensure uploading of technical bid in the Technical RFx Response-> User - > Technical Bid only. The "PRICE BID" must contain the price schedule and the bidder's commercial terms and conditions. Details of prices as per Bid format / Commercial bid can be uploaded as Attachment under the attachment option under "Notes & Attachments". Priced bids of only those bidders will be opened whose offers are found to be techno-commercially acceptable.

2.0 **Bid security of Rs. 87,800 /-** shall be furnished as a part of the TECHNICAL BID (refer Clause No. 8.0 (Section A) of "General Terms & Conditions" for e-Procurement as per Booklet No. MM/CALCUTTA/E-01/2016 for E-procurement (LCB Tenders)).A bid shall be rejected straightway if Original Bid Security is not received within the stipulated date & time mentioned in the Tender and/or if the Bid Security validity is shorter than the validity indicated in Tender and/or if the Bid Security amount is lesser than the amount indicated in the Tender.

2.1 For exemption for submission of Bid Security, please refer Clause No. 8.16 (Section A) of "General Terms & Conditions" for e-Procurement as per Booklet No. MM/CALCUTTA/E-01/2016 for E-procurement (LCB Tenders).

2.2The Bank Guarantee towards Bid Security shall be valid **upto 09.04.2019.**

3.0 Successful bidder will be required to furnish a Performance Bank Guarantee @10% of the order value. Validity of the performance security shall be valid for 90 days beyond contract period/duration and applicable warranty/guarantee/defect liability period (if any). **Bidder must confirm the same in their Technical Bid**. Offers not complying with this clause will be rejected.

4.0 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.

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

6.0 Bids containing incorrect statement will be rejected.

7.0 No offers should be sent by Telex, Cable, E-mail or Fax. Such offers will not be accepted.

8.0 All the Bids must be Digitally Signed using "Class 3" digital certificate (e-commerce application) with Bidder's organization 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. The bid signed using other than "Class 3" digital certificate with Bidder's organization name, will be rejected.

9.0 The original Bid Closing date shall be considered by OIL for evaluation of BRC Criteria even in case of any extension of the original Bid closing date. Bidders to quote accordingly.

10.0 Bidders are required to submit the summary of the prices in their Commercial (Priced) bids as per bid format (Summary), given in **Annexure CCC** below :

Annexure-CCC

Price Bid Format

Tender No. ……

	Item No.		
	HSN Code		
	Basic material Value (Unit Rate)		
	Quantity		
		In Rupees	
A.	Total Basic Material Value (Unit rate x Quantity)		
B.	Pre-despatch /Third party Inspection charges, if any		
C.	Packing and forwarding charges, if any		
D.	Total Ex-works value (A+B+C)		
E.	GST on (D)		
F.	Compensatory Cess, if any		
G.	Total FOR Despatching Station Value (D+E+F)		
H.	Freight Charges upto destination		
I.	GST on freight charges		
J.	Insurance charges inclusive of GST		
K.	Training Charges, if any		
L	GST on training charges		
M	Installation & Commissioning Charges, if any		
N	GST on I & C charges		
O	AMC charges, if any		
P	GST on AMC charges		
Q	Total FOR Destination Value (G+H+I+J+K+L+M+N+O+P)		

Gross weight of the total consignment
Gross volume of the total consignment
Name of Despatching Station
Delivery Period
Validity
Payment terms
Name of original manufacturer
Other terms if any

_____
Name of Bidder
Full Name :
Address :
Date :

Note:

1. Bidders must quote Freight Charges upto destination specified in tender. In case bidder fails to quote inland freight charges, highest freight quoted by the other bidder (considering pro-rata distance) against this tender or OIL's estimated freight , whichever is higher, shall be loaded to their offer for comparison purpose.
2. Inspection Charges (Ref. B), Training Charges (Ref. K & L), I&C Charges (Ref M & N) and AMC Charges (Ref. O & P) are to be quoted wherever specifically asked for in the tender.
3. Other clauses on Goods & Service Tax shall be applicable as incorporated elsewhere in this tender.

II) BID EVALUATION CRITERIA

The bids conforming to the specifications, terms and conditions stipulated in the enquiry and considered to be responsive after subjecting to the Bid Rejection Criteria will be considered for further evaluation as per the Bid Evaluation Criteria mentioned below:

1.0 The evaluation of bids will be done as per the Price Schedule (SUMMARY) detailed vide Para 10.0 of Bid Rejection Criteria.

2.0 If there is any discrepancy between the unit price and the total price, the unit price will prevail and the total price shall be corrected. Similarly, if there is any discrepancy between words and figure, the amounts in words shall prevail and will be adopted for evaluation.

3.0 To ascertain the inter-se-ranking, the comparison of the responsive bids will be done on FOR Destination basis, subject to corrections / adjustments given herein.

4.0 **This tender shall be guided by Purchase preference policy-linked with Local Content (PP - LC) notified vide letter no. O-27011/44/2015-ONG-II/FP dated 25.04.2017 of MoP&NG as well as Public Procurement Policy for MSEs-Order 2012. For details of the PP-LC policy, please visit OIL website at www.oil-india.com and it is also provided in Annexure-K of this tender.**

Purchase Preference will be given as per prevailing Government Guidelines as applicable on the bid closing date
Bidders seeking benefits, under Purchase Preference Policy (linked with Local Content) (PP-LC) shall have to comply with all the provisions specified and shall have to submit all undertakings / documents applicable for this policy.

In case a bidder is eligible to seek benefits under PP-LC policy as well as Public Procurement Policy for MSEs-Order 2012, then the bidders should categorically seek benefits against only one of the two policies i.e. either PP-LC or MSE policy. If a bidder seeks free of cost tender document under the MSE policy, then it shall be considered that the bidder has sought benefit against the MSE policy and this option once exercised cannot be modified subsequently.

5.0 In case any of the Clauses of the Bid Rejection Criteria / Bid Evaluation Criteria (BEC / BRC) mentioned here contradict the Clauses in the General Terms & Conditions of the Tender and/or elsewhere, those mentioned in this BEC / BRC shall prevail.

ANNEXURE - EEE

COMMERCIAL CHECKLIST

(To be filled up and submitted along with the bid)

Tender no.	
Bidder's name	

SL. NO.	BEC / TENDER REQUIREMENTS	COMPLIANCE BY BIDDER	
		Indicate *'Confirmed'/'Not Confirmed'/Not applicable*	**Indicate *Corresponding page ref. of unpriced bid or***
1	Confirm that validity has been offered as per NIT.(120 days from BC date).		
2	Confirm that Bid Security / Earnest Money has been submitted as per NIT (Wherever Applicable)?		
2.1	Confirm that original bid bond guarantee has been submitted in format MENTIONED IN NIT.		
3	Confirm that you shall submit Performance security (in the event of placement of order) (Wherever Applicable)?		
4	Confirm that duly signed Integrity Pact has been submitted as per NIT (Wherever Applicable)?		
5	Confirm that you have submitted documentary evidence as per BRC Technical		
6.1	Confirm that you have submitted proof of annual turnover and net worth certified by a chartered accountant (with membership number and Firm registration number) .		
6.2	Confirm that you have submitted affidavit/undertaking (wherever applicable) as mentioned in bid rejection criteria (financial) in annexure -BBB		
7	Confirm that the offers and all attached documents are digitally signed using Class 3# digital certificate (e-commerce application) in Organization Name issued by an acceptable Certifying Authority (CA) as per Indian IT. Act 2000.NIT.		
8	Confirm that you have not taken any exception/deviations to the NIT.		
9.	Confirm that the product offered strictly conform to the technical specifications.		
10	Confirm that the prices offered are firm. *(Conditional offer shall be liable for rejection.)*		

***NOTE*: Please fill up the greyed cells only.**

Bidders Response Sheet- Annexure FFF

No.	Tender No.	
	Bidders Name	
Sl	Description	Remarks
1	Place of Despatch	
2	Whether Freight charges have been included in your quoted	
3	Whether Transit Insurance charges have been included in your	
4	Make of quoted Product	
5	Offered Validity of Bid as per NIT	
6	Bid Security Submitted (if applicable)	
6	Details of Bid Security Submitted to OIL (if applicable)	
	a) Bid Security Amount (In Rs):	
	b) Bid Security Valid upto:	
7	Whether you shall submit Performance Security in the event of placement of order on you (if applicable)	
8	Integrity Pact Submitted (if applicable)	
9	Delivery Period in weeks from placement of order	
10	Complied to Payment terms of NIT (if applicable) otherwise to Standard	
11	If bidder is MSE whether you have quoted your own product	
12	If bidder is Small scale unit , whether you are owned by SC/ST	
13	If Bid security submitted as Bank Guarantee, Name and Full Address of Issuing Bank including Telephone, Fax Nos and Email id of branch manager	
14	Confirm that the Bid Security submitted (In case of Bank Guarantee) is in toto as per format provided in the bidding document.	
15	Bid Security if Not submitted, reasons thereof	

NOTE: Please fill up the greyed cells only.

ANNEXURE - GGG

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

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

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

Office Seal **Counter Signed by Banker:**
Signature of Vendor **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.**

ANNEXURE-I of Tender no. SKI 8862 P19/03

SPECIFICATION OF SILENT DIESEL ENGINE DRIVEN GENERATOR SET OF CAPACITY RANGE 330kVA - 365 kVA

1.0 SCOPE OF SUPPLY

1.1 One number new diesel engine driven generator set of rating in the range 330kVA (264kWe) to 365kVA (292kWe), 415V, 50Hz, 0.8PF (lag) for Emergency Standby Duty (ESP) complete with all standard accessories control panel, safety devices, generator breaker etc.
1.2 Microprocessor/ Relay based AMF control panel for automatic start of the DG set.
1.3 Installation and commissioning of the DG set including reliability run/trial run at Oil India Limited, Moran – 785669, Assam.

2.0 OPERATIONAL REQUIREMENT

2.1 The DG Set shall be standby source of power in the event of normal power supply failure in Moran Power Station of Oil India Limited (2 X 3MW Gas Turbine based captive power plant).
2.2 Purpose of the DG Set is to supply electrical power:
(a) For starting of 3MW Gas Turbine Generator (GTG) Unit. Electrical load in gas turbine starting system includes one VFD driven 100KW induction Motor as highest load.
(b) To all emergency/critical electrical loads (approx. 70 KW) of captive power plant In the event of normal power supply failure.
2.3 DG set shall be capable to take starting load of 100 KW induction motor (VFD driven, starting current around 280A) when already loaded with the base load of about 70KW.
2.4 Automatic Start (Automatic Main Failure Scheme): The Diesel Generator Sets shall be suitable for manual start and auto start. In manual start the Diesel Generator shall be started manually by an operator. In auto start the Diesel Generator shall start on receiving an impulse from under voltage relay in the event of normal power supply failure.
2.5 Starting system of the DG set shall be electrical starting system complete with batteries, battery charger, DC starting motors, starting relay etc. Battery Charger with float and boost charging facility shall be independent of engine running. Power supply to the charger shall be from normal station power supply, not linked to the DG set.

3.0 GENERAL REQUIREMENTS FOR THE GENERATOR SETS

3.1 The generator set shall be sturdy, rugged, proven and extremely reliable and durable. The generator set shall be suitable for operation in single island mode operation (round the clock on rotation).
3.2 The generator set shall be resistant to dirt in the air, tolerant of extremes of temperature.
3.3 The components of the generator set complete shall be of such design so as to satisfactorily function under all conditions of operation.
3.4 The entire work of manufacture/fabrication, assembly and installation shall conform to sound engineering practice. The entire installation shall be such as to cause minimum transmission of noise and vibration to the site.
3.5 Vendor shall furnish all relevant data of complete package as per Annexure - IV (Data Sheet).

4.0 CODES & STANDARDS

4.1 All equipment in the offer shall conform to the following, but not limited to them, latest edition of relevant codes & standards.
4.2 ISO 3046/1 or equivalent Indian Standard: Specification for reciprocating internal combustion engines
4.3 ISO 8528 or equivalent Indian Standard: Rotating electrical machine
4.4 IS: 10000(Part-iv) (or) (ISO: 3046) (Latest edition): Declaration of power, efficiency, fuel (Diesel) and lube oil consumption for diesel engine.
4.5 IS: 10002: Specification for performance requirement for constant Speed Engines (above 20 KW).
4.6 IS: 12065 Noise limit
4.7 IS: 13364 Specification of Alternator coupled with IC Engines

4.8 IS: 12075 Vibration
4.9 IS: 4691 Enclosure Protection
4.10 IS: 6362 Cooling
4.11 IS: 2253 Mounting
4.12 In case of bidder's inability to use the mentioned codes and standards, the bidder/manufacturer shall indicate his proposed codes and standards defining in detail for using the same. OIL may review the bidder's proposed codes and standards for approval of the same.

5.0 SITE CONDITIONS

5.1 The ambient condition of the generator sets shall be:
5.2 Maximum Ambient Temperature : 40°C
5.3 Minimum Ambient Temperature : 03°C
5.4 Maximum Humidity at 21°C : 100 %
5.5 Maximum Humidity at 35°C : 95 %
5.6 Maximum Humidity at 41°C : 70 %
5.7 Maximum Altitude above sea level: 150 Meter

6.0 COMPOSITION OF DIESEL FUEL.

High Speed Diesel as per IS 1460: 2005.

7.0 TECHNICAL SPECIFICATION

7.1 STATUTORY NORMS

7.1.1 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.

7.1.2 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 Limit. A copy of the same has to be furnished along with the offer.

7.1.3 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.

7.2 DIESEL ENGINE AND GENERATOR SET RATING/CAPACITY:

a) The engine-generator set, as a unit, shall be rated for a Emergency Standby Power application in the range of Range **330kVA (264kWe) - 365kVA (292kWe),** at 0.8-PF (lag) with an output of minimum **425 amperes** while generating 415 Volt AC, 3-phase, 50 Hz power.

b) Generator set should be ready to use type and suitable to operate on the given High Speed Diesel as per IS 1460: 2005.

c) The generator drive-engine shall be standard design of the original manufacturer designed primarily for generator set application in accordance with ISO 3046/BS5514/IS10000/ISO8528 standards and with high tolerance limits.

d) The generator drive-engine shall be a four-stroke, compression-ignited, with heat exchanger / radiator cooling system, turbocharged after cooled, diesel engine capable of meeting the rated output and duty of the generator set with 1500RPM as speed, compression ratio not exceeding 18.0:1. It should also be capable to operate without any external ventilation system.

e) The generator drive-engine shall be robust, durable with proven track record. It should be known for high reliability and durability.

Note:
The following documents, but not limited to them, shall be submitted along with the technical bid in support of the specified rating and output:

a) The technical data pertaining to the engine provided with the offer should be certified by the engine manufacturer.
b) Necessary certificate indicating the 24 hour average load factor and Time between Overhaul (TBO) for the engine for the specified output and duty from the engine/generator set manufacturer.
c) Engine BHP with Speed Diesel as per IS 1460: 2005 as engine fuel and at 1500RPM and 18:1 Compression Ratio or lower.
d) Calculation for determining the size of the engine generator set.
e) Engine and alternator should bear Name Plate revealing in it details of ratings published by the OEM of the engine and alternator. The details of ratings should match with the manufacturer's standard catalogue.

7.3 ALTERNATOR AND CONTROL PANEL and other electrical items:

(Refer Annexure II for Specification of Electrical Items)

8.0 CONSTRUCTION FEATURES

The specifications given hereunder are general in nature and shall be subject to the standard practice of the engine manufacturer. However, the ignition and governor with the engine shall be as per the given specification provided under in the respective subsection here under. Bidder / manufacturer

shall be responsible for providing diesel engine driven generating set as per standard practice with the specified technical requirements suitable for Emergency Standby Power (ESP) Operation.

8.1 DIESEL ENGINE:

(i) STARTING SYSTEM - Electrical start complete with batteries (lead acid type). The engine starting system shall include 24 volt DC starting motor(s), starter relay, and automatic reset circuit breaker to protect against butt engagement. Batteries shall be maintenance free, lead acid type mounted near the starting motor. Corrosion resistant or coated steel battery rack shall be provided for mounting. Required cables will be furnished and sized to satisfy circuit requirements.

(ii) CHARGING SYSTEM – As per Point no. (D) of Annexure II for Specification of Electrical Items.

(iii) AIR INTAKE SYSTEM - shall include dry type paper filters element, silencer and vacuum indicator for servicing air cleaner as per manufacturer standard. Maximum air intake restrictions with clean and choked filters should be within prescribed limit of the OEM/ manufacturer recommendation for the particular model of the engine. Air cleaners should be either medium or heavy as per manufacturer standard for gen set application.

(iv) LUBRICATION SYSTEM - lubrication system with lubrication oil filters with replaceable elements as per manufacturer standard. Necessary gear driven oil pump for lubricating oil, oil coolers, priming of engine bearing as per manufacturer recommendations.

(v) FUEL SYSTEM - Fuel system shall comprise of isolation valve, diesel filter, diesel tank besides other accessories etc. The capacity of the diesel tank should be such so as to run the engine for a min period of 24 hours without refill.

(vi) GOVERNOR STANDARDS –
(a) Engine: IS:10001/BS:5514
(b) Governing: Class A-1 specifications of IS: 10000 / BS: 5514.
Note: The engine speed shall be so maintained that frequency variation at constant load including no load shall remain within a band of 1% of rated frequency.

(vii) ENGINE EXHAUST SYSTEM
Exhaust system with smooth bends to create minimum back pressure, with suitable residential grade silencer (at optimum location) to reduce the noise level upto 75 dB and inbuilt Spark Arrestor. The silencer shall have an end inlet and end outlet with its horizontal tail end with 45 degree downward cut to avoid rain water entry or with rain cap vertical end. The exhaust flexible shall have it's free length when it is installed.

Exhaust piping shall be of MS pipe (Schedule B) conforming to relevant IS. The runs forming part of the factory assembly on the engine flexible connections upto the exhaust silencer shall be exclusive of exhaust piping item. 50mm thick loosely bound resin (LBR) mattress/mineral wool/Rockwool, density not less than 120kg/sq. meter and 0.6mm thick aluminium shall be used for cladding work. Load or stress should be prevented on the turbocharger.
(viii) COOLING SYSTEM - System should be designed for ambient temperature of 40 Deg C. It should have heat Exchanger - Radiator system for cooling.

(ix) ACCESSORIES: The engine shall be fitted with the following accessories subject to the design of the manufacturer:
a Engine over speed protection.
b Vibration dampers.
c Non sparking guard for coupling
d Dynamically balanced Flywheel
e Necessary flexible coupling and guard for alternator and engine

(x) INSTRUMENTATION & CONTROLS:
Engine shall be provided with the following instruments and controls for the efficient operation and safety. It shall be simple and easy to operate and maintain. All controls shall operate in fail- safe mode.
a Start/ Stop Switch
b Battery Charging Indication
c Lube oil pressure indication, alarm and shut down
d Low lub oil trip indication
e Water temperature indication
f High water temperature indication, alarm and shut down
g RPM indication
h Over-speed indication, alarm and shut down
i Engine hours indication

Engine control section: This section shall have:
Digital RPM meter -1 No.
Engine start/stop controls
Battery charger circuit
Emergency stop switch (mushroom head type)

The following engine conditions should give alarm indication:
a) Low lube oil pressure (low set point)
b) High water temp. (low set point)
c) Engine over speed (low set point)
d) Low battery voltage

In addition, engine should be stopped with the help of heavy-duty 24V D.C. fuel solenoid on following trip conditions.
a) Low lube oil pressure
b) High water temp.
c) Engine over speed

Indication of each of the trips shall be provided in the front multi-annunciation window of the Engine control section. Suitable relay/ timer arrangement shall be provided wherever required.
Push buttons shall be provided for:
(a) Accept fault
(b) Reset alarm
(c) Engine start/ stop
(d) Lamp test

Hooter/alarm to indicate Engine trip on fault
All indication/metering/controls shall be mounted in front of the panel.

8.2 ALTERNATOR AND CONTROL PANELS AND OTHER ELECTRICAL ITEMS.
i) Refer Annexure II for specification of electrical items.
ii) Note: Engine & Alternator shall be supplied with independent lifting hooks / eye bolts for safe Handling

9.0 ACOUSTIC ENCLOSURE
(Refer Annexure III for specification of Acoustic enclosure & Enclosure Illumination.)

10.0 SKID
Engine and Alternator shall be directly coupled or coupled by means of flex plate/flexible coupling as per manufacturer standard design and both units shall be mounted on a suitable designed common

bed plate together with all auxiliaries to ensure perfect alignment of engine and alternator with minimum vibrations. The bed plate shall be suitable for installation on suitable anti-vibration mounting system.

11.0 PAINTING & PACKING

i) Painting shall be done as per standard practice of manufacturer.
ii) The packing shall be roadworthy for transportation upto site, sufficiently robust to withstand rough handling.
iii) Boxes/packing cases containing electrical equipment shall be water proof lined.
iv) 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
v) All manuals, books, digital items (discs) shall be separately packed and contained in rigid plastic pouches.
vi) All manuals, drawings, documents and digital items of engine shall be packed in one separate container and the container shall be separately handed over to OIL at delivery of the Gen sets.

12.0 EQUIPMENT DATA SHEET AND NAME PLATE

(i) EQUIPMENT DATA SHEET
(Refer Annexure IV for details of data sought)
(ii) NAME PLATE
The following data shall be engraved on the name plate:
(iii) Diesel Engine:
Manufacture's Name, Model, Sl. No. & Year of Manufacture, Rated BHP, Rated RPM, Weight In Kg., OIL's Purchase Order No.
(iv) Alternator:
Manufacturer's Name, Sl. No: Type & Frame Ref, Rated Output in kVA & kW, Type of Duty, Rated Power Factor, Frequency, Rated Voltage, No: of Phases & Type of Connection, Rated Speed (RPM), Class of Insulation, Excitation Current & Voltage at Rated Out Put, Year of Manufacture &, Weight in Kg., OIL's Purchase Order No.

13.0 PARTS FOR TWO YEAR OPERATION AND MAINTENANCE:

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.

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 & indicated separately 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. AVR Unit for Alternator- One no. per Gen Set
   ii. Rotating rectifier assembly fitted with complete set of forward and reverse diodes- One set per Gen set
   iii. ACB/MCCB complete with trip unit, coils etc as fitted inside generator control panel. This ACB/MCCB shall be tested by installation inside the control panel during commissioning of the set.

A list of such spare parts along with description and part number and quantity shall be submitted along with the technical bid. Any other spares, consumables required for the commissioning operation

shall also be supplied. Engine lubricating oil as recommended by the engine manufacturer, shall be provided for use during the installation and commissioning run.

14.0 SUBMITTALS

14.1 Documents for submission along with the technical bid -
The following document shall be submitted along with the technical bid:
i) GA drawing of Generator Set and Control Panel.
ii) Engine data Sheet
iii) Sizing of the engine generator set. Furnish calculation of Engine BHP for matching with alternator capacity. Calculation should be approved by the Gen Set manufacturer.
iv) Acoustic Enclosure Dimensions indicating height etc.
v) Exhaust piping arrangement including height of exhaust.
vi) Transient response of frequency and voltage for the generator set.
vii) Auxiliary Equipment - Specification or data sheets, including switchgear, spring type vibration isolators.
viii) Drawings - General dimensions drawings showing overall generator set measurements, mounting location, and interconnect points for load leads, fuel, exhaust, cooling and drain lines
ix) Wiring Diagrams - Wiring diagrams, schematics and control panel outline drawings published by the manufacturer for use by owner.
x) Warranty Statements - Warranty verification published by the manufacturer.
xi) Service - Location and description of supplier's parts and service facility including parts inventory and number of qualified generator set service personnel.

14.2 Documents for submission before the pre-dispatch inspection:
Two copies of the Integrated Operation & Maintenance Manual for the complete Generator Set including operating instructions with description and illustration of all switch gear controls & indicators, all generator controls and all engine controls

14.3 Drawing / Documents to be furnished on completion of installation:
Three sets of the following laminated drawings shall be submitted by the supplier while handing over the generator set to OIL. One set shall be laminated on a hard base for display in the generator set room/room where the panel is installed and another set shall be displayed in JE's room. In addition, drawings will be given on Compact Disc (CD):
a) Generator set installation drawings giving complete details of all the equipments, including their foundations.
b) Line diagram and layout of all electrical control panels giving switchgear ratings and their disposition, cable feeder sizes and their layout.
c) Control wiring drawings.
d) Manufacturer's technical catalogues of all equipment and accessories
e) Operation and maintenance Manual of all major equipments, detailing all adjustments, operation and maintenance procedure.
f) Integrated Operation & Maintenance Manual for the complete Generator Set including operating instructions with description and illustration of all switch gear controls & indicators, all generator controls and all engine controls. Quantity to be supplied: One per Gen set
g) Engine Shop Manual (Engine Rebuilding Manual). Quantity to be supplied: Two with this order.
h) Parts Books - that illustrates and list all assemblies, subassemblies and components, except standard fastening hardware (nuts, bolts, washers, etc.). Quantity to be supplied: Two with this order.
i) Routine Test Procedures - for all electronic and electrical circuits and for the main AC generator. Quantity to be supplied: One per Gen set
j) Troubleshooting Chart - covering the complete generator set showing description of trouble, probable cause and suggested remedy. Quantity to be supplied: One per Gen set
k) Wiring Diagrams and Schematics - showing function of all electrical components. Quantity to be supplied: One per Gen set
l) Alternator Operation, Maintenance & Spare Part Manual. Quantity to be supplied: One per Gen set

m) Generator Set Test Certificate.
n) Alternator Test Certificate.
o) Certificate that the item has been designed, manufactured and tested conforming to the requirements & specifications
p) Warranty Certificate

15.0 INSPECTION AND TESTING

OIL as purchaser shall have right to carry out stage inspection and shop visit to review the manufacturing progress but such inspection shall not relieve the bidder of his responsibility to ensure that the equipment supplied is free from all manufacturing and other defects and conform to correct specifications. The bidder/manufacturer shall be notified in advance, if it is intended to inspect plant or material. However, manufacturer need not hold any manufacturing activity for witness of purchaser's stage inspection.

15.1 PREDELIVERY INSPECTION

i) Pre-delivery inspection shall be performed by OIL to insure all generating set components, controls, and switchgear are included as specified herein, free from any defects and carry full load prior to delivery and acceptance. The testing of the Gen Sets shall necessarily be carried out at factory/ manufacturer premises in presence of representatives of OIL. The manufacturer or its representative shall give a notice in advance of minimum four weeks for carrying out pre-delivery inspection and shall arrange staff/fuel/POL and any other consumables for test run at his cost. OIL shall witness such inspection & testing at mutually agreed date and will bear the cost of its inspection visit to the factory.

ii) All major items/ equipments i.e. engine, alternator and associated electrical control panels etc. shall be offered for inspection and testing assembled as unit.
iii) Gen Sets will be tested on load banks for the rated KW rating. Testing shall be for a minimum of 1 hour at 80% load, 1 hr. at 100% load, 1 hr. at 110% load.

iv) During testing all controls/ operations safeties will be checked and proper record will be maintained by the manufacturer's representative. Any defect/ abnormality noticed during testing shall be rectified. The testing will be declared successful only when no abnormality/ failure are noticed during the testing.

v) Any defects which become evident during the test shall be corrected by the bidder at his own expense prior to shipment to the jobsite.

vi) The Gen set will be cleared for dispatch to site only when the testing is declared successful by OIL.

vii) A copy of the test results shall be submitted to the OIL at the end of the inspection. Test results shall show manufacturer's tolerances as well as actual parameters recorded.

15.2 DISPATCH/SHIPMENT TO SITE: The items shall be dispatched only after OIL's satisfactory inspection and advice.

16.0 INSTALLATION AND COMMISSIONING AT SITE

(For installation and commissioning of electrical items refer to Annexure II)

i) Installation and Commissioning of the generating set complete with control panel shall be carried out by the bidder in the presence of OIL representatives at **sites at Oil India Limited, Moran – 785669, Assam(India).**
ii) Installation / commissioning charges should be quoted separately which shall be considered for evaluation of the offers. These charges should included amongst others to and from fares, boarding/ lodging and other expenses of the service personnel during their stay at Moran, Assam (India). All

Personal, Income and Service Tax etc. towards the services provided by the bidder shall be borne by the bidder and will be deducted at source by OIL
iii) Bidders should also confirm about installation/ commissioning in the Technical Bid.
iv) The representative shall provide list of tools and equipment available with the manufacturer to carry-out the installation and commissioning work. All the safety gadgets required for safe work shall be provided by the bidder. Any appliances, apparatus and labor etc. necessary for the tests shall have to be provided by the bidder at his cost.
v) The bidder shall be responsible for safety of its personnel and equipment during the commissioning work.
vi) During the installation & commissioning job, the bidder shall strictly ensure that all the cut ends of cables, packing materials, leftover items are removed from site after completion of work. No environmental damage shall be done while carrying out the job.
vii) Any special/ specific item required for commissioning job shall be provided by the bidder.

17.0 TRIAL RUN/RUN-IN PERIOD:

After installation and successful testing of the generator set site, a trial run at available load will be carried out for 72 hours. The generator set will be operated and a log of all relevant parameters will be maintained during this period. The supplier is free to carry out necessary adjustments. The generator set will be said to have successfully completed the trail run, if no breakdown or abnormal /unsatisfactory operation of any component of the entire generator set complete included in the scope of supply, occurs during this period. After this the generator set will be made available for beneficial use. After the gen set has operated without any major breakdown/trouble, it shall be taken over by OIL subject to guarantee/warrantee clause of the tender. This date of taking over of the generator set, after trouble free operation during the trial run/running -in period, shall be the date of acceptance /taking over.

18.0 SERVICE AND WARRANTY

i) The supplier shall ensure adequate and prompt after sales service free of cost during guarantee period, and against payment after the guarantee period is over, in the form of maintenance, spares and personnel as and when required during normal life span of the equipments and shall minimize the breakdown period. In case of equipment supplied by other manufacturers the supplier shall furnish a guarantee/warrantee from the manufacturer for the same before the generator set is taken over.

ii) The nature of after sales service, which can be provided by the bidder, during initial erection and commissioning as also subsequent operation should be clearly stated in the quotation.

iii) The manufacturer shall have a local authorized dealer who can provide factory trained servicemen, the required stock of replacement parts, technical assistance, and warranty administration.

iv) The manufacturer's authorized dealer shall have sufficient parts inventory to maintain over the counter availability of at least 90% of any normal wear and tear parts. (Belts, hoses, filters, turbines, pumps, safeties, fuel injectors, gaskets)

vi) The manufacturer's authorized dealer shall have factory trained service representatives and tooling necessary to install and commission all provided equipment.

vii) 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.

viii) The warranty coverage shall include repair parts, labor, travel expense necessary for repairs at the jobsite, and expendables (lubricating oil, filters and other service items made unusable by the defect) used during the course of repair or any defects in the engine or alternator during warranty period shall be replaced by the party at his cost without any extra charge to OIL.

ix) Running hours shall not be a limiting factor for the warranty coverage by either the manufacturer or the authorized dealer.

x) Offer received without written warranties as specified will be rejected in their entirety.

19.0 GENERAL NOTES TO TECHNICAL SPECIFICATION

a) The offer will not be acceptable if the bidder do not quote for all items of the tender, supply, installation, commissioning of all items
b) In their offer the bidder must mention their detailed comments point-wise against each point of tender specifications. Any deviation from the tender specification shall be specifically mentioned. Specific type and make of equipment should be mentioned. All the information required as per tender specifications must be submitted.
c) The bidders shall provide overall dimensions of the Gen set, Acoustic Enclosure and foundation/installation diagram of the Gen set.
d) In the event of order, the supplier shall submit to OIL within one month of placement of order all documents and drawings as required against each item.
e) The manufacture of the equipment is to be started only after written approval of the drawings / documents by OIL as mentioned in tender against all equipment.
f) Bidder must confirm in the Technical Bid that the major equipment such as Diesel Engine and Alternator shall have manufacturer's Test Report and Warranty Certificate and the same shall be provided during inspection of the Generator set by OIL.

20.0 ANNEXURE II: SPECIFICATION OF ELECTRICAL ITEMS

(Refer tender Attachment for Annexure II)

21.0 ANNEXURE III: SPECIFICATION OF ACOUSTIC ENCLOSURE

(Refer tender Attachment for Annexure III)

22.0 ANNEXURE-IV EQUIPMENT DATA SHEET

(Refer tender Attachment for Annexure IV)

23.0 ANNEXURE-V TECHNICAL CHECK LIST (FOR BIDDER)

(Refer tender Attachment for Annexure V)

----------End of Text----------

20.0 ANNEXURE II: SPECIFICATION OF ELECTRICAL ITEMS

A. ALTERNATOR:

1. Make: KIRLOSKAR/NGEF/STAMFORD/CROMPTONGREAVES/CATERPILLAR/KATO /GENERAL ELECTRIC USA
2. Rated Output : Within 330kVA to 365kVA at 0.8 PF at specified ambient conditions for utility and motor loads.
3. Rated Voltage : 415 Volts ± 5%
4. Armature Winding : 3 Phase, 4 wire type
5. Rated Frequency : 50 Hz ± 3%
6. Rated power factor : 0.8 lagging
7. Class of insulation : Class F/H but temp rise limited to class B
8. RPM : As per engine rated speed
9. Phase sequence: RYB - 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 required
12. Alternators Enclosure Protection : IP 23
13. Alternators Terminal Box Protection: IP 54
14. Excitation system: Brush less, self excited, self Regulated with solid state AVR. Voltage characteristics- VG3 as per Table-1, IS-13364 (Part-2)
15. 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.
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(P-2)
19. Waveform deviation: As per IS-13364 (Part-2)
20. Unbalanced current: As per IS-13364 (Part-2)
21. Short circuit current: As per IS-13364 (Part-2)
22. Cooling: Air cooled by integral fan
23. All windings should be made from electrolytic grade copper of high purity.
24. The alternator shaft shall be supported on rolling element bearings at NDE or at both DE/NDE.
25. Voltage swing (Transient response): As per IS-13364 (Part-2).
26. The alternator should be capable of sustaining a 10 % over load for one hour in any 12 hours operation.
27. Total voltage harmonic distortion should be less than 3 % between phases at no load.
28. The alternator should be capable of withstanding 1.2 times the rated speed for two minutes without any damage.
29. 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.
30. The alternator terminal box should be of suitable size and should be suitable for terminating power cables of alternator.
31. 2 nos. of earth points are to be provided on both sides of the alternator.
32. Lifting hooks are to be provided for lifting the alternator.
33. 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.

34. Alternator windings and AVR should be suitable for humid atmosphere as per ambient conditions mentioned in the enquiry.
35. Alternator frame and enclosure shall be made from MS or Cast steel.
36. The permissible vibration of the alternator shall be as per IS-12075.
37. The alternator shall conform to the following standards: Latest publications of all IS Standards shall be referred.
    a) IS: 12065 Noise limit
    b) IS: 12075 Vibration
    c) (iii) IS: 4691 Enclosure Protection
    d) (iv) IS: 6362 Cooling
    e) (v) IS: 2253 Mounting
    f) (vi) IS: 13364 Specification of Alternator coupled with IC Engines

B. Generator Control panel :

A separate control panel shall be provided for mounting of generator circuit breaker, switches/relays, metering, control and protection devices. The detailed description of the panel is as follows.

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 of channels, 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, double earthing studs on two sides, complete with suitably sized zinc passivated hard wares 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. 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 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. Provision shall be made in the bottom channel for grouting of the panel.

The panel should broadly have the following compartments/sections.

1. Generator Breaker: 800A 4 pole TPN MCCB or ACB, draw out type, breaking capacity minimum 50kA with adjustable OL protection from 0.4 X In. The Generator Breaker (MCCB or ACB) should have all standard protection features integrated into it, including short circuit, earth fault, overload etc. The Generator Breaker (MCCB or ACB) should trip on (a) Over load, short circuit and earth fault- Tripping from internal trip unit, (b) Over/under voltage & Over/under Frequency- From voltage and frequency relays, (c) Engine fault (Low lube oil, high water temp, over speed etc.)- Trip contact from engine protection system.

Incoming and outgoing power cables shall terminate on electrolytic grade, high conductivity electro-tinned copper links / spreader bars / bus bars liberally sized for termination of all power cables. Two nos. outgoing power cables of 3.5 X 240 sq.mm, 1100V grade, stranded, aluminium cable shall be used for termination at outgoing terminals of the breaker. Neutral bar shall also have provision for connection of lead for neutral earth.

2. Generator Protection Section: This section shall have protection features for the generator and the engine. The generator breaker should trip or alarm annunciated on the following faults: (a) Over load, short circuit and earth fault- Tripping from generator protection relay, (b) Low and

high Engine Speed- Trip signal from engine protection system, (c) Over and under voltage- Trip signal from generator protection relay, (d) Generator winding, bearing over temperature- Trip signal from generator protection relay, (d) Engine fault (Low lube oil, high water temp, over speed)- Trip signal from engine protection system

Components of the protection system: (a) Built-in long time overload, short time fault, instantaneous short circuit, earth fault protections- in the MCCB / ACB, (b) 1No. Microprocessor based 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 Schneider/ Sepam Series 40 of Merlin Gerin/ Siprotec Compact 7SJ80 of Siemens, (c) For above, Bar Primary Resin Cast CT of 1000/5 ratio, min 15 VA burden, class-1, conforming to IS 2705. No. of CTs as per circuit requirement. Make: AEI/ kappa / Conzerv/ L&T

3. Generator Control Section : This section shall have the followings :

3.1 Meters:

(i) 1 No. Three phase analog Voltmeter with selector switch, Size- 96x96 mm, Class of accuracy 0.5, 0 - 500 V, Auxiliary power supply -230VAC (Make: AE I/ Conzerv/ L&T).

(ii) 1 No. Three phase analog ammeter with selector switch, Size- 96x 96mm sq. mm, 0-800 Amps, C.T. operated , Auxiliary power supply 230V AC, class of accuracy -0.5 (Make: AEI/ Conzerv/ L&T)

(iii) 1 No. Digital DC Voltmeter, Size- 96x96 mm, Class of accuracy 0.5, 0 - 50 V

(iv) 1 No. Digital frequency meter, scaled 0-100 Hz, suitable for 240 V AC operation, (Make: AEI / Conzerv / L&T)

(v) 1 No. Multifunction meter (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)/ Conzerv (Model EM 6600).

(vi) 1 No. Hour meter to record running hours of the genset.
CT - Bar Primary Resin Cast CT of 600/5 ratio, 15 VA burden, class-1, conforming to IS 2705. No of CTs as per circuit requirement. Make of CT: AEI/ kappa / L&T Suitably rated CTs, CT ratio 200/5, class I for ammeter, kW meter and PF meter (Make: Kappa / Conzerv/ L&T.)

All meters shall be mounted in front of the panel.

3.2 Indications: Indications for the following are to be provided:

(i) Engine running
(ii) Power supply on for R, Y &B phases
(iii) Trip circuit healthy
(iv) Electrical fault (From aux contact of trip unit of ACB / MCCB)
(v) Over/under voltage
(vi) Over/under frequency
(vii) Engine fault
(viii) Set on load

(ix) Over temp. for bearing and winding
(x) Battery charger ON
(xi) Any other indication as per OEM

All indication lamps shall be of LED type (Make: Binay/ Technic/ L&T) and shall be mounted in front of the panel.

Push buttons for acknowledging/ resetting alarms, checking healthiness of trip circuits etc. shall also be provided.

3.3 Fuses: 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-Bussman/GE)

All meters, indication lamps shall be protected by adequate nos. of HRC instrument fuses of suitable rating.

3.4 Auxiliary relays: Auxiliary Relays /Contactors will be provided as per requirement of the control circuits. (Make: Siemens/ Telemecanique /ABB/BCH/L&T/Indo-Asian).All relays should have 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.

C. AMF Panel:

The package shall comprise of AMF panel along with Main Control & Protection Panel.

1. Auto mode: This shall be effective in Auto position of AUTO / MANUAL Selector switch located in Main control and protection panel. The diesel generator set will normally be at rest. Upon failure of plant normal power supply, an impulse will be extended. The impulse shall be normally from an under voltage relay. Upon receipt of this impulse, DG Set shall be started automatically and brought to rated speed and generator voltage brought to rated value. All accessories required for starting and completion of various sequences of operation for the above purpose shall be provided. In case the DG fails to start and run up on first attempt the engine cranking shall be repeated two more times. When engine does not respond to three impulses, it shall be locked out and alarm given. Immediately after the diesel set reaches rated speed and generator reaches rated voltage, a Voltage and frequency monitoring relay located in Main Control and protection panel shall extend an impulse for closing generator breaker.

2. Manual / Test Mode: In this mode of operation, the operator shall manually start the DG set. Facility for manually starting the diesel generator set for routine testing shall be provided. This shall be done by putting the AUTO / MANUAL Selector switch in Manual Position. Routine testing would be done putting selected load on the DG set.

3. Starting time: The total time from the receipt of starting impulse for diesel generator set till the diesel generator set reaches rated speed and rated voltage shall not be more than 10 seconds.

D. Starting System & Battery Charger:

Electrical starting system complete with batteries & battery charger shall be provided for the DG Set. The engine starting system shall include 24 volt DC starting motors, starting relay, automatic reset circuit breaker to protect against butt engagement etc.

1. Batteries shall be of 24 V lead acid battery (SMF) / bank of adequate ampere hour capacity (at 10 hours discharge rate for supplying control power to control panel and starting power to engine starting motor) complete with connecting leads first charging and routine check, instruments including hydrometer and cell tester, teak wood stand, floor insulators, cell supporting insulators, etc. It shall be possible to start the engine three times in immediate succession without appreciable drop in DC Voltage. The battery shall have a sufficient capacity to start the engine more than 4 times consecutively.

2. One suitable Battery Charger with float cum boost charging facility independent of engine running shall be provided. Since DG set will remain mostly in standby mode, power supply to the charger shall be from normal station power supply. Suitable changeover switch shall be provided for putting either of the battery set on charging.

E. DOCUMENTS

1. The following Documents / drawings shall be submitted with the offer
i) GA and schematic drawings of alternator and control panel
ii) Technical literature of alternator
iii) Confirmation that the party agrees to all the points mentioned under electrical specification of generating set. 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. Equivalent make shall not be acceptable. The bidder shall 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 within 30 days of placement of order.
i) GA drawing
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 the generator.
iii) Detailed power & control wiring diagram, detail enclosure drawings for control panel, COS, 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) CPRI test certificate for bus bar fault level and temperature rise

3. Three sets of following as built documents per gen set 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.

F. ELECTRICAL SPARES

Following spares shall be supplied by the party along with the complete package for the Gen set and their cost shall be included in the total package cost. However, Cost of these spares shall be indicated separately in the cost breakup.
1. AVR Unit for Alternator- One no. per Gen Set
2. Rotating rectifier assembly fitted with complete set of forward and reverse diodes- One set per Gen set
3. ACB/MCCB complete with trip unit, coils etc as fitted inside generator control panel. This ACB/MCCB shall be tested by installation inside the control panel during commissioning of the set.

G. INSPECTION AND TESTING FOR ALTERNATOR AND CONTROL PANEL INCLUDING MCC PANEL, IF PROVIDED

All the routine tests as per IS and load tests of the alternator and the control panel shall be witnessed by OIL's Engineer at respective manufacturer's works. 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. Overload test
8. Measurement of open circuit and short circuit characteristics

Intimation for inspection for each item must be sent to OIL at least 15 days in advance.

Any modification suggested during inspection, to comply with order specs, shall be carried out by supplier at no additional cost. Supplier shall affect dispatch of the unit to OIL, Moran only on receipt of OIL's dispatch advice.

H. COMMISSIONING OF ELECTRICAL PART OF THE UNIT

1. Installation and Commissioning of the generating sets, control panels, MCC shall be carried out by the supplier in the presence of OIL representatives at OIL Moran, Assam (India) as per IS & CEA Regulations 2010 and as per manufacturer's commissioning manual. All installation work shall be carried out by licensed electricians under the supervision of a licensed supervisor. Services of qualified and competent personnel from equipment manufacturer are essential during commissioning of the generating sets. All tools, instruments, hand tools required for the installation and commissioning work shall be brought by party. The instruments shall be

calibrated and the calibration should be valid at the time of commissioning. Operational tests of all devises, their settings, shall also be carried out during commissioning job by the supplier. Commissioning manual and formats for recording all tests on various equipment and units shall be sent to OIL along with the unit.

2. All outside (outside of the enclosure) earthing jobs, supply of earthing cables (external earthing, as described in the "I: Earthing" clause), earthing terminations with lugs, glands, fasteners, hardware (with supply of these materials), making of earth pits and brick enclosure at field site for gen set and control panel shall be done by party, as advised and approved by OIL.
3. All protective devices, circuit breakers, protective relays (secondary injection test of generator protection relay), equipment shall be tested for proper operation and setting done during commissioning by the commissioning engineer. The commissioning engineer should possess valid electrical supervisor license issued by licensing board, Assam.

4. The Gen set will be treated as successfully commissioned from electrical side after successful load test (reliability run) of the unit at OIL's field site as per details given in Para 14 and 16 of the detailed description.

I. EARTHING:

i) The earthing scheme for the unit should be as per IS-3043.
ii) Two nos. 50x6mm GI straps shall be suitably fixed inside the unit near the floor. These will serve as earth bus. 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 single core copper cables to both the straps with independent connections at separate points. The neutral of the alternator will be connected to a neutral grounding resistor unit, placed outside the enclosure (high resistance grounding-not included in the scope of this unit). The other end of the NGR shall be connected to external earth pit through a separate cable. Suitable provision is required in the panel base plate for safe entry of neutral earth cable. Neutral earth cable from alternator neutral point to external NGR (neutral grounding resistance unit) of approximately 10.0 m length shall be supplied by the party.

Heavy duty PVC insulated, PVC sheathed, flexible, single core, ISI approved copper cables of various sizes (as per IS: 3043) shall be used for all earthing jobs. The earthing cables are 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 ISI approved heavy duty galvanized, flexible conduit. Make: Finolex/ Havells/ L&T/reputed brand for earthing cable.

iii) Both the GI straps shall extend up to the back side of the enclosure. Each strap will have one no. of zinc coated terminal stud of 10mm dia provided at end of the straps for connection to external earth. Two nos. of earthing cables of size & type as mentioned in point no. (ii) above and of individual length of 10.0 mtr shall be supplied and connected to these two straps for external earthing. The neutral earthing lead from the NGR unit as mentioned in point no. (ii) above shall also be brought outside the enclosure for earthing of neutral separately. The free ends of these three cables shall be crimped with heavy duty, tinned copper tubular lugs and marked with ferrules for connection to external earth pits. Suitable opening with rubber bush shall be provided in the rear side of the unit to facilitate the entry of outgoing power cable and earth leads.

(iv) Separate MCC panel for auxiliary motors, if provided, shall also be earthed in a similar manner to external earth electrodes used for the skid earthing.
NGR earth electrode shall not be used for earth connection to other equipment earthing.

J. GUARANTEE

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

----------End of Text----------

21.0 ANNEXURE III: SPECIFICATION OF ACOUSTIC ENCLOSURE

21.1 Acoustic Enclosure:

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.

a. 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.

b. 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].

c. 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.

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

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

f. 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.

g. 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.

h. The acoustic enclosure with skid should also incorporate:
   i. Locking arrangement(Provision for fitting external lock and key)
   ii. Draining arrangement for fuel and lubeoil.
   iii. Lifting arrangement for entire skid/genset with enclosure.
   iv. Air breather.
   v. Hood for rain protection

vi. Emergency stop button
vii. Panel meter viewing window

21.2 SERVICE ACCESSIBILITY:

Genset /engine control panel should be visible from outside the enclosure.
a) Routine/periodical check on engine/alternator (filter replacement and tappet setting etc) should be possible without dismantling acoustic enclosure.
b) For major repairs/overhaul, it may be required to dismantle the acoustic enclosure.
c) Sufficient space should be available around the genset for inspection and service.

21.3 ENCLOSURE ILLUMINATION:

Acoustic Enclosure Part:
A separate circuit shall be provided for lighting of the acoustic part of the enclosure. There shall be minimum 3 nos. flameproof/increased safety FTL/Bulk head glass fittings, with fluorescent 14 watt/160 watt MLL Lamp, Material- LM6, 230VAC, 50 HZ, IP-55, Lamp holder Porcelain ES-27, fitted on wall or roof of enclosure with control from non acoustic part of the enclosure. 3x2.5 sq mm stranded copper conductor, PVC insulated, PVC sheathed, 1100v grade, heavy duty, armoured cable and FLP cable glands should be used for wiring purpose inside the acoustic enclosure.
Make of Luminaire: Philips/Baliga/FCG/Sudhir
Light 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.
Make: Legrand/ Merlin-Gerin/reputed brand for MCB

Non Acoustic Enclosure Part:

A separate circuit shall be provided for lighting of NON acoustic part of enclosure. Power for the lighting circuit shall be taken from the incoming switch in the control panel through backup HRC fuse & neutral link of 16 Amp rating. Non-acoustic enclosure shall have 2(Two) nos. of 1x18 Watt Tube light luminaires suspended with rigid supports from the roof or wall. These luminaires shall be wired with heavy duty PVC insulated, PVC sheathed, armoured, 3x 2.5sqmm stranded copper cables. Lights should be switched from individual 6 Amp, C curve, MCBs, mounted on the front cover of the control panel. 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.
Make of Luminaire: Philips
Make of Metallic plug & socket: Legrand / Merlin Gerin
Make of MCB: Legrand / Merlin Gerin/reputed brand

NOTE:
(i) Bidders should submit layout drawing of the acoustic enclosure indicating positions of engine, alternator etc along with the wiring diagram of the package and will have to be approved by OIL before execution of the order.
(ii) Enclosure design should be such that for any major maintenance activities the enclosures from any side can be easily dismantled and re-erected.
(iii) Generating set comprising of Engine, Alternator, 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.
(v) A panel viewing window should be provided to facilitate visual monitoring of the equipment from outside.

----------End of Text----------

23.0 ANNEXURE-IV EQUIPMENT DATA SHEET

The following equipment data shall be furnished by the bidder for submission along with the technical bid:

Sl. No	Description of Data sought	DATA	Remarks(if any)
	GENERATOR SET		
1	Typical Maximum Emergency Standby Power Rating at 50Hz(0.8 P.F.),kW:		
2	Output Voltage and Frequency:		
3	Power Factor:		
4	No. of Phases:		
5	Over all Dimensions, MM:		
6	Dry Weight:		
7	Fuel consumption at standard conditions for: 50%, 75% and 100% load		
8	Exhaust gas components; % NOX, % SO, Tons particulate/yr/mo at 50%, 100% load		
9	Verification of 10% overload capability		
	ENGINE		
1	Type/Model:		
2	No. of cylinders:		
3	Aspiration:		
4	Bore:		
5	Stroke:		
6	Displacement, Liter:		
7	Engine Output Prime, kWm(Max):		
8	Piston Speed, m/s:		
9	Brake Mean Effective Pressure(BMEP), kPa:		
10	Engine Rating(BHP) at 1500RPM and Piston Compression Ratio:		
11	HSD Consumption: L/ Hr.		
12	Exhaust Temperature(Stack)^{0}C		
13	Energy Input, kW:		
14	Energy Output, kW:		
15	Exhaust Gas Flow, Liter/sec:		
16	Exhaust System Permissible Back Pressure, mm Hg:		
17	Engine Water Flow, Liter/Min:		
18	Engine Dimension, LxBxH:		
19	Governing system		
20	Type of governor		
21	Accuracy		
22	Engine protection details		
23	Method of starting		
	RADIATOR		
1	Model/Type		
2	Coolant Capacity		
3	Horse power required to run the radiator fan		
	ALTERNATOR		

1	Make's name		
2	Rated kva		
3	Power factor		
4	Rated voltage		
5	Rated current		
6	Speed in rpm		
7	Frequency		
8	No. Of phase		
9	Over load capacity		
10	Class Of insulation		
11	Type of enclosure		
12	Voltage regulation		
13	Direction of rotation		
14	Type of bearing		
15	RTD's provided (no)		
16	Model		
17	Frame		
18	Insulation class		
19	Number of Leads		
20	Weight, total		
21	Weight, rotor		
22	Air Flow		
23	At rated voltage:		
24	Efficiency at 0.8 power factor for: 50% load, 75% load, 100% load		
25	Fault current, 3 phase symmetrical		
26	Decrement curve		

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ANNEXURE- V of Tender no. SKI 8862 P19/03

24.0 TECHNICAL CHECK LIST (FOR BIDDER):

The following checklist must be completed and returned with the offer. Please ensure that all these points are covered in your offer. These will ensure that your offer is properly evaluated. Please tick mark #Yes# or #No# to the following question, in the right

Sl. No.	Check List item	YES/NO
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 Assembler (Gen Set Manufacturer) and whether documentary evidences submitted?	YES/NO
5	Whether After-sale Service Center for the engine offered located in India?	YES/NO
6	Whether clauses of the technical bid is responded clause-wise	YES/NO
7	Whether deviation (if any) from the technical specification are highlighted clause wise?	YES/NO
8	Whether detail specification of engine with manufacturer's technical literature/catalogue enclosed?	YES/NO
9	Whether detail specification of Alternator with manufacturer's technical literature/catalogue enclosed?	YES/NO
10	Whether test certificate of Alternator and Control Panel will be submitted?	YES/NO
11	Whether power and Wiring diagram of Alternator Control Panel submitted?	YES/NO
12	Whether bill of Materials of Control Panel submitted?	YES/NO
13	Whether confirmed that control panel drawing shall be approved by OIL before manufacturing in the event of placement of order?	YES/NO
14	Whether offered engine is as per NIT specifications?	YES/NO
15	Whether quoted for supply, installation, commissioning & Test run at site of generator set?	YES/NO
16	Whether the Generator Set is rated in the range 330kVA – 365 kVA at 0.8PF, 415Volts AC 3 Phase 50Hertz Emergency Standby Duty?	YES/NO
17	Whether the engine and the Gen set design is as per ISO 3046/BS5514/IS10000/ISO8528 standards?	YES/NO
18	Whether documentary evidences i.e. (i) Purchase Order Copies, (ii) Invoices, (iii) Satisfactory supply completion / Installation report for the supplies made against the past three orders for diesel engine driven generator sets submitted with the technical bid?	YES/NO
19	Whether information pertaining to past three orders(Purchase order) for gas engine driven generator sets submitted in tabular format with the following details?: (i) Purchase order No. with Order Date (ii) Order Quantity with capacity of Generator Set (iii) Make and Model of the engine and (iv) Customer Name with address and contact no. to whom the supplies was made.	YES/NO
20	Whether satisfactory performance report of the offered engine model in generator set application in oil/gas field application with onsite field gas as	YES/NO

	fuel and cumulative running hours logged by the engine with purchase order copy, invoice submitted with the technical bid?	
21	Whether undertaking and confirmation from OEM that the equipment to be supplied are not going to become obsolete for the next 10 years and whether spare parts for 10 years shall continued to be supplied at the least?	YES/NO
22	Whether undertaking from the engine OEM certifying the rated output vis-a-vis compression ratio and RPM of the engine submitted with the technical bid?	YES/NO
23	Whether undertaking from the engine manufacturer in support of the engine rating and output is submitted?	YES/NO
24	Whether two sets of Composite Operation Manual for the Generator Set Complete and Trouble Shooting Chart shall be supplied along with the Order?	YES/NO
25	Engine Shop Manual (Engine Rebuilding Manual) and Parts Manual shall be supplied with the Order?	YES/NO
26	Whether spare parts of engine for two years operation and maintenance will be supplied along with the order and list of such spares submitted with the technical bid?	YES/NO
27	Whether the content of this Check List is read and responded?	YES/NO

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