



**OIL & GAS DEVELOPMENT COMPANY LIMITED**  
**PROCUREMENT DEPARTMENT (LOCAL), ISLAMABAD**  
**SCHEDULE OF REQUIREMENT**

Material : **SUPPLY INSTALLATION & COMMISSIONING OF 300KVA DIESEL  
GENSET WITH ATS PANELS VFD PANELS**

**Due Date:**

Tender Enquiry No: **PROC/LE/17538/18**

Bid Bond Value : RS. 650,000/-

Attachment(if any) : YES

EVALUATION WILL BE CARRIED OUT ON FULL

Sr No	Description	Quantity	Make/Brand offered	Unit	Unit Price (PKR) Inclusive Of All Taxes Except GST	Unit Price (PKR) Inclusive of GST	Total Price (PKR) Inclusive of GST	Delivery Period Offered	deviation from Tender Spec. If Any
1	SUPPLY,INSTALLATION &COMMISSIONING OF 300 KVA DIESEL GENSET WITH ATS PANELS,VFD PANEL etc.TOR WITH DETAIL SPECS ATTACHED.	1		Number					
2	OIL(LUBE)FILTER, (ASY DIESEL ENGINE)	24		Number					
3	FUEL FILTER(ASY DIESEL ENGINE)	24		Number					
4	ELEMENT (WATER) FILTER	12		Number					
5	AIR FILTER	4		Number					
6	VEE BELT	2		Number					
7	HEATER WATER JACKET ASSY(HEATER GPI)	1		Number					

**Special Note:-** The prospective bidders also download the master set of Tender Document

- The prospective bidders may keep in touch with OGDCL web site for downloading the clarifications/amendments (if any) issued by OGDCL.
- I. DELIVERY AT BASE STORE ISLAMABAD WITH IN 120 DAYS AFTER LPO. II. PAYMENT TERM IS PAYMENT AFTER DELIVERY/INSTALLATION. III. BID VALIDITY IS 120 DAYS

Discount (if any) shall only be entertained on Schedule of Requirement of Bidding Document (Financial Proposal). If the discount is mentioned elsewhere in the bid, the same shall not be entertained.



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**Mandatory Checklist**

Please confirm the compliance of the following mandatory information along with the bid(s) (failing which bids(s) will not be accepted)

Documents	To be Attached with the Technical/Financial Bids	Compliance	
		Yes <input type="checkbox"/>	No <input type="checkbox"/>
Original Bid Bond	Technical Bid	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Copy of NTN Certificate	Technical Bid	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Copy of GST Certificate	Technical Bid	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Confirmation that the Firm is appearing on FBR's Active Taxpayer List	Technical Bid	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Duly signed and stamped <b>Annexure-A (Un-priced)</b>	Technical Bid	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Duly filled, signed and stamped <b>Annexure-B</b>	Technical Bid	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Duly filled, signed and stamped <b>Annexure-D</b>	Technical Bid	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Duly filled, signed and stamped <b>Annexure-L</b> on Company's Letterhead	Technical Bid	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Duly signed and stamped <b>Annexure-M</b> on Company's Letterhead	Technical Bid	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Duly signed and stamped <b>Annexure-N</b> on Non-Judicial Stamp Paper duly attested by Notary Public	Technical Bid	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Duly filled, signed and stamped <b>Annexure-A (Priced)</b>	Financial Bid	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Duly filled, signed and stamped <b>Annexure-C</b>	Financial Bid	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Duly filled, signed and stamped <b>Annexure-E</b>	Financial Bid	Yes <input type="checkbox"/>	No <input type="checkbox"/>

# TOR

## FOR THE SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF A 300 KVA GENSET WITH ATS PANELS FOR FIRE LIFT AND FIRE PUMPS INSTALLED AT OGDCL HOUSE

1.1. OGDCL intends to purchase a 300 KVA Generator for the Fire Lift and Fire Pumps installed at the OGDCL H.O. in case of any fire emergency.

As per recommendations of Safety Audit conducted by M/s URS based on "CDA Building Standard for Fire Prevention and Life Safety 2010"; the "**Fire Lift**" installed at the H.O. will be used only by the Fire Crew during an emergency. This "Fire Lift" needs an external source of power supply in case of any emergency when WAPDA is cut off and backup Generators are shut down. Furthermore, according to health and security suggestions, the Fire Pumps are lacking any additional/external source of power supply in case of a fire emergency when WAPDA power failure is terminated and Backup Generators are shut down. In view of aforementioned circumstances, OGDCL intends to purchase a 300 kVA Generator for the Fire Lift and Fire Pumps in case of any fire incident.

- Supply and Installation of a Diesel Generator Set of 300 kVA/240 kW Standby Power at 1500 RPM, 50 Hz, 0.8 PF & 400 V.
- Supply of Automatic Transfer Switch (ATS) Panels (2 No.) with Manual Override System (MOR) for Fire Lift and Fire Pumps (to be installed in the Lifts Control Room near the panel of the lift and alongside the Fire Pumps at the B-2 Floor).
- Supply and Installation of Distribution Boxes
- Supply of Cable Tray (6" x 3") for laying of cable for Fire Pump and Cable Tray (4" x 3") for laying of cable for Fire Lift (cables will be running inside the building in GI raceways ducts).

1.2. Equipment installed at OGDCL HO for which the Generator is required:

- 01 No Fire Lift operated with 22 kW motor.
- 02 Fire Pumps of 100 HP each (one of them operative while one stand by).
- 01 Jockey Pump of 15 HP for sustain the fire lines pressurized.

  
Najeeb-ur-Rahman Muhammad  
Dy. Chem. Engineer (Elect.)  
Administration Department  
Oil & Gas Development Company Ltd.



**1.3. Scope of Work:**

**THE SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF A 300 KVA GENSET WITH ATS PANELS FOR FIRE LIFT AND FIRE PUMPS INSTALLED AT OGDCL HOUSE**

S #	DESCRIPTION	QTY
1	<b>Supply , Installation, Testing &amp; Commissioning of Diesel genset, not less than 300 KVA / 240 KW( SITE RATING AT 50°C &amp; 550 M ALTITUDE)</b> prime power at 1500 RPM,3-phase ,50 Hz , 400/230 volts, direct injection ,turbo charged, after cooled ,having EMCP or equivalent control panel, with Weather & soundproof canopy, tool kit, 2-years recommended spares (Part No & Qty be mentioned against each item) , D.G set should be completed with safety devices( detail of safety devices should be given).	01 job
2	<b>Supply , Installation, Testing &amp; Commissioning of Distribution Box "1" (LV-SWG-1)</b> <b>Incoming:</b> 1. MCCB 630A TP, 1 No. 2. Full metering (voltage and ampere) 3. MCB 4A SP, 3 Nos. <b>Outgoing:</b> 1. MCCB 400A TP, 1 No. 2. MCCB 125A TP, 1 No. (Breaker Make: Schneider /Terrasaki )	01 job
3	<b>Supply, Installation, Testing &amp; Commissioning of Automatic transfer Switch (ATS-MOR-1) For Fire Pumps</b> <b>Incoming:</b> 1. Magnetic Contractor 500A TP@ AC3, 2 Nos. 2. MCCB 400A TP, 3 Nos. 3. ATS Control Accessories, 1 Lot. <b>Outgoing:</b> 1. MCCB 400A TP, 1 No. (For Fire Pump) MCCB 100A TP, 1 No. (For Jockey Pump) .....(Breaker Make: Schneider /Terrasaki)	01 job
4	<b>Supply , Installation, Testing &amp; Commissioning of Automatic transfer Switch ATS(MOR) 2 For Fire Lift</b> <b>Incoming:</b> 1. Magnetic Contractor 150A TP@ AC3, 2 Nos. 2. MCCB 125A TP, 3 Nos. 3. ATS Control Accessories, 1 Lot. <b>Outgoing:</b> 1. MCCB 125A TP, 1 No. (For Lift) )..... (Breaker Make: Schneider /Terrasaki)	01 job
5	<b>Supply , Installation, Testing &amp; Commissioning of Variable Frequency Device (VFD) 75 KW(01 No) Bypass Panel for the fire pump</b>	01 Job
6	Supply, laying & termination of <b>power cable 1C-240mm<sup>2</sup>, PVC/PVC (Make: Pakistan Cables)</b> , from the Distribution Box '1' to the Fire Pumps at the B-2 Floor. (installation complete in all respects) (approximate length of power cable is <b>250 meters</b> however charging will be made as per actual Length of the power cable used))	01 job
7	Supply, laying & termination of <b>power cable 4C-35 mm<sup>2</sup>, PVC/PVC (Make: Pakistan Cables)</b> , from the Distribution Box "2" to the Lift Room at the 17 <sup>th</sup> Floor; installation complete in all respects (approximate length of power cable is <b>130 meters</b> however charging will be made as per actual Length of the power cable used))	01 job

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Dy. Chief Engineer (Elect.)  
Administration Department  
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8	Complete earthing system for the generator set consisting of <b>02 earth</b> pits for the generator set using <b>1Cx70mm<sup>2</sup> earth cables</b> & 2 each earth pit.	01 job
9	Supply, laying & termination of Control Cable 4C-2.5mm <sup>2</sup> , complete in all respect (approximate length of power cable is <b>200 meters</b> however charging will be made as per actual Length of the cable used))	01 Job
10	Supply, laying & termination of Cable Tray (6" X 3" ) for laying of cable for Fire Pump including hangers, rod etc., complete in all respect(cables will be running inside the building in <b>GI raceways ducts</b> ). (approximate length is <b>35 RFT</b> however charging will be made as per actual used))	01 job
11	Supply, laying & termination of Cable Tray (4" X 3" ) for laying of Lift cable , including hangers, rod etc., complete in all respect(cables will be running inside the building in <b>GI raceways ducts</b> ). (approximate length is <b>270 RFT</b> however charging will be made as per actual used)	01 job
12	Foundation Pad & Anchor Bolting Of Gen-set Included With All Civil Materials	01 job
13	Loading, unloading and installation of Genset on the steel structure.	01 job

## 2. Genset's specification:

### 2.1. Technical Specification:-

Diesel Generator Set, Direct Injection, Turbo Charged, After Cooled, not less than 300 KVA/ 240 KW Prime Power( SITE RATING AT 50°C & 550 M ALTITUDE) at 1500 Rpm, 0.8 Power Factor, 3-Phase, 50 Hz, 400/230 Volts

Note: The following manufacturers OR Equivalent will be acceptable:

- i) **For Engine:** Caterpillar, Cummins, Detroit, Perkins
- ii) **For Alternator:** Caterpillar, New-age Stamford, Siemens

### 2.2. Salient Features:-

- Control Panel EMCP 3 Or Equivalent
- Air Cleaner With Service Indicator
- Radiator Fan & Drive
- Muffler
- Flexible Fitting
- Exhaust Outlet Flange
- Primary & Secondary Fuel Filters
- Fuel Cooler
- Generator Permanent Excited( Class H Insulation, Class F Temp Rise)
- Explosion Relief Valve (for crankcase protection)
- Digital Voltage Regulator
- Oil Drain Line With Valve
- Battery Set
- Battery Charger
- Charger Alternator
- Emergency Stop Push Button
- Tool Kit
- Manuals ( Workshop manual, operation maintenance & parts catalogue for engine, alternators and radiator/ fan drive system)

### 2.3. Air Inlet

- Single Element Canister Type Air Cleaner
- Service Indicator

### 2.4. Cooling

- Radiator with Guard
- Coolant Drain Line with Valve
- Fan & Belt Guards

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- Extended Life Coolant
- Radiator Duct Flange
- Coolant Level Sensor

#### 2.5. Generator

- Permanent Magnet Excited
- Class H Insulation
- Class F Temp (105°C Prime/ 130 °C Standbys)
- Anti-Condensation Space Heaters
- Winding Temp Detectors

#### 2.6. Power Termination

- Bus Bar
- Bottom Cable Entry

#### 2.7. Control Panel

- User Inter Face Panel (UIP), Rear Mount
- EMCP 3 or Equivalent, Gen Set Controller
- Voltage & Speed Adjust
- Digital Voltage Regulator with KVAR/PK Control, 3 Phase -Sensing
- Load Share Module
- Emergency Stop Push Button
- Front Text Alarm

#### 2.8. Protection System:

The protection system should be supplied with the panel to protect the Generator against unusual circumstances. The protection system should have following equipment/ protection systems:

- Emergency Stop Push Button.
- Generator Over current Protection.
- Reverse Current Protection.
- Generator over/under voltage Protection.
- Excitation over-current Protection.
- Excitation over-Voltage Protection.
- Generator over speed Protection.
- Stator/Rotor earth fault protection

#### 2.9. Lube

- Lubrication Oil & Filter
- Oil Drain Line with Valves
- Fumes Disposal
- Gear Type Lube Oil Pump

#### 2.10. Mounting

- Formed Steel Welded Base
- Anti-Vibration Mounts

#### 2.11. Starting /charging

- 24 v starter motor
- Batteries with rack & cable
- Battery disconnect switch

#### 2.12. Exhaust:

- A standard type silencer complete with companion flanges, and flexible stainless steel exhaust pipe/fitting properly sized shall be furnished and installed according to the manufacturer's recommendation. Exhaust pipe size shall be sufficient to ensure that exhaust backpressure does not exceed the maximum limitations as specified by the engine manufacturer. The exhaust emission standard for diesel generators should not be less than EURO-II

### 2.13. Fuel

- Primary Fuel Filter with Water Separator
- Secondary Fuel Filter
- Fuel Priming Pump
- Flexible Fuel Lines
- Fuel Cooler

### 2.14 Fuel Storage System

- Imported day fuel tank skid mounted type, built in the base of gen-set not less than 800 liters capacity.

### 2.15 Sound Attenuated and Weather Proof Canopy/Enclosure

- 12 and 14 gauge steel construction or better.
- Sound attenuation Level I: 85 d(B)A
- Compact footprint, low profile design
- Easy access to all major generator and engine control components for servicing
- Fully-house, enclosed exhaust silencer ensuring safety and protects against rust
- Enclosure, generator set, exhaust system and tank should pre-assembled, pre-integrated and shipped as one package
- Enclosures mounted directly to a sub-base fuel tank or lifting base
- UL2200-listed
- Super structure doors and roof.
- Fresh air provided through acoustic louvers
- No de-rating during running of DG Set with all the doors closed within ambient temperature of 50 degree C.
- Radiator exhaust outlet through Acoustic louvers and upward Acoustic duct to control outgoing noise.
- Hinged and lockable door all around Canopy for easy access to DG-Set for routine maintenance
- Doors will be sealed with heat resistant imported self-gripping rubber gas kit
- Stainless steel hinges with greasing nipple.
- Canopy Structure Skid mounted type.
- DG set can be easily removed for any major overhauling
- Enclosed exhaust silencer improves safety and protects against rust
- Designed for ambient temperatures up to 50 °C (122 °F)

### 2.16 Testing

- Full load test shall be conducted as detailed below:
- DG Set running at 50% Load 1 HR
- DG Set running at 75% Load 2 HR
- DG Set running at 100% Load 1 HR
- DG Set running at 110% Load 1 HR

### 2.18 ATS/MOR Panels

- 3-Pole 500A for fire Pumps & 150 A rating For Fire lift(Detail mentioned in Sr# 3 & 4 of Scope of work)
- Microprocessor control - Easy-to-use, standard control. LEDs displays transfer switch status; pushbuttons allow operator to activate control test, exercise timing and transfer mode.
- Advanced transfer switch mechanism – True transfer switch mechanism with break-before-make action.
- Manual operation – Standard removable handle can be used to manually operate the switch after the power source has been properly disconnected.
- Positive interlocking - Mechanical and electrical interlocking prevent source-to-source connection through the power or control wiring.
- Main contacts -Silver alloy contacts with multi-leaf arc chutes are rated for 100% load interruption. They require no routine contact maintenance and provide 100% continuous current ratings.
- Easy to service – Single-plug harness connection and compatible terminal markings simplify servicing. Access space is ample. Door-mounted controls are field-programmable; no tool should be required.
- Complete product line
- Warranty and service – Product should be backed by a comprehensive warranty and a worldwide network of distributors with factory-trained service technicians.



**3. TERMS & CONDITIONS FOR THE BIDDERS:**

- 3.1 The bidder must have Original Warranty Master of Engine, Genset and Alternator. Warranty of Genset by OEM should be for one year or 8000 hours from commissioning or 24 months from the date of supply. Warranty of 01 year for all the supply items.
- 3.2 Generator should be Capable to Run on Continuous Duty & Power guaranteed at 50° C & 550-meter altitude. Detailed specs of Generator must be provided.
- 3.3 Documentary proof that quoted DG model is based in Pakistan at more than 30 sites Authority can visit and check the site without any prior information to the bidder.
- 3.4 Bidder should be OEM or authorized dealer of OEM .Authorization Dealer Ship Certificate issued by OEM on its letter head. Further, the Engine & generator being supplied must be supported by warranty of OEM through local agent.
- 3.5 Engine, Alternator, Control Panel and all other parts should be manufactured and assembled/coupled by OEM in its facility. Further, OEM should be in manufacturing business of gensets for last 10 years
- 3.6 The financial bid should include the cost of supply, installation, testing & commissioning of Genset, ATS panels and other allied equipment.
- 3.7 The bidder shall supply all necessary tools required for routine operation & maintenance with generator. A list of the tools should be provided with the technical proposal.
- 3.8 The vendor shall submit with the quotation comprehensive fully detailed schedules of spare parts with separate prices of each covering all equipment during construction/commissioning/start-up and 2 years operation. All spare parts supplied shall be new and fully interchangeable with the main equipment being supplied. The un-priced list of spare parts must be provided with technical bid for review. These spare parts shall be delivered at the same time as the main equipment. The spare parts for start-up and operation shall be packed separately. The spare parts for two-year operation will be included in the financial evaluation.

List of spare parts for two-year operation

S #	Description	Qty
1	FILTER A OIL (LUBE) ASY DIESEL ENGINE	24
2	FILTER AS FU ASY DIESEL ENGINE	24
3	ELEMENT (WATER) FILT	12
4	ELEMENT AS (AIR FILTER)	04
5	VEE BELT	02
6	HEATER WATER JACKET ASSEMBLY(HEATER GP)	01

- 3.9 The successful bidder will provide hard & soft copies (02 set each) of the following literature with the Generator Set supplied.
  - Service, operation, Spare Parts and workshop manual for Diesel Engine.
  - Service, operation , Spare Parts and workshop manual for Alternator/Generator
  - Complete circuit & logic diagrams for Control Panel
  - Service, operation and Spare Parts manual for Control Panel.
  - Manual of both Sync panels ( generators sync panel & WAPDA sync panel )
- 3.10 The bidders will be appreciated to visit OGDCL house and to observe the actual picture of the project before their bids submission
- 3.11 Bidder is bound to quote all items from **Sr # 1.3(1-13)** mentioned in the **SCOPE OF WORK.**
- 3.12 All the components have one year Company Warranty
- 3.13 Letter of origin for components (breakers, Modules, Cables) will be provided on demand.
- 3.14 Copper bus bar will be insulated with imported material (PVC) and copper purity (99.9%) according to standard Current Flow Method. Finished with Powder Coating (Color Code:7032)
- 3.15 Panels will be fabricated in 16 SWG Sheet Thickness

  
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- 3.16 The circuit breakers shall be supplied with ON-OFF- TRIPPED indications, in addition to elsewhere given ACCESSORIES. The breaker should be rated as mentioned above and Comply with IEEE C37.13.standard.
- 3.17 The LV switchgear panel should comply the following standards:  
 Factory assembled and tested and complying with IEEE C37.20.1.  
 Finish: IEEE C37.20.1, manufacturer's standard gray finish over a rust- inhibiting primer on phosphatizing- treated metal surfaces.
- 3.18 **PANEL EARTHING:**  
 An earth bar of appropriate cross sectional area and green colored shall be provided joining the bodies of all LV panels all along the length. The bus bar should be capable to handle the full short circuit current for a period of 3 Seconds, without being damaged. The bus bar should be connected with main earth pit with the help of flat copper strip as ECC in a closed loop arrangement.
- 3.19 All panels to be manufactured should comply IP 44 for indoor type & IP 54 for outdoor type or as given in relevant section & all electrical panels should be painted with electrostatic powder painting process.

#### 4. Technical Evaluation

**BIDDER'S ELIGIBILITY CRITERIA:** - Only the bidder(s) will be technically responsive who complies all the following terms of Eligibility criteria.

- i. Bidder must have experience of at least 10 years or more in supply/manufacturing of Genset and Allied Equipment.
- ii. Bidder must be OEM or authorized dealer of OEM. Authorization Dealer Ship Certificate issued by OEM on its letter head must be provided.
- iii. Original Warranty Master of Engine, Genset & Alternator must be provided.
- iv. The manufacturer/ seller/bidder should have good established facilities in Pakistan for after sales service, maintenance cells and spare parts supply. The bidder should provide the proof of these facilities and OGDCL will have the right to visit these facilities prior to finalization of order.
- v. Detail of similar types projects. Complete addresses with telephone numbers of must be provided & the bidder must provide the Bill of Lading to import the gensets before (at least 05 Nos).
- vi. The bidder must comply with all the terms of clause # 3 of terms/conditions (from 3.1 to 3.19).
- vii. NTN/GST Registration
- viii. **Undertakings**
  - a. For not being blacklisted.
  - b. For not involvement in any litigation against OGDCL

#### 5. Financial Evaluation:

The commercial bids of only technically responsive bidders, qualified as per **bidder's eligibility criteria**, will be opened and evaluated. Contract will be awarded to the bidder/firm quoted lowest rates.

  
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