

**OIL INDIA LIMITED**(A Govt. of India Enterprise)  
P.O. Duliajan-786602, Assam.

Fax No. 91-374-2800533, E-mail:material@oilindia.in

**Tender No. & Date : DFD8826L09/06 17.04.2008**

Bid Security Amount : INR 0.00 OR USD 0.00

**Bidding Type :**

Bid Closing On : 18.06.2008 at 13:00 hrs. (IST)

Bid Opening On : 18.06.2008 at 13:00 hrs. (IST)

Performance Guarantee : Not Applicable

OIL INDIA LIMITED have issued Limited tenders to following parties for items detailed below. For General Terms & Conditions, please refer to Document No. MM/GLOBAL/01/2005 available in OIL's web site:

| Item No./<br>Mat. Code | Material Description   | Quantity | UOM |
|------------------------|--|----------|-----|
| <b>10</b><br>0C000242  | SUPPLY AND COMMISSIONING OF 30 KVA NATURAL GAS ENGINE DRIVEN GENERATING SET WITH ACOUSTIC ENCLOSURE AS PER DETAILED SPECIFICATIN, BRC/BEC AND OTHER TERMS & CONDITION VIDE ENCLOSED ANNEXURES.<br><br>Detailed specification furnished vide ANNUEXURE-IA | 1        | NO  |
|                        | <b>INSTALL&amp;COMM</b>  |          |     |
| 10                     | INSTALLATION & COMMISSIONING   | 1        | NO  |

**Special Notes :** 1. Bids are invited under **Single Stage Two Bid System**. Bidder shall quote accordingly under Single Stage Two Bid System. The "**TECHNICAL**" & "**COMMERCIAL**" bids shall be prepared separately in triplicate and the same should be kept in two separate envelopes superscribing the Tender No., Brief Material Description and Bid Closing Date and clearly writing on the cover of the two envelopes as "**TECHNICAL**" & "**COMMERCIAL**". Both the envelopes should then be kept in one envelope duly sealed, superscribing the Tender No., Brief Material Description and Bid Closing Date on the cover. The Technical bid should contain all the Techno-Commercial details of the offer including the commercial terms and conditions excepting the prices which should be kept blank. The Commercial bid should contain the Price Schedule including all the Commercial terms and conditions of the offer. Any offer not complying with the above will be rejected straightway.

2. The items shall be brand new, unused & of prime quality. Bidder shall warrant (in the event of an order) that the product supplied will be free from all defects & fault in material, workmanship & manufacture and shall be in full conformity with ordered specifications. This clause shall be valid for 18 months from date of receipt or 12 months from date of commissioning of the items. The defective materials, if any, rejected by us shall be replaced by the supplier at their own expense. Bidders must confirm the same while quoting.

**3. INSTALLATION & COMMISSIONING**

Installation & Commissioning of the unit shall be carried out by supplier's competent engineer(s) at Duliajan, Assam (India). Installation/Commissioning charges if any must be quoted separately on lumpsum basis which shall be considered for evaluation of the offer.

While quoting Installation/Commissioning charges, bidder should take into account all charges including to and fro fares, boarding/lodging, and other daily expenses of the commissioning personnel. OIL may provide accommodation on chargeable basis subject to availability. Income, Service, Corporate Taxes etc, if any, towards Installation/ Commissioning and Training will be to supplier's account and will be deducted at source.

Offers without indicating the Installation/Commissioning charges shall be loaded with the maximum Installation/Commissioning charges received against this tender for evaluation purpose.

Moreover if Income/Service taxes are not categorically mentioned in their offer, then such offers shall be loaded with the applicable rate of Taxes for evaluation purpose.

**4. Payment :** Payment shall be released as follows :

- i) 80 % of the order value shall be paid against despatch/shipment of the goods.
- ii) Balance 20 % of the order value along with the commissioning charges shall be paid after successful commissioning and acceptance of the unit by OIL.
- iii) OIL may also consider 100 % payment against shipment/despatch document provided bidders agree to pay the interest for 20 % of order value and also submit Bank Guarantee equivalent to 20 % of the order value.

Any offer not complying with the above shall be loaded at one percent above the prevailing Bank rate (CC rate) of State Bank of India for evaluation purpose.

**5. Bid Rejection Criteria (BRC) and Bid Evaluation Criteria (BEC) applicable to this tender is enclosed vide Annexure- II.**

**6. Technical Check-list and Commercial Check-list vide Annexure III must be filled-up and submitted along with the Technical Bid.**

**7. Oil India Purchase Order No. must be engraved on the body of the item. Bidder must confirm the same categorically while quoting.**

**8. Bidders shall categorically confirm in their quotation that the equipment to be supplied are not going to be obsolete for next 10 years and provision for supplying spares of the equipment will be continued.**

**9. Bidder must provide all accessories/spares for initial commissioning and repair kit along with the main equipment free of cost. Bidder to confirm the same while quoting.**

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

**11. Validity of the offers should be 180 days. (Please refer clause 1.2 of Section 'D' of MM/GLOBAL/01/2005). Bids with lesser validity shall be rejected.**

**12. Quotation must be submitted in **triplicate**.**

13. **Nil-Custom Duty** shall not be applicable against this tender. Indigenous bidders are requested to quote their **Non-Deemed Export** prices.

Tender No. : DFD8826L09/06  
Tender Date : 17.04.2008  
Bid Closing On : 18.06.2008 at 13:00 hrs.(IST)  
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**Tender issued to following parties only:**

| Sln0 | V_Code | Vendor Name                    | City/Country      |
|------|--------|--------------------------------|-------------------|
| 1    | 100409 | WAUKESHA ENGINE, DRESSER, INC  | WISCONSIN         |
| 2    | 100904 | BRIGGS & STRATTON CORPORATION  | DUBAI             |
| 3    | 101054 | BRIGGS & STRATTON CORPORATION  | MILWAUKEE         |
| 4    | 101429 | ASKA JENERATOR SANAYI A S      | ISTANBUL          |
| 5    | 101430 | FG WILSON LTD                  | BT 40 1EJ         |
| 6    | 101431 | INTERPOWER INTERNATIONAL INC   | YO626YA           |
| 7    | 101432 | CENTRAL POWER SERVICES LIMITED | RP3OPH            |
| 8    | 101433 | ABATEC SA                      | B1661             |
| 9    | 200067 | AEICORP TECHNOLOGIES PVT LTD   | KOLKATA-700 017   |
| 10   | 200176 | INDUSTRIAL TRADE & AGENCY      | GUWAHATI          |
| 11   | 200392 | RAVI BROTHERS                  | GUWAHATI          |
| 12   | 200854 | JAKSON ENGINEERS LTD           | NEW DELHI         |
| 13   | 200856 | JEEVAN DIESELS                 | KOLKATA           |
| 14   | 201156 | TIL LIMITED                    | KOLKATA           |
| 15   | 202039 | SAURAV AUTO PRIVATE LIMITED    | GUWAHATI          |
| 16   | 204448 | CATERPILLAR INDIA PVT LTD      | TAMILNADU         |
| 17   | 205016 | SUDHIR GENSETS LIMITED         | NEW DELHI 110 019 |

**ANNEXURE - IA**  
**TO TENDER NO.DFD8826L09/08**

**DETAILED TECHNICAL SPECIFICATIONS, SPECIAL NOTES AND OTHER TERMS AND CONDITIONS FOR 30 KVA NATURAL GAS ENGINE DRIVEN GENERATING SET WITH ACOUSTIC ENCLOSURE.**

**ANNEXURE I : ENGINE AND OTHER MECHANICAL ACCESSORIES**

**1.0 SCOPE OF SUPPLY :**

The scope of supply by the bidder shall be of 30 KVA, 415 Volts, 3 phase, 50 Hz Industrial type, Natural Gas Engine driven Generating set with all accessories.

The generating sets shall be the primary source of power for its application. The rating applies to supplying continuous power at variable load for unlimited annual hours. A 10% overload is allowed for up to 1 hour in every 12 hours.

**2.0 GAS ENGINE :**

The gas engine should be a four stroke, naturally aspirated, radiator cooled engine, rated for continuous power and capable of developing a net minimum of 38HP at 1500 rpm with a maximum compression ratio of 10.5 : 1. The engine should comprise of the following sub systems :

**2.1. Cooling System :** The cooling system of the water cooled engine should comprise of

- i. Engine driven fresh water pump - Engine mounted
- ii. Radiator
- iii. Radiator Blower Fan.
- iv. Radiator Piping
- v. Thermostat

**2.2. Air Intake System :** The air intake system should comprise of

- i. Air intake manifold - Engine Mounted
- ii. Dry Type Intake Air Filter - Engine Mounted
- iii. Vacuum Indicator - Mounted on Intake Piping.

**2.3 Starting System :** The engine should have an electric starting system comprising of

- i. A heavy duty battery pack of reputed make having a minimum capacity of 180 ampere hours
- ii. Battery leads having minimum diameter of 70 sq. mm

- iii. An engine mounted battery charging alternator (preferably LUCAS TVS make)
- iv. A 24 volt starter (preferably of LUCAS TVS / DELCO REMY make)

**2.4 Ignition System :** The ignition system should comprise of

- i. Non-shielded Contact-less Distributor
- ii. Ignition Coil
- iii. Wiring Harness
- iv. Transformers
- v. Spark Plugs (preferably of STITT/ CHAMPION make)

**2.5 Exhaust System :** The exhaust system should comprise of

- i. Water Cooled Exhaust manifold.
- ii. Exhaust silencer - Residential type with Spark Arrester
- iii. SS Flexible Connections and exhaust piping

**2.6 Fuel System :** The fuel system should comprise of

- i. Hydraulic / Hydra Mechanic / Electronic Governor (preferably WOODWARD Make)
- ii. Carburetor (preferably IMPCO make)
- iii. Main line and secondary line pressure regulators (preferably VANAZ / FISHER make)
- iv. Fuel Solenoid valve
- v. Gas Shut Off valve (Mechanical)
- vi. Gas filter and related piping on engine

**2.7 Lubricating System :** The lubricating system should comprise of

- i. Lubricating Oil Pan.
- ii. Engine Mounted Lube Oil Pump - Gear Driven
- iii. Lubricating Oil Filter - Simplex Type Paper Element - Engine Mounted
- iv. Oil Filler Tube with Cap and Lube Oil Dipstick Oil Level Check - Engine Mounted
- v. Crank case breather

**2.8 Instrument Panel :** The instrument panel should include

- i. Lubricating oil pressure gauge
- ii. Lubricating oil temperature gauge
- iii. Water temperature gauge
- iv. Starting switch
- v. Ignition switch
- vi. Digital tachometer and hour meter
- vii. Ammeter

**2.9 Engine Safety Controls :** Engine mounted safety shut off / trip system for tripping the engine in the event of

- i. Low lubricating oil pressure
- ii. High cooling water temperature
- iii. Engine over speed

**2.10 Other Features :**

- i. Flexible coupling
- ii. Viscous vibration dampener
- iii. Flywheel with housing
- iv. Lifting eyes
- v. Coupling guard
- vi. Guards over belt drive (blower fan drive, water pump drive pulley, charging alternator drive pulley and timing pulley).
- vii. Standard painting
- viii. Suitable hand throttle control
- ix. Mechanical hour meter
- x. SAE standard rotation

N.B.:- Provision of guards over belt drives and couplings has become mandatory as per recommendations of OISD & DGMS bodies.

**3.0 General Notes :**

3.1 The engine should conform to ISO 3046 / IS 10000 / BS 5514 specifications and shall be rated for continuous power with an over load power rating of 110 % of the continuous power corresponding to engine application , for a period of 1 hr within a period of 12hrs of operation.

3.2 The bidder should submit the following information along with relevant performance rating curves and engine product catalogues

- i. Gross HP developed at rated RPM
- ii. Deduction for fan, charging alternator and other ancillary equipment
- iii. Net HP developed at rated RPM
- iv. Specific fuel consumption at rated power as well as 110%and 75% of rated load

**FOR ELECTRICAL ITEM, PLEASE REFER TO ANNEXURE II**

3.3 As the generating sets shall be deployed at various upcoming well head set ups as well as relocated from one installation to another as per operational needs, the engine should perform effectively for a range of values of the individual components of the fuel gas as provided below :

|                   |   |       |    |       |   |
|-------------------|---|-------|----|-------|---|
| METHANE           | : | 86.64 | -- | 91.72 | % |
| ETHANE            | : | 3.20  | -- | 5.60  | % |
| PENTANE           | : | 1.90  | -- | 1.00  | % |
| ISO-BUTANE        | : | 1.00  | -- | 0.06  | % |
| N-BUTANE          | : | 0.30  | -- | 0.01  | % |
| PENTANE +         | : | 0.96  | -- | 0.21  | % |
| NITROGEN          | : | 5.50  | -- | 0.20  | % |
| CARBONDIOXIDE     | : | 0.50  | -- | 1.20  | % |
| HYDROGEN SULPHIDE | : | 0.00  | -- | 0.00  | % |

3.4 A suitably selected flexible coupling should be incorporated to transfer power from the engine to the alternator. A guard should be provided to cover the same to meet OISD recommended norms.

3.5 The generating sets should be suitable for operation at the following site conditions :

|                                       |   |                 |
|---------------------------------------|---|-----------------|
| Maximum Temperature                   | : | 48 Deg C        |
| Minimum Temperature                   | : | 05 Deg C        |
| Maximum Relative Humidity at 21 Deg C | : | 100 %           |
|                                       |   | 35 Deg C : 95 % |
|                                       |   | 41 Deg C : 70 % |

3.6 Each engine alternator set should be mounted on a suitable base rail and the base rail should incorporate Anti-Vibration Mounting pads between the base rail and the customer foundation.

3.7 Bidder must submit filled in data sheet enclosed with the tender and must undertake that the equipment to be supplied are not going to be obsolete for next 10 years and provision for supplying spares of the equipment will be continued.

#### **4.0 Acoustic Enclosure :**

The generating set comprising of engine, alternator, control panel and other auxiliaries for each set should be placed inside an acoustic enclosure having the following salient features :

i. The acoustic enclosure should be of modular construction with the provision to assemble and disassemble easily at site. There should also be adequate provision of taking out the equipment for maintenance / repairing jobs and reinstalling the same after necessary corrective action.

ii. The noise level limit for the acoustic enclosure should be maximum 75 dB at 1M, as per recent Central Pollution Control Board, India, norms. The sound proofing of the enclosure should be done with high quality rock wool / mineral wool conforming to

IS 8183. The rock wool should be further covered with fibre glass tissue and perforated sheet.

iii. The weather- proof and corrosion resistant acoustic enclosure should be made out of cold rolled steel duly surface treated, phosphated and finally power coated for long lasting finish. The sheet metal components should preferably be hot dip, seven tanks pretreated before powder coating with special pure polyester based powder.

iv. Adequate ventilation should be provided to meet total air requirement. If felt necessary a suitably sized blower should be incorporated to meet total air requirement.

v. The temperature inside the enclosure should not exceed 5 Deg C beyond ambient. If necessary a high enclosure temperature trip as well as a thermostatically controlled blower may be installed to ensure the same.

vi. There should be a provision of emergency shut down of the generating set (Prime Mover) from outside the enclosure.

vii. The enclosure should have the sufficient space in and around the generating set to facilitate maintenance and operation of the set and there should be two numbers of earthing points on both sides for connecting the enclosure to the ground.

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

x. Enclosure illumination and power outlet.

**FOR ELECTRICAL SPECIFICATION, PLEASE REFER TO ANNEXURE II**

**5.0 Warranty :**

The warranty period for the Engine, Alternator and all other accessories should be a minimum of 18 months from the date of dispatch / shipment or 12 months from the date of commissioning. The relevant warranty /guarantee certificate should be submitted at the time.

**FOR ELECTRICAL PART, PLEASE REFER TO ANNEXURE II**

**6.0 Installation, Commissioning, Testing and Handing Over :**

Installation and Commissioning of the generating sets and control panels shall be carried out by the bidder in the

presence of OIL representatives at its fields at Duliajan, Assam (India). Services of qualified and competent personnel from equipment manufacturer is essential during installation and commissioning of the generating sets.

Materials such as line pipes, fittings necessary for fabricating fuel / water lines, supports for engine exhaust shall be provided by OIL. However bidder has to arrange welding and cutting facilities that may be required during installation and commissioning the generating sets. OIL will provide necessary statutory permits for welding and cutting jobs in classified areas as and when required.

Installation / commissioning charges should be quoted separately which shall be considered for evaluation of the offers. These charges should included amongst others to and fro fares, boarding / lodging and other expenses of the commissioning engineers during their stay at Duliajan, Assam (India). All Personal, Income and Service Tax etc. towards the services provided by the supplier shall be borne by the supplier and will be deducted at source. Bidders should also confirm about installation / commissioning in the Technical Bid.

Note : Once commissioned at designated sites, the generating sets will be subjected to a trial run on available load for a minimum period of 72 hrs continuously and on satisfactory performance shall be subsequently handed over to OIL.

**FOR ELECTRICAL PART, PLEASE REFER TO ANNEXURE II**

**7.0 Inspection and Testing :**

The generating sets including the control panels shall inspected and tested at manufacturers works / factory by OIL Engineer, as per relevant IS norms , prior to dispatch. Intimation must be sent to OIL at least 30 days in advance for inspecting the generating sets at manufacturer's premises.

The supplier shall submit detailed records and all relevant test certificates along with the delivery of the generating sets. The certificates should be forwarded in quadruplicate and those for electrical equipment should be endorsed - Suitable for use in the climatic conditions specified.

Inspection / testing charges, if any, shall be quoted separately which shall be considered for evaluation of the offers. The to and fro fares, boarding / lodging and other en route expenses of OIL's Inspection Engineers for carrying our inspection shall be borne by OIL.

Any offer not quoting the installation / commissioning and Inspection / testing charges shall be loaded with a maximum charges for the same received against the tender for the evaluation purposes. Moreover, bidders should categorically confirm about the Service / Income Taxes for evaluation purpose.

**FOR ELECTRICAL PART, PLEASE REFER TO ANNEXURE II**

**8.0 Packing :**

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

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

**9.0 Spares :**

List of spares along with their specifications, that shall be required for normal operation and maintenance of the generating sets and accessories for a period of two years, should be submitted along with the offers. Individual part numbers with unit prices thereof should be provided. However, cost of these spares will not be considered for evaluation.

**FOR ELECTRICAL PART, PLEASE REFER TO ANNEXURE II**

**10.0 Drawings / Documents :**

Foundation drawings for the gas engine driven generating set shall be forwarded within a month of placement of order. Six sets Spare Parts Catalogues, Operation Manuals, Workshop Manuals of equipment associated with the generating set should be provided.

i) The supplier should provide six sets each of parts list, operator's instruction manual and workshop maintenance manual covering all the items along with each generating set.

ii) One set of drawing showing installation details of the generating set, oilfield type skid, wiring diagram for the control panel (inclusive of float charger) and wiring drawing

between the alternator and control panel should be provide with each generating set..

iii) The supplier has to provide installation diagram of the set and performance data sheet along with the quotation.

iv) The supplier should provide the following information along with the generating sets

- a) Dynamic load
- b) Static load
- c) Any unbalanced load

**FOR ELECTRICAL PART, PLEASE REFER TO ANNEXURE II**

**11.0 After Sales Service :**

The nature of after sales service, which the supplier can provide during initial commissioning and also subsequently, should be clearly stated. Confirmation that all spares related to the generating sets and their accessories shall be available for a period of at least 10 years after delivery should be given.

Foreign bidder must have established service centre (s) in India or must agree to establish such a centre in India in the event of placement of Oil's firm order on them.

**12.0 DATA SHEETS :**

**12.1 DATA SHEET (ENGINE) :**

|  |  |
|--|--|
| MAKE   |  |
| MODEL  |  |
| NUMBER OF CYLINDERS  |  |
| ASPIRATION   |  |
| COMPRESSION RATIO  |  |
| SIZE ( BORE & STROKE)  |  |
| DISPLACEMENT   |  |
| RATED SPEED  |  |
| GROSS HP AT RATED RPM  |  |
| DEDUCTION FOR FAN, ALTD & TEMP                                       |  |
| NETT HP AVAILABLE AT RATED RPM                                       |  |
| SPECIFIC FUEL CONSUMPTION<br># 100% LOAD<br># 75% LOAD<br># 50% LOAD |  |
| LUB OIL CONSUMPTION ( LT/HR)   |  |
| GRADE & QUANTITY OF LUB OIL REQD                                     |  |
| COOLING SYSTEM CAPACITY  |  |
| MAKE & TYPE OF GOVERNOR  |  |
| SPEED DROOP  |  |

## 12.2 DATA SHEET (GENERATOR PACKAGE) :

|                         |  |
|-------------------------|--|
| LENGTH X WIDTH X HEIGHT |  |
| DRY WEIGHT              |  |

## 12.3 DATA SHEET OF ELECTRICAL EQUIPMENT / SERVICE :

The bidder shall furnish all the details point wise against each point of tender specification. Any deviation from the tender specification shall be categorically mentioned. All specific type of makes of components shall be mentioned.

## ANNEXURE II : DETAIL OF ELECTRICAL PART OF THE UNIT

### A. SPECIFICATION OF ALTERNATOR :

1. Make : KIRLOSKAR / NGEF / STAMFORD/  
CROMPTON GREAVES
2. Rated Output : 30 KVA continuous rating at 0.8 PF at specified ambient conditions for Motor loads
3. Rated Voltage : 415 Volts
4. Phase : 3 Phase 4 wire
5. Type : Brush less
6. Rated Frequency : 50 Hz
7. Rated power factor : 0.8 lagging
8. No. of Poles : 4
9. Class of insulation : Class F/H
10. RPM : 1500
11. Phase sequence : UVW - phase sequence and direction of rotation shall be clearly marked on the alternator.
12. Standard : Confirming to IS: 4722,13364 with latest amendments
13. Duty/load : Continuous base load duty for Motor Loads
14. Connection/ Winding : Y connected copper winding
15. Ambient : Min- 5 °C Max- 40 °C, RH 95% max
16. Alternators Enclosure Protection : IP 23
17. Alternators Terminal Box Protection : IP 54
18. Amplitude of vibration : Should be as per IS-12075
19. Excitation system : Brush less, self excited and self Regulated with solid state AVR
20. Mounting : Foot mounted on genset skid that has been mounted on anti vibration pad
21. Permissible voltage variation :  $\pm 2\%$  at rated speed, load and power factor
22. Permissible frequency variation : Generator should be able to give rated output at 2 % variation in rated frequency
23. Frame size : Bidder to confirm
24. Motor starting ability : 200 % of FLC for 10 sec with max. voltage dip of 20%.
25. Unbalanced current carrying capacity : 20 % of FLC

26. Short circuit current withstand capacity : 4 to 5 times FLC for 5 sec.
27. Cooling : Air cooled by integral fan
28. 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. All windings should be made from electrolytic grade copper of high purity. At nominal speed the excitation system must produce sufficient residual voltage in order to ensure self excitation.
29. The alternator shaft shall be supported on rolling element bearings at NDE.
30. Voltage swing (Transient response) when rated load is suddenly switched on should be maximum 10 % with 0.2 to 0.7 sec (Recovery time). Automatic voltage regulation  $\pm 0.5$  % to  $\pm 1.0$  % from no load to full load.
31. The alternator should be capable of sustaining a 10 % over load for one hour in any 12 hours operation.
32. The alternator should be capable of continuous operation over a range of 110 % of rated voltage.
33. Total voltage harmonic distortion should be less than 2 % between phases at no load.
34. The alternator should be capable of withstanding 1.2 times the rated speed for two minutes without any damage.
35. Alternator stator winding terminals are to be connected to 4 nos. of suitably rated tinned copper terminals supported on sheet molding compound (SMC) supports inside the alternator terminal box.
36. The alternator terminal box should be of suitable size and should be suitable for terminating one no. 4X 16 sq.mm PVC insulated and PVC sheathed, armored and stranded conductor copper cable approved by IS-1554. Separate cable box shall be provided for supporting power cable. Suitable size of heavy duty single compression cable gland should be fitted in the cable box. Cable gland and entry hole shall also be required for AVR cables as AVR shall be mounted in the control panel.
37. 2 nos. of earth points are to be provided on both sides of the alternator.
38. Lifting hooks are to be provided for lifting the alternator.
39. 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. AVR shall be suitable for motor loads.
40. Alternator windings and AVR should be suitable for humid atmosphere as per ambient conditions mentioned in the enquiry.
41. Bidder to mention efficiency of the alternator at 25%, 50%, 80% load at 0.8 pf.
42. Alternator frame should be made from MS or Cast steel.

## **B. SPECIFICATION OF CONTROL PANEL :**

Sheet steel clad, self supporting, floor mounting, cubicle type, dust and vermin proof generating set control panel made of 2mm thick MS CRCA sheet and built upon rigid framework, having front and rear hinged doors with danger plate fitted on both sides, lifting lugs on top, ventilation louvers on both sides, bottom detachable gland plates, double earthing studs on two sides, complete with suitably sized zinc passivated hardwares with heavy plain and spring washers. The panel doors should have neoprene rubber gasket. The panel should be designed and manufactured as per IS-8623. 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 tank anti corrosion treatment and then powder coated. Panel should be supported on frame of 3.15mm thick sheet metal 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. MCCB should trip on the following faults
  - i) Earth leakage, through earth leakage relay.
  - ii) Over load & short circuit. Tripping from inbuilt trip unit of MCCB.
  - iii) Low Engine Speed, through under frequency relay.
  - iv) Engine fault (Low lub oil, high water temp). Trip signal from engine protection switches, mounted on the engine and working on engine battery supply.
3. 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)
  - ii) 1 No. Voltmeter selector switch (Kaycee/ Salzer / L&T make)
  - iii) 1 No. M.C Ammeter, 1.0% accuracy, 96 sq.mm, 0-50 Amps, C.T. operated (AEL/L&T make)
  - iv) 1 No. Ammeter selector switch (Kaycee/ Salzer / L&T make)
  - 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)
  - 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)
  - vii) 1 No. Hour meter to indicate engine run hours (AEL / L&T make)
  - viii) 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. Lamps shall remain ON after tripping of MCCB. However, on engine

fault trip the engine will stop and the fault indicating LED shall remain powered from engine battery.

- a) Trip on earth fault.
- b) Set running.
- c) Low Engine speed
- d) Engine fault (Voltage same as engine battery voltage)

4. MAIN COMPONENTS : ( Mounted Inside the Panel )

- i) Panel should have one set of TP & N electrolytic grade, high conductivity, tinned copper bus-bars, made from electrolytic grade copper of 99.0 % purity, rated 100 amps and supported at required intervals to withstand short circuit fault levels up to 10 KA for 3 secs. Bus-bar support shall be non-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) 1 No. 125 Amps TP & N (Neutral bus to have removable link with bolt) CFS unit, fitted with 63 Amps HRC fuse, type: CMM (GEPC make)
- iii) 1 No. 100 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.
- iv) 1 No. 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 short circuit due to saturation. Similar to Cat No. (26092+ 26091) of Legrand. (Make GEPC /Legrand / Merlin Gerin).
- v) 1 No. Under Frequency Relay, solid state type, with electronic timer (0- 10 sec adjustable delay) for tripping the MCCB if the generator frequency is less than the set value (45hz to 49hz, adjustable in steps) for more than 5 sec. The relay should be EMC and immune to EMI approved per ISI/IEC. Make: GE/ABB/Merlin Gerin/Legrand/Schneider/L&T/Siemens for relay and L&T/GEPC/Siemens for timer.
- vi) 1 no. KWH meter integrating, electronic type suitable for balanced and unbalanced loads, C.T. operated, 3 ph, 4 wire. (Alstom/L&T make)
- vii) Bar Primary Resin cast CT of 50/5 ratio , 15 VA , class-1 conforming to IS 2705. No of CTs as per circuit requirement.
- viii) Auxiliary Relay / Contactor 240 AC with some spare contacts. Quantity should be as per the control circuit requirement. (L&T /Siemens/Schnieder make)
- ix) 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).

x) 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 approved by ISI, TAC, FIA. All wiring will have copper lugs & terminal blocks as required. Wiring for lighting circuit MCB, power outlet and wiring for CT will be done with 2.5 sqmm, flexible copper, 1100v grade PVC insulated wires approved by ISI, TAC, FIA & have ring type lugs. Colour code for wires shall be followed. Make: Finolex/ Havells.

ii) Output from the Alternator terminal box should be connected to control panel input with heavy duty 4 X 16 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 be mounted in control panel and its control 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) Engine control wiring will run from engine to control panel in heavy duty ISI approved galvanized flexible MS conduit supplied by the party.

v) Alternator to panel power cable, AVR cable shall be protected in their run from unit to control panel to avoid any damage.

vi) Alternator to panel power cable, AVR cable and engine protection cable conduit shall be protected in their run from unit to control panel to avoid any damage. The run where there will be movement of people shall be guarded with solid pipes.

vii) Suitable provision shall be made for safe routing of output cable from panel to outside of the unit. Opening in the acoustic enclosure should be guarded with rubber bush for safe passage of the outgoing power cable.

### **D. ENCLOSURE ILLUMINATION AND POWER OUTLET :**

Enclosure will have one no. of 20w FTL luminaire mounted on enclosure wall and wired with heavy duty PVC insulated and PVC sheathed armored, stranded copper cable approved by IS. Light will be switched from individual MCB, 6amp, C curve, mounted on control panel cover & have back-up HRC fuse and neutral link of 16 amp rating. One no. industrial type metallic plug socket of 10amp rating with 10 amp SP MCB as switch should also be fed from lighting circuit fuse. The socket should be mounted on the enclosure side. Power for lighting circuit and socket outlet should be taken from the main bus through HRC fuses.

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

#### **E. EARTHING :**

- i) The earthing scheme for the unit should be as per IS-3043.
- ii) Two nos. 25x3mm GI straps shall be suitably fixed inside the unit near the floor. Strap galvanization 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, each 10.0 mtr long ( Cable size and type- Heavy duty PVC insulated, PVC sheathed, flexible, single core, IS approved copper cables of 25 sqmm size) from neutral bus inside the panel. The other end of this cable shall be brought out of the enclosure for earthing. 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.
- iii) 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 10.0 mtr shall be provided and connected to these two straps for external earthing. The neutral earthing leads as mentioned under point no.2 above shall also be brought outside the enclosure for earthing of neutral separately. The free ends of these cables shall be crimped with heavy duty, tinned copper tubular lugs, marked with ferrules. Suitable opening with hinged cover shall be provided in the rear side of the unit to facilitate the entry of outgoing power cable and earth leads.

#### **F. DOCUMENTS (For Electrical part of genset):**

i) The following documents / drawings shall be submitted with the offer

- a) GA drawing
- b) Technical literature of alternator
- c) Detail comments point-wise against each point of tender specifications. Any deviation from the electrical specifications of the tender will be specifically mentioned by the party with proper justification. Acceptance of deviations at discretion of OIL. Type and make of components shall be mentioned and shall be as per tender. Equivalent make shall not be mentioned in list of make.
- d) Confirmation that the party agrees to all the points mentioned under electrical specification of genset.
- e) The undertakings from the manufacturers of generator and control panel stating that they have read and understood the complete tender specification and in the event of an order on the bidder the respective equipment supplied by them through the bidder will fully meet the tender specifications for rating, type, make and performance.

ii) 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

- a) GA drawing
- b) Documentary evidence from the manufacturer of generator confirming that the alternator to be supplied will meet all specifications as mentioned in the order. Technical catalogue of generator.
- c) Detailed power & control wiring diagram, detail enclosure drawings for control panel, earthing scheme.
- d) Layout plan of the unit showing all parts, cable routes.
- e) Illumination scheme with plug socket.
- f) Details of power cables, control cable and their routes.
- g) Bill of materials of all components.

iii) Six sets of following documents shall be submitted in bound form after commissioning of the genset

- a) GA drawing
- b) Detailed power & control wiring diagram, detailed enclosure drawings for control panel, earthing
- c) Scheme, layout plan of the unit showing all parts.
- d) Details of power cables, control cable and their routes.
- e) Bill of materials of all components.
- f) Technical literature of alternator.
- g) O&M manual.
- h) Catalogues of various components.
- i) All test certificates for tests done at manufacturer's works for alternator, control panel and complete unit.
- j) Tests done during commissioning.
- k) Guarantee certificate for alternator and control panel. Guarantee shall be for 12 months after commissioning of genset or 18 months after supply, whichever is earlier.
- l) List of recommended spares for two years.

## **G. GENERAL NOTES FOR ELECTRICAL ITEMS AND WORKS :**

i) In case of an order the complete electrical specification of the tender shall be mentioned in the order. However, deviations from tender specifications, as mentioned by bidder in their offer and subject to acceptance by OIL shall only be mentioned in the order.

ii) In the event of an order the bidder will submit all documents as per Para F.ii for Documents for OIL's approval.

iii) The manufacture of the unit shall start only after written approval of the drawings / documents (as per Para F.ii for documents) by OIL.

iv) The genset will be treated as successfully commissioned from electrical side after successful load test of the unit at OIL's field site with available load within the rated loading limits of the genset for 72 hrs, submission of all documents as per Para F.iii for documents of electrical specifications and supply of all spares as mentioned under para H of electrical specifications.

## **H. SPARES :**

Following spares shall be supplied by the party along with the genset. Cost of spares shall be included in the genset cost.

i) MCCB mounted in control panel- One no.

ii) AVR Unit for Alternator- One no.

iii) Spare diodes, Quantity and type - Same as fitted in the Rotating rectifier assembly of the generator.

## **I. INSPECTION AND TESTING :**

The complete unit/ alternator/ control panel shall be inspected and tested at manufacturer's works / factory by a team of OIL Engineers prior to dispatch. Amongst others, all routine tests of the alternator and control panel shall be witnessed during the inspection. Intimation for inspection of complete unit must be sent to OIL at least 30 days in advance.

All routine tests of the alternator and control panel shall be witness during the inspection at respective manufacturer's works. Prior information to be given to OIL.

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

Inspection / testing charges, if any, shall be quoted separately which shall be considered for evaluation of the offers. To and fro fares, boarding/ lodging and other en-route expenses of

OIL's Inspection team for carrying our inspection shall be borne by OIL.

**J. INSTALLATION / COMMISSIONING OF ELECTRICAL PART OF THE UNIT :**

Installation and Commissioning of the generating sets, control panels mounted on skid shall be carried out by the bidder in the presence of OIL representatives at its fields at Duliajan, Assam (India). Services of qualified and competent personnel from equipment manufacturer are essential during installation and commissioning of the generating sets. Persons engaged for installation, testing and commissioning of alternator and control panel should have valid electrical license. A person who is authorized for supervision of all electrical works should have supervisory license.

External power cable from control panel of the unit to the load center shall be provided by OIL and the party will connect the same to the genset control panel. Party shall connect the earthing loops (Four nos) of the unit to OIL's earth system using the 10.0 M long earth loops provided inside the unit.

The genset will be treated as successfully commissioned from electrical side after successful load test of the unit at OIL's field site with available load for 72 hrs and submission of all documents as per Para F.iii and all spares as per para H of electrical specifications.

**K. GUARANTEE :**

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

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**ANNEXURE - II**

**TO TENDER NO.DFD8826L09/08**

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

**(I) BID REJECTION CRITERIA (BRC)**

The bids must conform to the specifications and terms and conditions given in the enquiry. Bid shall be rejected in case the items(s) 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.1 BRC TECHNICAL:**

i) The gas engine should be a four stroke, naturally aspirated, radiator cooled engine, conforming to ISO 3046 / BS 5514 / IS 10000 standards and capable of developing a net minimum of 38HP at 1500 rpm with a maximum compression ratio of 10.5 : 1.

ii) The Alternator must be brushless type.

iii) Bidders should have the experience of successfully completing at least one order in the last 10 (ten) years before the bid closing date of this enquiry against supply, installation, commissioning and testing of Gas Engine driven Generating sets of capacity 30 KVA or above along with the Control Panels and accessories in PSUs, Central Govt. or any other reputed Company. Documentary evidence in this regard must be provided along with the quotation failing which offer will be rejected.

iv) Bidder should be an OEM or authorized dealer of OEM for the engine , alternator , the complete generating set an OEM approved assembler of generating sets or his authorized representative .

v) If the bidder is an OEM of engine or their authorized dealer then he must purchase the Alternator from OEM of Alternator or their authorized dealer and vice versa and necessary documentary certificates from the OEM must be submitted along with the offer.

vi) If the bidder is an OEM approved assembler of generating sets, he must purchase the engine and the Alternator from OEM or their authorized dealers. Documentary evidence in this regard must be enclosed with the offer failing which offer will be rejected.

(vii) Bidder must submit filled in data sheet enclosed with the enquiry.

## **A.2 BRC COMMERCIAL:**

1.0 Bids are invited under **Single Stage Two Bid System**. Bidders shall quote accordingly under **Single Stage Two Bid System**. The "**TECHNICAL**" and "**COMMERCIAL**" bids shall be prepared separately in triplicate and the same should be kept in two separate envelopes superscribing the Enquiry No., Brief Material Description & Bid Closing Date and clearly writing on the cover of the two envelopes as "**TECHNICAL**" and "**COMMERCIAL**". Both the envelopes should then be kept in one envelope, duly sealed, superscribing the Enquiry No., Brief Material Description and Bid Closing Date on the cover. The Technical Bid should contain all the techno-commercial details of the offer including the commercial terms and conditions excepting the prices which should be kept blank.

2.0 The Commercial Bid should contain the Price Schedule as per Para 11.0 below including all the commercial terms and conditions of the offer. Any offer not complying with the above will be rejected straightway.

3.0 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.

4.0 Bidders must confirm that Goods, materials or plant(s) to be supplied shall be new of recent make and of the best quality and workmanship and shall be guaranteed for a period of eighteen months from the date of shipment/dispatch or twelve months from the date of commissioning whichever is earlier against any defects arising from faulty materials, workmanship or design. Defective goods / materials or parts notified by OIL shall be replaced immediately by the supplier at the supplier's expenses. The relevant Warranty / Guarantee Certificate should be submitted at the time of delivery of the Alternator and Control Panel. Test Certificate of the Alternator should be submitted at the time of delivery.

5.0 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.

6.0 Bidders shall quote directly and not through Agents in India. Offers made by Indian Agents on behalf of their foreign principals will be rejected. Similarly offers from unsolicited bidders will be rejected.

7.0 Original offer should be submitted in sealed envelope. No offers should be sent by Telex, Cable, E-mail or Fax. Such offers will not be accepted.

8.0 Validity of the bid shall be minimum 180 days. Bids with lesser validity will be rejected.

9.0 Bids containing incorrect statement will be rejected.

10.0 Bids shall have no inter-lineation, erasures or overwriting except as necessary to correct the errors made by the bidder, in which case, such corrections shall be initiated by the person signing the bid. Any bid not meeting this requirement shall be rejected.

11.0 Bidders are required to submit the summary of the prices in their commercial bids as per bid format (Summary), given below :

(i) Commercial Bid Format ( SUMMARY ) for Foreign Bidders :

- (A) Total Material Cost of 1 No. Gen. Set
- (B) Cost of Commissioning spares, if any
- (C) Grand Total Material Cost, ( A + B ) above
- (D) Packing & FOB Charges
- (E) Total FOB value, ( C + D ) above
- (F) Ocean Freight up to Kolkata, India
- (G) Insurance Charges
- (H) Total CIF Kolkata, ( E + F + G ) above
- (I) Installation / Commissioning Charges including Income / Service Tax
- (J) Inspection / Testing charges, if any
- (K) Total Value, ( H + I + J ) above
- (L) Total value, in words :
- (M) Gross Weight :
- (N) Gross Volume :

(ii) Commercial Bid Format ( SUMMARY ) for Indigenous Bidders :

- (A) Total Material Cost of 1 No. Gen Set
- (B) Cost of Commissioning spares, if any
- (C) Grand Total Material Cost, ( A + B ) above
- (D) Packing and Forwarding Charges
- (E) Total Ex-works value, ( C + D ) above
- (F) Excise Duty, ( Please indicate applicable rate of duty )
- (G) Education Cess @ 2 % on ED
- (H) Sales Tax, ( Please indicate applicable rate of Tax )

- (I) Total FOR Manufacturing station price, (E + F + G + H ) above
- (J) Road Transportation charges
- (K) Insurance Charges
- (L) Installation / Commissioning Charges including Income / Service Tax
- (M) Inspection/ Testing charges, if any
- (N) Total Value ( I + J + K + L + M )
- (O) Total value in words :
- (P) Gross Weight :
- (Q) Gross Volume :

NOTE : Since the Gen Set covered in this tender will be used by OIL in non-eligible areas, so Indigenous bidders will not be eligible for Deemed Export Benefit.

13.0 Installation / Commissioning charges should be quoted separately which shall be considered for evaluation of the offers. These charges should include amongst others, to and fro fares, boarding / lodging and other expenses of the Commissioning Engineers during their stay at Duliajan, Assam (India). All Personal, Income and Service Tax, etc towards the services provided by the supplier shall be borne by the supplier and will be deducted at source. Bidder should also confirm about providing all these services in the Technical Bid.

14.0 Inspection / Testing charges, if any, shall be quoted separately which shall be considered for evaluation of the offers. The to and fro fares, boarding/lodging and other en route expenses of OIL's Inspection Engineers for carrying out inspection shall be borne by OIL. Any offer not quoting the installation / commissioning and Inspection / Testing charges shall be loaded with the maximum charges for the same received against the tender for evaluation purposes. Moreover if any bidder does not categorically confirm about the Service / Income Taxes etc. in their offer, then such offers shall be loaded with the applicable rate of Tax for evaluation purposes.

## **(II) BID EVALUATION CRITERIA (BEC)**

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

### **A.1 BEC COMMERCIAL:**

1.0 The evaluation of bids will be done as per the Commercial Bid Format (SUMMARY) detailed vide para 11.0 of BRC.

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 For conversion of foreign currency into Indian currency, B.C. selling (Market) rate declared by State Bank of India, one day prior to the date of price bid opening shall be considered. However, if the time lag between the opening of the bids and final decision exceed 3(three) months, then B.C. Selling(Market) rate of exchange declared by SBI on the date prior to the date of final decision shall be adopted for conversion and evaluation.

4.0 Offers not complying with the payment terms indicated in the tender shall be loaded with one percent above the prevailing Bank rate (CC rate) of State Bank of India for evaluation purposes.

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

5.1 When only foreign bids are involved :

Comparison of bids will be done on the basis of "Total Value" which is estimated as under :

- (A) Total Material Cost of 1 no. Gen Set
- (B) Cost of Commissioning spares, if any
- (C) Grand Total Material Cost, ( A + B ) above
- (D) Packing & FOB Charges
- (E) Total FOB Value, ( C + D ) above
- (F) Ocean Freight up to Calcutta, India (as quoted)
- (G) Insurance Charges @ 1% of Total FOB Value vide ( E ) above
- (H) Banking Charges @ 0.5% of Total FOB Value vide ( E ) above in case of payment through Letter of Credit ( If confirmed L/C required, 1.5% of Total FOB Value will be loaded )
- (I) CIF Calcutta Value, ( E + F +G + H ) above
- (J) Installation / Commissioning charges including Income & Service Tax
- (K) Inspection / Testing charges, if any
- (L) Total Value, ( I + J + K ) above

**NOTE** : Banking charges in the country of the foreign bidder shall be borne by the bidder.

5.2 When only domestic bids are involved :

Comparison of bids will be done on the basis of "Total Value" which is estimated as under:

- (A) Total Material Cost of 1 no. Gen Set
- (B) Cost of Commissioning spares, if any
- (C) Grand Total Material Cost, ( A + B ) above
- (D) Packing and Forwarding Charges
- (E) Total Ex-works value, ( C + D ) above
- (F) Excise Duty, ( Please indicate applicable rate of duty )
- (G) Education Cess @ 2 % on ED
- (H) Sales Tax as applicable, on ( E ) above
- (I) Total FOR Manufacturing station Value, ( E + F + G + H ) above
- (J) Transportation charges to Duliajan (as quoted )
- (K) Insurance charges @ 0.5% of Total FOR Mfg Station Value ( I ) above
- (L) Total FOR Destination value, ( I + J + K ) above
- (M) Installation / Commissioning Charges including Income & Service Tax
- (N) Inspection / Testing charges, if any
- (O) Total value, ( L + M + N ) above

5.3 When both Foreign and Domestic bids are involved :

The Total Value of domestic bidder (inclusive of customs duty on imported raw material and components etc, and applicable terminal excise duty on the finished products and Sales Tax) excluding inland transportation to destination and Insurance charges worked out as per para 5.2 above and Total Value of the foreign bidder worked out as per para 5.1 above excluding inland transportation to destination will be compared. No price preference will be allowed to indigenous bidders except that for capital goods, the domestic manufacturers would be accorded a price preference to offset CST to the extent of 4 % or actuals, which ever is less subject to 30 % local content norms as stipulated for World Bank Funded project to the satisfaction of OIL. When more than one domestic bidder falls within price preference range, inter-se-ranking will be done on Total Value basis.

5.4 Other terms and conditions as per MM/Global/01/2005 shall be applicable. However, if any of the Clauses of the Bid Rejection Criteria / Bid Evaluation Criteria (BEC / BRC) contradicts the Clauses of the tender and / or MM/Global/01/2005 elsewhere, those in the BEC / BRC shall prevail.

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**ANNEXURE - III**

**TO TENDER NO. DFD8826L09/06**

**TECHNICAL CHECK-LIST**

| <b>SRL. NO.</b> | <b>DETAIL</b>  | <b>BIDDER RESPONSE</b> |
|-----------------|--|------------------------|
| 1               | Whether quoted as OEM or authorized dealer of Engine and whether documentary evidences submitted ?         | YES/NO                 |
| 2               | Whether quoted as OEM or authorized dealer of Alternator and whether documentary evidences submitted?      | YES/NO                 |
| 3               | Whether quoted as OEM or authorized Dealer of Generating set and whether documentary evidences submitted ? | YES/NO                 |
| 4               | Whether quoted as OEM approved Assembler or his authorized representative ?                                | YES/NO                 |
| 5               | Whether separately highlighted any deviation from the technical specification ?                            | YES/NO                 |
| 6               | Whether six sets of installation / commissioning , Maintenance Manual shall be submitted ?                 | YES/NO                 |
| 7               | Whether spare parts shall be available for 10 years after supply of the equipment ?                        | YES/NO                 |
| 8               | Whether Net HP of the offered Engine is at least 38 HP ?   | YES/NO                 |
| 9               | Whether the offered engine is naturally aspirated ?  | YES/NO                 |
| 10              | Whether compression ratio limited to 10.5:1 ?  | YES/NO                 |
| 11              | Whether offered engine conforms to ISO 3046 / IS 10000 / BS 5514 specifications ?                          | YES/NO                 |
| 12              | Whether quoted for supply, installation, commissioning & handing over of Gen Set ?                         | YES/NO                 |

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**ANNEXURE - IV**

**TO TENDER NO. DFD8826L09/06**

**COMMERCIAL CHECK LIST**

[THE FOLLOWING CHECK LIST MUST BE COMPLETED AND RETURNED WITH THE OFFER. PLEASE ENSURE THAT ALL THESE POINTS ARE COVERED IN YOUR OFFER. THESE WILL ENSURE THAT YOUR OFFER IS PROPERLY EVALUATED. PLEASE TICK MARK 'YES' OR 'NO' TO THE FOLLOWING QUESTIONS, IN THE RIGHT HAND COLUMN.

|    |  |        |
|----|--|--------|
| 1  | Whether Original Signed quotation submitted ?  | YES/NO |
| 2  | Whether 3(three) copies of quotations submitted ?  | YES/NO |
| 3  | Whether submitted bid under Two Bid System ?   | YES/NO |
| 4  | Whether offered firm prices ?  | YES/NO |
| 6  | For Foreign Bidders only - Whether offered FOB port of dispatch including sea worthy packing & forwarding? | YES/NO |
| 7  | For Indian Bidders only - Whether offered Ex-works price including Packing/forwarding                      | YES/NO |
| 8  | Whether Price Bid submitted as per Price Schedule (refer Para 12.0 of BRC vide Annexure - II) ?            | YES/NO |
| 9  | Whether quoted any deviation ?   | YES/NO |
| 10 | Whether deviation separately highlighted ?   | YES/NO |
| 11 | Whether indicated ocean freight up to C&F Kolkata port (Excluding marine insurance) ?                      | YES/NO |
| 12 | Whether indicated firm delivery period ?   | YES/NO |
| 13 | Whether specified an offer validity of 6 months from the bid closing date ?                                | YES/NO |
| 14 | Whether indicated the country of origin for the items quoted ?   | YES/NO |
| 15 | Whether technical literature / catalogue enclosed ?  | YES/NO |
| 16 | Whether all the items of the tender quoted ?   | YES/NO |
| 17 | Whether Indian Agent applicable ? If Yes :   | YES/NO |
|    | (a) Name & address of the agent in India   |        |
|    | (b) Amount of agency commission  |        |
|    | (c) Whether the agency commission included in material value ?   | YES/NO |

|    |  |        |
|----|--|--------|
|    | (d) If the agent is to receive annual retainer fee, the details about the quantum thereof.   | YES/NO |
| 18 | Whether weight & volume of the items offered indicated ?   | YES/NO |
| 19 | Whether confirmed acceptance of tender Payment Terms of 80% against shipment/dispatch documents and balance 20% after successful commissioning along with commissioning charges ?        | YES/NO |
| 20 | Whether commissioning charges applicable, if Yes, whether quoted separately ?  | YES/NO |
| 21 | Whether confirmed that installation / commissioning will be carried out ?  | YES/NO |
| 22 | Whether installation / commissioning charges separately quoted ?   | YES/NO |
| 23 | Whether to & fro air fares, boarding/lodging of your personnel for installation / commissioning at Duliajan, Assam (India) included in the quoted installation / commissioning charges ? | YES/NO |
| 24 | Whether Service Tax, Income Tax etc. towards Services provided under installation / commissioning are included in the charges quoted ?   | YES/NO |
| 25 | Whether agree for Pre-despatch inspection ?  | YES/NO |
| 26 | Whether Pre-Despatch inspection charges are involved ?   | YES/NO |
| 27 | Whether Pre-Despatch inspection charges separately quoted ?  | YES/NO |
| 28 | Whether confirmed to provide after sales services in the event of an order ?   | YES/NO |
| 29 | Whether spare parts would be available at least for ten years ?  | YES/NO |
| 30 | For indigenous bidders - Whether all applicable Taxes / Duties including Service / Income Tax quoted ?   | YES/NO |
| 31 | Whether Guarantee / Warranty for 1 year from commissioning or 18 months from shipment / dispatch quoted ?  | YES/NO |
| 32 | Whether all BRC / BEC clauses accepted / complied ?  | YES/NO |

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