



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

TELEPHONE NO. (033) 22301657

FAX NO: (033) 22302596

Email: oilcalmn@oilindia.in

FORWARDING LETTER

Tender No & Date : **SKI 6019P15 DATE 21.01.2015**

Tender Fee : **Rs 1,000.00**

Bid Security Amount : **Rs 156,000.00**

Bidding Type : **SINGLE STAGE TWO BID SYSTEM**

Bid Closing on : As mentioned in the Basic Data of e-portal

Bid Opening on : As mentioned in the Basic Data of e-portal

Performance Guarantee : Applicable

Integrity Pact : Applicable

Delivery Required : **At DULIAJAN, ASSAM**

OIL invites Bids for Diesel Engine Driven Generating Sets **as per Annexure II** through its E-Procurement site. The bidding documents and other terms and conditions are available at Booklet No. MM/CALCUTTA/E-01/2010. The prescribed Bid Forms for submission of bids are available in the Technical RFx -> External Area -> Tender Documents.

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

The tender is invited with firm price for the specified quantity. Further details of tender are given below:-

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

SLNO & MATERIAL CODE	MATERIAL DESCRIPTION.	QUANTITY	UNIT
10 ----- 0C000242	Diesel Engine Driven Generating Set 63 KVA	12	NO.
20	Installation & Commissioning	12	AU

The tender will be governed by:

- “General Terms & Conditions” for e-Procurement as per Booklet NO. MM/CALCUTTA/E-01/2010 for E-procurement (LCB Tenders).
- Technical specifications with BEC/BRC as per **ANNEXURE II**.
- The prescribed Bid Forms for submission of bids are available in the Technical RFx -> External Area -> Tender Documents.
- In the event of receipt of only a single offer against the tender within B.C. date, OIL reserves the right to extend the B.C. date as deemed fit by the Company. During the extended period, the bidders who have already submitted the bids on or before the original B.C. date, shall not be permitted to revise their quotation.
- 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).
- Bidder are advised to fill up the Technical bid **CHECK LIST** and **RESPONSE SHEET** given in MS excel format in Technical RFx -> External Area -> Tender Documents. The above filled up document to be uploaded in the **Technical RFx** Response.

g) Integrity Pact :

OIL shall be entering into an Integrity Pact with the bidders as per format enclosed vide **Annexure V** of the tender document. This Integrity Pact proforma has been duly signed digitally by OIL's competent signatory. The proforma has to be returned by the bidder (along with the technical bid) duly signed (digitally) by the same signatory who signed the bid, i.e. who is duly authorized to sign the bid. In the event bidder declines to submit the integrity pact, their offer shall be rejected straightaway.

Uploading the Integrity Pact with digital signature will be construed that all pages of the Integrity Pact has been signed by the bidder's authorized signatory who sign the Bid

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

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

Special Note:

- 1.0 General Qualification Criteria:
In addition to the general BRC/BEC, following criteria on Bidders' Experience and their financial capabilities shall be considered (documentary evidence to be provided along with the bid in Technical RFx -> External Area -> Tender Documents as on the Bid Closing Date:
 - a) **Bidder should have experience of successfully executing similar order for at least **Rs 46.62 Lakhs** during last 3 years as on the Bid Closing Date.**
 - b) **Annual financial turnover of the firm in any of the last 3 financial years or current financial year should not be less than **Rs 156 Lakhs**.**
- 2.0 Application showing full address / e-mail address with Tender fee (non-refundable) of ₹ 1000.00 per tender (excepting PSU and SSI units registered with NSIC) by Demand Draft in favour of M/s. Oil India Limited payable at Kolkata and to be sent to Head-Calcutta Branch, Oil India Limited, 4, India Exchange Place, Kolkata – 700 001. Application shall be accepted only upto one week prior to Bid Closing date. The envelope containing the application for participation should clearly indicate “REQUEST FOR ISSUE OF USER ID AND PASSWORD FOR E TENDER NO **SKI6019P15** for easy identification and timely issue of authorisation.
Alternatively, applicants already having User ID & Password for OIL's e-portal can pay the requisite tender fee and bid security against this tender through the online payment gateway.
On receipt of request from applicants who do not have USER_ID and initial PASSWORD, it will be communicated to the bidder (through-e-mail) and will be allowed to participate in the tender through OIL's e-Procurement portal on payment of requisite tender fees. No physical tender documents will be provided. USER_ID AND INITIAL PASSWORD WILL BE ISSUED TILL ONE WEEK PRIOR TO THE BID CLOSING DATE.

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

- 3.0 Please note that all tender forms and supporting documents are to be submitted through OIL's e-Procurement site only except following documents which are to be submitted manually in sealed envelope super scribed with Tender no. and Due date to **Head-Calcutta Branch, Oil India Limited, 4, India Exchange Place, Kolkata – 700 001** only on or before the Bid Closing Date and Time mentioned in the Tender.
- a) Original Bid Security
 - b) Detailed Catalogue (if any)
 - c) Any other document required to be submitted in original as per tender requirement
- All documents submitted in physical form should be signed on all pages by the authorised signatory of the bidder and to be submitted in triplicate
- 4.0 Bidders are requested to examine all instructions, forms, terms and specifications in the bid. Failure to furnish all information required as per the NIT or submission of offers not substantially responsive to the bid in every respect will be at the bidders risk and may result in rejection of its offer without seeking any clarifications.
- 5.0 Bidders must fill the technical Check list (Annexure III)
- 6.0 All the Bids must be Digitally Signed using “Class 3” digital certificate (e-commerce application) with organisation name as per Indian IT Act obtained from the licensed Certifying Authorities operating under the Root Certifying Authority of India (RCAI), Controller of Certifying Authorities (CCA) of India.
- 7.0 Bidders must ensure that their bid is uploaded in the system before the tender closing date and time. Also, they must ensure that above documents which are to be submitted in a sealed envelope are also submitted at the above mentioned address before the bid closing date and time failing which the offer shall be rejected.
- 8.0 Bid must be submitted electronically only through OIL's e-procurement portal. Bid submitted in any other form will be rejected.
- 9.0 **The tender is invited under SINGLE STAGE-TWO BID SYSTEM. The bidders are required to submit both the “TECHNO-COMMERCIAL UNPRICED BID” and “PRICED BID” through electronic format in the OIL's e-Tender portal within the Bid Closing Date and Time stipulated in the e-Tender.**
- 10.0 **Please ensure that Technical Bid / all technical related documents related to the tender are uploaded in the Technical RFx Response-> User - > Technical Bid only. The “TECHNO-COMMERCIAL UNPRICED BID” shall contain all techno-commercial details except the prices.**

Please note that no price details should be uploaded in Technical RFx Response.

- 11.0** The “**PRICE BID**” must contain the price schedule and the bidder’s commercial terms and conditions. **The prices of the items should be quoted in “Conditions Tab”. Details of prices as per Bid format / Commercial bid can be uploaded as Attachment under the attachment option under “Notes & Attachments”**
- 12.0** To ascertain the substantial responsiveness of the bid OIL reserves the right to ask the bidder for clarification in respect of clauses covered under BRC also and such clarifications fulfilling the BRC clauses in to must be received on or before the dead line given by the company, failing which the offer will be summarily rejected.
- 13.0** **Please do refer the User Manual provided on the portal on the procedure How to create Response for submitting offer.**

NOTE:

- 1. Bidders should submit their bids explicitly mentioning compliance / non compliance to all the NIT terms and conditions.**
- 2. PSUs and SSI units are provided tender documents Free of Cost (as per govt guidelines), however they have to apply to OIL's designated office to issue the tender documents before the last date of sale of tender document mentioned in the tender.**

Yours Faithfully,

Sd-
(Prayas Chakravorty)
DMM(P)
For Head-Calcutta Branch



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

TELEPHONE NO. (033) 2230 1657 / 58 / 59

FAX NO: (033) 2230 2596

Email : oilcalmn@oilindia.in

ANNEXURE-II

Tender No& Date : SKI6019P15 DATED 21.01.2015

OIL INDIA LIMITED invites Indigenous tenders for items detailed below:

TECHNICAL SPECIFICATIONS WITH QUANTITY

SLNO & MATERIAL CODE	MATERIAL DESCRIPTION.	QUANTITY	UNIT
10 ----- 0C000242	Diesel Engine Driven Generating Set 63 KVA	12	NO.
20	Installation & Commissioning	12	AU

Technical Specifications

DIESEL ENGINE DRIVEN GENERATING SET CAPABLE OF DEVELOPING MINIMUM 63 KVA WITH ACOUSTIC ENCLOSURE & MOUNTED ON A OIL FIELD SKID

Water cooled D.G. Set capable of developing minimum 63 KVA at 3 phase, 0.8 power factor, 415 volt, 50 Hz and running at 1500 rpm under NTP conditions conforming to IS: 10,000/ ISO 3046/ISO 8528/DIN 6271/BS 5514 or latest. The generating set should have acoustic enclosure & mounted in a oil field skid.

1.0 DIESEL ENGINE:

Water cooled, Vertical in-line, four stroke, diesel engine having in line fuel pump, governing class-A1 capable of developing sufficient horsepower to drive the alternator when running at 1500 rpm under standard reference conditions of atmospheric temperature of 27 degree Celsius, altitude not exceeding 150 meter above mean sea level, relative humidity 60% at 27 degree Celsius. The engine should be suitable for continuous duty & capable of developing 10% in excess of its rated output at its rated speed for a period of 1 hour in any period of 12 hours continuous running without undue heating or any other mechanical trouble. The engine should be anti clockwise while looking from the flywheel end and should conform to IS: 10,000 /ISO: 3046/BS 5514 or latest.

The engine should comprise the following standard accessories such as

- 1.01 Flywheel
- 1.02 Fuel and lubricating oil filter
- 1.03 Heavy duty air intake filters.
- 1.04 Lubricating oil pressure gauge
- 1.05 Tachometer
- 1.06 Standard set of spares as per Para 7 (e) of NIT
- 1.07 12 volt of electric starting equipment (preferably LUCAS TVS make) fitted to the engine and comprising of starter, charging alternator and starting ring gear fitted to the flywheel.
- 1.08 Heavy Duty Radiator.
- 1.09 Fuel tank of capacity to run the genset for continuous 24 hours. Diesel filling from outside with theft proof arrangement.
- 1.10 Guard for all moving parts of the engine such as W/pump belt, charging alternator belt, radiator fan etc.
- 1.11. Residential type Exhaust silencer with spark arrestor (muffler) to be provided inside the canopy but in a separate chamber.
- 1.12 The Engine instrument panel with starting switch and key, indication of battery charging, water temperature and lube oil pressure
- 1.13. Any items/points not included in the specifications but necessary for operation shall be stated by the bidder.
- 1.14. Engine safety controls (High water temp, low lube oil pressure and over speed)

Fire extinguisher to be provided inside the canopy. The instrument panel with all gauges to be mounted on engine and should be visible from outside. All parameters of both the engines and alternators (like output current, voltage, coolant temp, lube oil pressure, rpm etc) need to be digitally displayed in a multifunction panel and the panel should be visible from outside through a robust constructed window.

Bidder has to justify the selection of particular engine along with the H.P

Special Notes (Engine):

Bidder must provide along with the offer necessary certificate indicating compliance of emission and noise norms as per latest MOEF/CPCB-II guidelines for DG sets capacity

upto 1000kVA. The engine model offered must have valid "Certificate of Type Approval" and "Certificate of Conformity of Production". Documentary evidence for the same should be provided along with the offer

2.0 ELECTRICAL :

Brushless type alternator of 63 KVA (minimum) rating when coupled to water cooled engine will develop 63 KVA (minimum) at 3 phase, 0.8 power factor, 415 Volt when running at rated rpm under NTP conditions.

The alternator should be any of the following makes:
Kirloskar, Crompton Greaves, AVK-SEGC, stamford.

A. TECHNICAL SPECIFICATIONS OF ALTERNATOR:

1. Rated Output: 63 kVA (minimum) continuous rating at 0.8 PF at specified ambient conditions (Motor Loads)
2. Rated Voltage : 415 Volts
3. Phase : 3, (4 wire) i.e. neutral point has to be brought out to terminal box
4. Type : Brush less
5. Frequency rated / cycle : 50 Hz
6. Rated power factor : 0.8 lagging
7. Class of insulation : Class F/H
8. Phase sequence : UVW
9. Conform to IS:4722, 13364 part 2 with latest amendments.
10. Rating : Continuous suitable for Motor loads.
11. Connection : Y (Star)
12. Ambient : 45 °C max, RH 98%
13. Alternator Enclosure Protection: IP 23
14. Alternator Terminal Box Protection: IP 54
15. Amplitude of vibration : Should be as per IS-12075: 2008.
16. Excitation system : Brush less, self excited and self Regulated with solid state AVR(mounted separately on the control panel)
17. Mounting : Foot mounted
18. Permissible voltage variation: +/-5 % at rated speed, load and power factor
19. Permissible frequency variation: +/- 3 % at rated load and power factor
20. Frame size : Bidder to confirm
21. Motor starting ability : 200 % of FLC for 10 sec with max. voltage dip of 20%.
22. Unbalanced current carrying capacity: 20 % of FLC
23. Short circuit current withstand capacity: 4 to 5 times FLC for 5 sec.
24. The brushless alternator shall be composed of 3 phase AC exciter with rotating diodes, surge suppressor, static voltage regulator with voltage adjuster potentiometer, main field windings and stator windings. PIV of exciter diodes must be minimum 6 times the maximum exciter armature operating voltage or 1200v whichever is higher. All windings should be made from electrolytic grade copper of high purity.
25. The alternator shaft should be supported with rolling element bearings on both ends (at DE and NDE side).

26. Voltage swing (Transient response) when rated load is suddenly switched on should be maximum 10 % with 0.2 to 0.7 sec (Recovery time).
 27. The alternator should be capable of sustaining a 10 % over load for one hour in any 12 hours operation.
 28. When the speed of engine is 1.2 times for two minutes, the alternator should be capable of withstanding it without any damage.
 29. The alternator should be capable of continuous operation over a range of 110 % of rated voltage.
 30. Automatic voltage regulation ± 0.5 % to ± 1.0 % from no load to full load.
 31. Total harmonic distortion factor should be less than 3 % between phases at no load.
 32. Alternator stator winding terminals are to be connected to 4 nos. of suitably rated terminals supported on sheet molding compound (SMC) supports inside the alternator terminal box.
 33. The alternator terminal box should be suitable and should have sufficient space for terminating one no 4 core X 25 sq.mm, 1000V grade EPR insulated and PVC sheathed stranded copper cable. Separate cable box shall be provided for supporting power cable. Suitable size of cable gland should be fitted in the terminal box. Cable gland and entry hole shall also be required for AVR cables as AVR shall be mounted in the control panel.
 34. 2 nos. of earth studs are to be provided on both sides of the alternator.
 35. Lifting hooks are to be provided for lifting the alternator.
 36. Automatic voltage regulator should be mounted in the control panel with approved rubber bushes under AVR mounting holes to reduce vibration. AVR should have under speed, over excitation protection features with LED display.
 37. Alternator windings and AVR should be suitable for humid atmosphere as per ambient conditions mentioned in the enquiry. AVR should be suitable for motor load duty.
 38. Bidder to mention efficiency of the alternator at 25%,50%,80% load at 0.8 pf.
 39. Alternator frame should be made from MS or Cast steel.
- Note: All IS mentioned above should be the latest edition.

B. SPECIFICATION OF CONTROL PANEL :

Sheet steel clad, self supporting, floor mounting, cubicle type, dust and vermin proof generating set control panel made of 3 mm thick MS CRCA sheet and built upon rigid framework, having front and rear hinged doors with danger plate fitted on both sides, lifting lugs on top, ventilation louvers on both sides, bottom detachable gland plates, double earthing studs on two sides, complete with suitably sized zinc passivated hardwares with heavy plain and spring washers. The panel doors should have neoprene rubber gasket. The panel should be designed and manufactured as per IS-8623. Suitable wire mesh should be provided on the inner side of the louvers to prevent entry of insects. The metal surface of the panel should be given seven tanks anti

corrosion treatment and then powder coated. Panel should be supported on frame of 3.15mm thick sheetmetal so that bottom cable entry plate of panel is at suitable height (min. 300mm) from floor of the unit for easy and safe entry of power and control cables. The frame should be able to withstand the stress and vibration during transportation.

The detail description of the panel is as described below:

1. AVR of the alternator shall be mounted inside the control panel with vibration proof supports.

2. INSTRUMENTS AND SWITCHES: (Mounted on front hinged door)

i) 1 No. M.C. Voltmeter, 1.0% accuracy, 96 sq. mm , 0 # 500 V (AEL/L&T make or equivalent)

ii) 1 No. Voltmeter selector switch (Kaycee/ Salzer / L&T make or equivalent)

iii) 1 No. M.C Ammeter, 1.0% accuracy, 96 sq. mm, 0-75 Amps, C.T. operated (AEL/L&T make or equivalent)

iv) 1 No. Ammeter selector switch (Kaycee/ Salzer / L&T make or equivalent)

v) 1 No. Digital frequency meter , 48 X 96 mm , scaled 0-100 Hz , suitable for 240 V AC operation, with a single pole ON / OFF switch (AEL/ Rishab Instruments make or equivalent)

vi) 1 No. MC KW meter , Dynamometer type, 3 ph, 3 element , 96 sq.mm , 1.0% accuracy 0 # 50 KW (AEL/L&T make or equivalent)

vii) 1 KWH meter integrating, electronic type suitable for balanced and unbalanced loads, C.T. operated, 3 ph, 4 wire. (Alsthom/L&T make or equivalent)

viii) 1 No. Hour meter to indicate engine run hours (AEL / L&T make or equivalent)

ix) The control panel should have following indication lamps mounted on panel front door. All lamps shall be of LED type, 240v AC having long life and low energy consumption. Binay Make.

a) Trip on earth fault.

b) Set running.

3. MAIN COMPONENTS : (Mounted Inside the Panel)

i) Panel should have one set of TP & N electrolytic grade, high conductivity, tinned copper bus-bars, made from electrolytic grade copper of 99.0 % purity, rated 100 amps and supported at required intervals to withstand short circuit fault levels up to 10 KA for 3 secs. Bus-bar support shall be non- hygroscopic SMC / FRP and the Bus-bar shall be insulated with heat shrinkable PVC sleeves. Incoming and outgoing power cable shall terminate on tinned copper links rated for 100amp.

ii) 1No. 125 Amps TP & N (Neutral bus to have removable link with bolt) CFS unit, fitted with 63 Amps HRC fuse, type : CMM (GEPC make or equivalent.)

iii) 1 No. 150 Amps, 4 pole, MCCB, 25 KA breaking, with inbuilt electronic type adjustable overload & short circuit protection. 240v AC shunt trip coil is required for external tripping. Front Drive kit with door interlocking facility to ensure that the door can be opened only when the MCCB is in the OFF position. Overload should be adjustable from 50% to 100% and short circuit setting should be also adjustable from 1.5% to 5%. Make: Legrand/ Merlin-Gerin or equivalent.

MCCB should trip on the following faults

- a) Earth leakage from external source.
- b) Over load & short circuit.

iv) 1No. CBCT along with Earth leakage relay for protection against earth leakage should be provided. Relay adjustable settings: 0.1 # 0.3- 1.0-3.0-10.0 Amp & 0.06-0.1-0.3-1.0# 5.0 Sec in steps. In case of earth leakage fault the relay should trip the MCCB through shunt trip coil. The CBCT (ID 35mm) size should be such that relay should not trip during shortcircuit due to saturation. Similar to Cat No. (26092+ 26091) of Legrand. (Make GEPC /Legrand/ Merlin Gerin or equivalent).

v) 6 nos. of Bar Primary Resin cast CT of suitable ratio, 15 VA , class-1 conforming to IS 2705 (3 nos. for ammeter and KW meter , 3 nos. for KWH meter (AEL / Kappa make or equivalent)

vi) Auxiliary Relay / Contactor 240 AC with some spare contacts. Quantity should be as per the control circuit requirement. (L&T /Siemens/ Schnieder make or equivalent)

vii) HRC instrument fuse holders NS type phenol moulded with suitable fuses & links for different circuits. Separate fuses and neutral links should be provided for control circuit indicating system lamps, instruments, enclosure illumination and tripping circuit (GEPC make or equivalent).

viii) Terminal strips for terminating the AVR cable from Alternator.

C. WIRING SCHEME:

i) Control system will work on 240v AC. Control panel inside wiring shall be done with 2.5 sqmm, flexible copper, 1100v grade PVC insulated wires conforming to relevent BIS. All wiring will have copper lugs & terminal blocks as required. Wiring for lighting circuit MCB, power outlet and wiring for CT will be done with 2.5 sqmm, flexible copper, 1100v grade PVC insulated wires as per BIS & have ring type lugs. Colour code for wires shall be followed. Make: Finolex/ Havells.

ii) Output from the Alternator terminal box should be connected to control panel input with heavy duty 4X 25 sq.mm, 1100v grade, PVC insulated and PVC sheathed, armoured, stranded copper cable approved by IS-1554. Cable to be supplied & connected by the bidder using copper lugs. Make: NICCO, CCI, Finolex, Havells.

iii) AVR shall also be wired from alternator terminal box to control panel by the party using heavy duty PVC insulated and PVC sheathed, 1100 v grade armoured, stranded, ISI approved copper cable of suitable size. Cable to be supplied and connected by the bidder using copper lugs.

Make: NICCO, CCI, Finolex, Havells.

iv) Heavy duty Single Compression Cable Glands shall be provided at all cable entries for power and control cables. Cable Glands shall also be provided for the outgoing power cable. All cable glands to be supplied by the party. Make: Baliga/ GMI/Dowells.

v) All power and control cable terminal ends will have suitable heavy duty crimping lugs. All lugs supplied by the party. Make: Dowells.

vi) Alternator to panel power cable, AVR cable shall be protected inside a conduit pipe in their run from unit to control panel to avoid any damage.

vii) Suitable provision shall be made for safe routing of output cable from panel to outside of the unit.

D. ENCLOSURE ILLUMINATION AND POWER OUTLET:

Enclosure will have two nos. of suitable type of screw cap CFL lamp luminaires mounted on enclosure wall and wired with heavy duty PVC insulated and PVC sheathed armored, stranded copper cable approved by IS inside a suitable conduit pipe. Light will be switched from individual MCB, 6amp, C curve, mounted on control panel cover & have back-up HRC fuse and neutral link of 16 amp rating. One no. industrial type metallic plug socket of 10amp rating with 10 amp SP MCB as switch should also be fed from lighting circuit fuse. The socket should be mounted on the enclosure side. Power for lighting circuit and socket outlet should be taken from the main bus through HRC fuses.

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

E. EARTHING:

1. The earthing scheme for the unit should be as per IS-3043.

2. Two nos. 25x5mm GI straps shall be suitably fixed inside the unit near the floor. Strap galvanisation thickness should be min. 85 micron and as per IS. Alternator earth terminals, control panel earth terminals, enclosure chassis shall each be connected with two nos. separate cables to both the straps with independent connections at separate points. The neutral of the alternator will be earthed by connecting two nos. of earthing cables from neutral bus inside the panel to earth strap at two independent points. Suitable provision is required in the panel base plate for safe entry of neutral earth cable. Heavy duty PVC insulated, PVC sheathed, flexible, single core, IS approved copper cables of 25 sqmm size shall be used for each earth connection. The cables to be terminated with lugs and suitably protected against mechanical damage. Earth cable shall be protected to avoid any damage and to be run in galvanized, flexible MS conduit. Make: Finolex/ Havells for cable.

3. Both the straps shall extend upto the back side of the enclosure and each strap will have one no. of zinc coated terminal stud of 10mm dia provided at end of the straps for connection to system earth. Two nos. of earthing cables of size & type mentioned in point no.2 above and individual length of 5.0 mtr shall be provided and connected to these two straps for external earthing. The free ends of these cables shall be crimped with heavy duty, tinned copper tubular lugs. Suitable opening shall be provided in the rear side of the unit to facilitate the entry of outgoing power cable and earth leads.

NOTES (Alternator and Control Panel):

- i) The bidder shall submit all indicative power and control wiring diagram for offered alternator.
- ii) Offered alternator should be of proven design / model.
- iii) Bidder shall submit the following information regarding alternator along with the offer failing which offer is liable for rejection:
 - a) Frame size
 - b) Dimensional drawing
 - c) Technical datasheet
 - d) Catalogue
- iv) Alternator and control panel are to be guaranteed for period of 12 months from the date of commissioning against any manufacturing defects.
- v) Guaranty Certificate shall be submitted at the time of delivery of alternator and control panel.
- vi) Test certificate of alternators shall be furnished at the time of delivery of alternator.
- vii) Bidder shall submit the drawings (Dimensional, schematic, GA, component layout and wiring layout) of control panel to OIL on placement of order and shall proceed for manufacturing of the panel only after getting due approval from OIL.
- viii) Packing should be adequate to avoid transit damage.
- ix) Ten sets of control circuit diagram of control panel and commissioning cum maintenance manual for alternator should be provided with soft copy along with the material.
- x) Any items/ points not included in the specifications but necessary for efficient control and operation of the alternator shall be stated by the bidder.

F CHANGE OVER SWITCH PANEL(COSP)

One no change over switch panel should be placed outside the acoustic enclosures and mounted rigidly on a separate frame which should be fixed on the oil field skid. The switching panel will comprise of :

- a) On load change over switch: 1 no.
 - 415 Volts, 200 Amps, 3 phase (with neutral), 4 pole
 - Make: GEPC / L & T / Crompton Greaves / Siemens or equivalent
- b) Wall mounting type fuse switch unit with HRC fuse and SM type fuse holder: 2 nos.
 - 415 Volts, 100 Amps, 3 phases (with neutral)
 - Make: GEPC / L & T / Crompton Greaves / Siemens or equivalent.
- c) One no suitable CFL lamp with MCB
- d) All terminals are to be marked properly.
- e) Mimic diagram on front facia of COSP with clear marking of incomer 1, incomer 2 & load connections.

The COS panel should be fabricated with sheet steel, dust and vermin- proof, self-supporting, suitable for outdoor installation (with canopy), industrial type conforming to IP-55. It should be fabricated from 3 mm MS CRCA sheet steel and suitable size rigid M.S. angle iron / M.S. channel frame work to have sufficient strength. Panel door should be of double leaf arrangement with heavy-duty hinges and lockable. A neoprene gasket is to be provided around the periphery of panel door to make it dust and vermin-

proof. Panel should be floor mounted. An earth bar of 50 mm x 6 mm of G.I. strap is to be provided on the backside of the COS panel for earth connection. Danger plates are to be provided on front and rear side of the panel. Detachable gland plate is to be provided for glanding of heavy duty 4X 25 sq.mm, 1100v grade, PVC insulated and PVC sheathed, armoured, stranded incoming and outgoing copper cables. Suitable size of cable gland are to be provided at cable entry point of the COS panel. Layout of the components inside the panel should be systematic and arranged in such a manner that sufficient space inside the panel is available for maintenance. The total height of the panel from ground level should not be more than 1.8 meters. Output from the Alternator control panel should be connected to one of the COS input terminal with heavy duty 4X 25 sq.mm, 1100v grade, PVC insulated and PVC sheathed, armoured, stranded copper cable approved by IS-1554. Cable to be supplied & connected by the bidder using copper lugs. Make: NICCO, CCI, Finolex, Havells. Other two terminals, one for terminating outgoing cable and other as incomer from second alternator are to be placed separately by putting partitions.

Panel Painting:

Both control panel & COS Panel should be thoroughly cleaned before applying two coats of rust preventive paints. This shall be followed by three coats of paint light grey Shade No. 631 as per IS: 5, thickness - 50 Microns.

Suitable electrical connection with 4 core x 35 mm 2 EPR insulated copper cable between control panels of gensets to incomer (main) fuse switch unit of COSP and then to changeover switch of COSP shall be done. Acoustic enclosure and COS panel shall be interconnected with 50mmX6mm GI strap for earthing. There should be provision for connecting common points of earthing system to local earth electrodes.

3.0 SKID AND COUPLING:

Each engine & alternator set should be in coupled condition and mounted on common base frame skid fitted with special vibration isolators for making the DG set vibration free.

The common base frame skid for the D.G set should be mounted on a 2 runner Oil Field type skid fabricated out of ISMB200 reinforced with suitable cross members. Both ends of the skid should have 600mm extended portion beyond the acoustic enclosure and it should be covered by 10mm chequered plate. The ends of the skid should be projected out by 300mm and curved upwards. 150 NB X 80 SCH pipe with provision for lifting should reinforce the end of skid for tail boarding.

Individual acoustically enclosed generating set with one change over switch should be mounted on individual OIL FIELD TYPE SKID.

Skid should have two studs for earthing, one in each end of the skid.

Layout drawing of canopy showing engine, alternator, control panel, change over switch, fuel tank etc and drawing of OIL Field Type Skid should be forwarded along with the offer.

4.0 ACOUSTIC ENCLOSURE:

The Genset (Engine, alternator, control panel, fuel tank and other auxiliaries) should be placed in a common acoustic enclosure. The arrangement should be made such that the operators & maintenance crew can enter and move inside the hut for normal inspection of the generating set. Provision should also be there to take the generating set outside in case of failure. The hut should be complete with internal wiring and light fitting for illumination. Heavy duty PVC insulated and PVC sheathed armored, stranded copper cable shall be used for wiring. Suitable MCB should be used in the internal wiring.

The generating set should be placed in common acoustic enclosure. The acoustic enclosure should be modular type. This should be easy assembling /dismantling & not fixed type. It should have following features

- a. locking arrangement
- b. Lifting arrangement
- c. Draining arrangement for fuel and lube oil.
- d. Air breather.
- e. Hood for rain protection
- f. Emergency stop button
- g. Panel meter viewing window
- h. Powder coated walls
- i. Suitable Fire extinguisher to be provided inside the canopy.
- j. The exhaust piping inside the acoustic enclosure shall be lagged

Specification of the acoustic enclosure:-

- a) The enclosure shall be fabricated out of not less than 2mm thick on the outside cover and not less than 1 mm thick perforated power coated sheet.
- b) Insulating material shall be high quality noise absorbent and fire retardant complying IS8183 specification for better sound attenuation.
- c) The hinged doors shall be made out of not less than 2 mm thick CRCA sheet and will be made air tight with neoprene rubber gasket and heavy duty locks. The hinges, door handles and bolts and nuts shall be of stainless steel.
- d) The enclosure should be powder coated.
- e) The enclosure shall have adequate ventilation to meet the air requirement for running the engine at rated load at site conditions and to expel the heat to maintain temperature rise inside canopy not more than 5°C for ambient >40°C and not more than 10°C for ambient temperature ≤40°C.
- f) There should be provision of draining of lube oil and coolant and filling of coolant.
- g) The enclosure shall be provided with suitable number of hinged doors along the length of the enclosure on each side for easy access inside the enclosure for inspection, maintenance and operation.
- h) The enclosure shall have fuel filling point.
- j) The enclosure shall be of modular construction.
- k) The enclosure shall be designed for easy access to the radiator for maintenance.
- l) The Inside of the enclosure shall be provided with minimum 2(two) no 15 watt CFL Flameproof Well glass fitted luminaire for illumination with necessary wirings and ISI marked accessories.

m) The enclosure should be type tested.

Bidder must provide along with the offer necessary certificate indicating compliance of noise norms as per latest MOEF/CPCB-II (Under environment protection act 1986) guidelines for DG sets capacity up to 1000kVA. Bidder has to provide type test certificate at the time of inspection.

The complete arrangement drawing of the gensets, with acoustic enclosure should be forwarded to OIL for approval once order is placed.

Bidders should provide detail drawing of above mentioned skid & enclosure for technical scrutiny.

5.0 PRE-REQUISITES FOR BIDDER:

a) The bidder should be an OEM or authorised dealer of OEM for engine, alternator or reputed assembler authorised by OEM for Generating sets.

b) If the bidder is an OEM of engine/alternator or authorised dealer of engine/alternator, he must purchase the other items from OEM or authorized dealer of the other items. In that case bidder must provide the documentary evidence from the OEM or authorised dealer of other items from whom the purchase would be made along with the supply

c) If the bidder is an assembler of gensets, he must purchase all equipment from OEMs or authorised dealers. In that case the assembler must provide the documentary evidence from the OEMs or authorised dealers of equipment from whom the purchase would be made along with the supply

e) The bidder must give assurance that after sales service in respect of engine, alternator and other equipment will be provided by their respective OEM or authorised dealers, stationed within 80 km from Duliajan, ASSAM.

f) The bidder must undertake and confirm from OEMs that the equipment to be supplied are not going to be obsolete for next 10 years and provision for supplying spares of the equipment to be continued.

6.0 OPERATING CONDITIONS AT SITE:

The engine / alternator should be suitable for operation at the following site conditions:

Engine room temperature (max.) : 45 0C

Engine room temperature (min.) : 5 0C

Max. relative humidity at 21 0C : 98 %

Max. relative humidity at 35 0C : 95 %

Max. relative humidity at 41 0C : 70 %

Altitude : 130 metres

Average annual rainfall : 343 centimetres

7.0 SPARE PARTS:

- a) Spare Parts list for two years normal operation of the generating set in addition to commissioning spare parts shall be provided along with the offer for each set running for 2000 Hrs annually. Item-wise price breakdown of spare parts should also be provided in tabular form showing spare parts requirement for Each set and Total requirement for all set. Cost of these spare parts will be considered for commercial evaluation of the offer. However OIL will decide on procurement of those spare parts.
- b) Bidder should categorically confirm the availability of spares parts for minimum 10 years from the date of delivery of materials.
- c) Spare parts list with prices for alternator, control panel and COS panel, light fittings etc. shall be submitted separately.
- d) The bidder has to supply the following mandatory minimum electrical spares along with each gen set [Bidder may include additional items, if deemed necessary]:
- i) Automatic voltage regulator unit (along with any other component used with AVR)- 02 sets
 - ii) Standard (forward) diode for rotating rectifier assembly- 06 nos.
 - iii) Reverse diode for rotating rectifier assembly- 06 nos.
 - iv) Varistor/ surge protector -03 nos.
- e) The bidder has to supply the following mandatory minimum spares for two years (e.g Fuel filter, Lub. oil filter, Air filter, various hoses, Coolant for each engine) operation for an average running of 2000hrs annually, along with the main equipments.[Bidder may include additional items, if deemed necessary]

7.1 GEN-SET INSTRUMENTATION:

Bidder must comply to the following points in connection with the instrumentation / electronic parts / system / components fitted with the engine / alternator / panel etc:

- a. Details of Electronics & Engine Safety Control system along with the offer.
- b. To provide details of manuals, terminal drawings etc. for engine safety control system along with the supply.
- c. To provide 2years spares of all Electronic cards and sensors.
- d. In case of 3rd party product, address of OEM / authorized dealers should be provided for procurement of spares in future.
- e. To provide trouble shooting manual / guide for fault rectification in instrument panel along with the supply.

8.0 PARTS LIST, INSTRUCTION MANUAL & DRAWINGS:

- a) Supplier shall provide set of spare parts list, operator's instruction manual and workshop maintenance manual covering all the items along with each generating set.

b) Supplier shall provide one set of Technical Literature of Engine, GA drawing showing installation details of the generating set. Oilfield type skid, wiring diagram for the control panel (inclusive of float charger) and wiring drawing between the alternator and control panel shall be provided with each generating set. Supplier shall provide all approved electrical drawings along with final drawings implemented during installation and commissioning.

c) Supplier shall provide a list of recommended spare parts for two years normal operation along with the materials.

9.0 INSPECTION AND TESTS:

a) The plant and materials may be subjected for inspection during manufacture at OIL's discretion but such inspection shall not relieve the supplier of his responsibility to ensure that the equipment supplied is free from all manufacturing and other defects and conforms to correct specifications. Supplier will be notified in advance, if it is intended to inspect plant or materials.

b) Pre-dispatch inspection of all the sets shall be carried out by OIL's representative at the works of manufacturer. Full load testing of the generator sets for output and performance shall be carried out in presence of OIL's representatives to their satisfaction. Supplier/ manufacturer shall accordingly arrange for inspection and intimate OIL well in advance.

c) Despatch clearance will not be given unless OIL is fully satisfied as regards manufacturing to order specifications and successful testing.

10.0 INSTALLATION & COMMISSIONING

The bidder shall install and commission the generating set at Oil's Operational area in Assam, India

11.0 TEST CERTIFICATES:

Detailed records and certificates of the foregoing tests should be submitted to us. The certificates / records shall be supplied in quadruplicate and those for electrical equipment shall be endorsed- "suitable for use in the climatic conditions specified".

12.0 PACKING:

The packing shall be sufficiently robust to withstand rough handling/ transit damage. Boxes/ packing cases containing electrical equipment shall be water # proof lined. Control panels in particular should be packed with sufficient care (with shock/ vibration proof lining) to prevent transit damage. Loose components shall be packed separately.

13.0 Any items/ points not included in the specifications but necessary for efficient control and operation of the alternator shall be stated by the bidder.

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

The bid must conform to the specifications and terms and conditions given in the enquiry. Bids shall be rejected, in case the item(s) offered do not conform to the required minimum/maximum parameters stipulated in the technical specifications and to the respective 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. The offered engine should be water cooled vertical in-line, four stroke, diesel engine having in line fuel pump, governing class-A1, which is capable of developing sufficient horsepower to drive the alternator(63 KVA)when running at 1500 rpm.
2. The engine should be suitable for continuous duty & capable of developing 10% in excess of its rated output at its rated speed for a period of 1 hour in any period of 12 hours continuous running without undue heating or any other mechanical trouble. The engine should be anti clockwise while looking from the flywheel end and should conform to IS: 10,000 /ISO: 3046/BS 5514 or latest.
3. The offered Diesel Generating Set should conform to the emission and noise norms as per latest MOEF/CPCB-II guidelines for DG sets capacity upto 1000kVA
4. The alternator must be of brushless type and developing minimum 63 kVA.
5. The bidder must have the credential of successfully executing similar order for a minimum of Rs 46.62 Lakhs worth of single order, to any reputed Govt. Organization, PSU's, Central Govt. or Public Limited Company undertaking during the last 3 years preceding from the bid closing date of tender. Documentary evidence in the form of order copies and proof of supplies (Performance certificates/ invoice/commissioning report) should be submitted along with the offer.
6. The bidder should be an OEM or authorised dealer of OEM for engine, alternator or reputed assembler for Generating sets authorised by OEM. Documentary evidence should be submitted along with the offer.

B COMMERCIAL :

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

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.

ii) **Bid security of Rs 156,000.00** is to be submitted in the form of bank guarantee as per format given in document MM/CALCUTTA/E-01/2010 for E-Procurement LCB Tenders and is to be submitted in sealed envelope superscribed with BID SECURITY AGAINST Tender no SKI6019P15 to **Head Calcutta Branch, Oil India Limited, 4, India Exchange Place, Kolkata-700001** only on or before the Bid Closing Date and Time mentioned in the Tender.

Alternately bid security may be paid online through e procurement portal. For exemption for submission of Bid Security, please refer relevant para of General Terms and Conditions vide MM/CALCUTTA/E-01/2010 for E-Procurement LCB Tenders. **The Bid Security shall be valid for six month more than bid validity.**

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

iii) The Annual financial turnover of the firm in any of the last 3 financial years or current financial year should not be less than Rs 156.00 lakh.

iv). 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.

v). Successful bidder will be required to furnish a **Performance Bank Guarantee @10%** of the order value. For exemption for submission of Performance Bank Guarantee, please refer relevant para of General Terms and Conditions vide MM/CALCUTTA/E-01/2010 for E-Procurement LCB Tenders. The Performance Bank Guarantee must be valid for one year from the date of successful commissioning of the equipment or 18 months from the date of despatch whichever is earlier. **Bidder must confirm the same in their bid. Offers not complying with this clause will be rejected.**

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

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

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

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

ix). Bids containing incorrect statement will be rejected.

- x). All the Bids must be Digitally Signed using “Class 3” digital certificate (*e-commerce application*) as per Indian IT Act obtained from the licensed Certifying Authorities operating under the Root Certifying Authority of India (RCAI), Controller of Certifying Authorities (CCA) of India. The bid signed using other than “Class 3” digital certificate, will be rejected.
- xi) Price should be maintained in the "online price schedule" only. The price submitted other than the "online price schedule" shall not be considered.
- xii). **INTEGRITY PACT:**
OIL shall be entering into an Integrity Pact with the bidders as per format enclosed vide **Annexure V** of the tender document. This Integrity Pact proforma has been duly signed digitally by OIL's competent signatory. The proforma has to be returned by the bidder (along with the technical bid) duly signed (digitally) by the same signatory who signed the bid, i.e. who is duly authorized to sign the bid. In the event bidder declines to submit the integrity pact, their offer shall be rejected straightaway. Uploading the Integrity Pact with digital signature will be construed that all pages of the Integrity Pact has been signed by the bidder's authorized signatory who sign the Bid

C. GENERAL:

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

2.0 BID EVALUATION CRITERIA (BEC):

A. TECHNICAL:

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

- i) In the event of computational error between unit rate and total price, the unit rate as quoted by the bidder shall prevail.
- ii) Similarly in the event of discrepancy between words and quoted figure, words will prevail.
- iii) Evaluation will be done on 'total contract cost' basis to ascertain the lowest bid.

B. COMMERCIAL:

- i) To evaluate the inter-se-ranking of the offers, Assam entry tax on purchase value will be loaded as per prevailing Govt. of Assam guidelines as applicable on bid closing date.
Bidders may check this with the appropriate authority while submitting their offer.
- ii) To ascertain the substantial responsiveness of the bid OIL reserves the right to ask the bidder for clarification in respect of clauses covered under BRC also and such clarifications fulfilling the BRC clauses in to must be received on or before the dead line given by the company, failing which the offer will be summarily rejected.