

**PROCUREMENT DEPARTMENT ISLAMABAD
FOREIGN SECTION E**

(To be completed, filled in, signed
and stamped by the principal)

ANNEXURE 'A'

Material NITROGEN PUMPING UNIT
Tender Enquiry No PROC-FE/CB/STIM-5167/2021
Due Date
Evaluation Criteria MAIN EQUIPMENT WISE *ve*

SCHEDULE OF REQUIREMENT

Sr No	Description	Unit	Quantity	Unit Price (FOB)	Total Price (FOB)	Unit Price C & F BY SEA	Total Price C & F BY SEA	Deviated From Tender Spec. If Any
1	NITROGEN PUMPING UNIT FOR PLANT ATAs,N2 KICK OFF & PRODUCTION LINE PURGING/TESTING JOBS; DETAILS ARE ATTACHED UNDER ANNEXURE-DS	Number	1					

Note:

1. Bid Validity: Bids must be **valid for 180 days** from the date of Technical Bid Opening.
2. Bid Bond Amount: USD 36,000/- (United States Dollar Thirty Six Thousand only).
Bid Bond must be valid for 210 days from the date of Technical Bid Opening. Bidders are advised to carefully read all clauses related to Bid Bond in Tender Document.
3. Evaluation Criteria: - Main Equipment Wise CFR Karachi.
Bidder to quote UNIT PRICE and quantity of each recommended spare part in FINANCIAL BID ONLY. Unpriced list to be provided with Technical Bid. **Spare will not be part of Financial Evaluation.**
4. Delivery Period: 28 weeks from establishment of LC
5. Bidders are advised to carefully read all the terms and conditions of the Tender Document "Master Set of Foreign Tender Document (Press-Single Stage Two Envelop) " available on OGDCL website which is an integral part of this Schedule of Requirement
6. "Bidders quoting equivalent parts must provide a certificate from at least three well renowned/E&P companies of foreign jurisdiction other than bidders/manufacturers own country, stating that equivalent (quoted parts) are used by them and performance of such parts is found satisfactory. Copies of purchase orders (unpriced) must also be provided. The certificate(s) / sale record is mandatory and due to non-submission thereof, the bid will be rejected."

**OGDCL
TENDER**

**NITROGEN
PUMPING UNIT
(NON-FIRED)
(NPU)**

**TERM OF REFERENCE (TOR)
FOR TRUCK MOUNTED
NITROGEN
PUMPING UNIT (NON-FIRED) (NPU)**

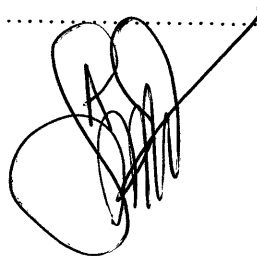
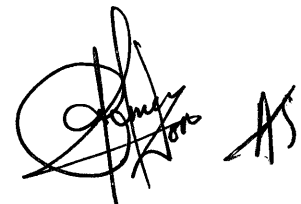
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IRFAN NAZIR
Manager / IC (DS)
Ext: 5737

1. Description

Truck mounted Nitrogen Pumping Unit (NPU) should be capable of pumping Nitrogen during kick off and Nitrogen purging and Line testing jobs during shutdown and start-up activities of Plants to all over OGDCL fields in Pakistan.

All components and systems should be assembled in a manner to provide easy access for maintenance. Complete unit should be suitable for onshore operations along with mobilization both on and off road conditions through all Oil & Gas fields in Pakistan including desert areas. The NPU is designed to operate in a wide range of ambient conditions (-5degC to 55degC). Especially in a extreme environmental condition.

2. Truck Chassis

Right Hand Drive cab-over 6 x 6 heavy duty truck chassis suitable for Oil & Gas fields used in extremely Hot/Cold climate of Pakistan. A brand new truck should have the following specifications.

2.1 Kenworth or Equivalent truck.

2.2 CAB:

Cab-over type Right Hand Drive cab along with sleeper having:


- Aluminum and Fiberglass construction, Aluminum doors
- Heavy duty rear cab supports and steel front cab supports
- Heater w/integral defroster
- Air Conditioner
- Air suspension cushioned driver seat + fixed passenger seat
- Stationary passenger seat w/steel toolbox
- Air horn
- AM/FM radio, CD player w/clock
- Two speed intermittent windshield wipers
- Electric windshield washer
- Rear and RH/LH two view side mirrors
- Inside Cab dome light
- Combination front/rear stop/tail/turn/backup lights RH/LH
- European style high/low beam headlights


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- Sun visors
 - Back up alarm buzzer
 - Air bags
 - Manual/preferably Power windows
 - Power Steering
- 2.3 Truck should compatible for desert services.
- 2.4 Should have stainless steel fenders.
- 2.5 Should have an air ride or leaf spring suspension system.
- 2.6 Mud flaps will be located behind Front and Rear tires.
- 2.7 Lock able tool box should be provided.
- 2.8 Allison or equivalent automatic transmission.
- 2.9 Heavy duty truck chassis.
- 2.10 The Engine should have minimum Caterpillar C15 ACERT (Industrial) or equivalent rated 440BHP to 595BHP @ 2100RPM.
- 2.11 Jacobs brake system or equivalent.
- 2.12 At least 225 Gallons Carbon Steel Fuel Tank.

Complete metric instrumentation/readouts/controls including:

- Air pressure
- Engine temperature
- Tachometer
- Engine hour meter
- Fuel
- Low oil pressure warning light/buzzer
- High coolant warning light/buzzer
- Low air pressure warning light/buzzer
- Engine Oil pressure
- Voltmeter
- Ammeter
- Speedometer w/odometer
- Expanded low scale readout



Important Note

Bidder will quote a latest and specific model, actual figure, dimensions, Engine capacity and literature/ Manuals of the Truck and that model could be accessible on the OEM website too. (Please mention the web address of the company)

3. Control Cabin

- 3.1 Cabin should be climate controlled & proper insulated.
- 3.2 Roof height of a cabin must be minimum 6.5 feet and the floor must be made of anti-slip material.
- 3.3 High strength Safety Glass window should be installed at the front side of cabin.
- 3.4 Provision of access door & ladder (with anti-slip surface) along with hand rails of the cabin should be provided.
- 3.5 Windows should be installed on all sides for a better view.
- 3.6 Height adjustable Captain Chair for the operator and another chair/bench for assistant.
- 3.7 Electrical wires should be properly installed/insulated.
- 3.8 04 internal lights, 04 adjustable exterior flood/Spot lights and Air horn along with separate switches, should be connected with a separate generator power supply as well.
- 3.9 Control cabin should be properly rain proofed and insulated to reduce exterior noise level and cooling demand.

3.1 Control Panel

The water/rust proof panel, engraved with rate and tank content charts should be provided. Horner or equivalent Operator Control Stations (OCS) should be installed which will capable of providing the followings:

- 3.1.1 Pressure in PSI.
- 3.1.2 Flow Rate in SCFM (SCF per Minute).
- 3.1.3 N₂ Temperature in degC and DegF.
- 3.1.4 Various Alarms and shutdowns.
- 3.1.5 Data Logging (pressure, Temperature, flow rates, LN Tank level).
- 3.1.6 USB accessory charging ports.
- 3.1.7 Two connection of 220 Volts must be available for connecting computers/ Laptops.

Operator Parameters Monitoring Systems:

- 3.1.8 Control valves for actuated valves: suction, pressure building, boost pump prime, tank blowdown, various Ball valves and both hydraulic actuated discharge valves.

- 3.1.9 Alarm signals for: engine oil & pressure, coolant temp & level, transmission oil temp & pressure, nitrogen pump lube oil temp and pressure, fluid pump temp and pressure and hydraulic oil temp.
- 3.1.10 Provision of engine emergency shut off valve.
- 3.1.11 Provision of ease of Engine Oil drainage, its drainage accessories. There should be ease for mechanic to access the drain point, filter changing. The drain point should be kept in such a way that the unit, body should not get dirty after the oil change.
- 3.1.12 All valves must be tagged for proper identification.

Control panel should be equipped with all necessary controls and gauges to ensure safe, efficient & reliable operation. All controls and operating valves to be grouped by circuit for operator ease to be immediately accessible.

4. Engines

4.1 Road Engine:

The Engine should have minimum Caterpillar C15 ACERT (Industrial) or equivalent rated 440BHP to 595BHP @ 2100RPM along with Allison or equivalent transmission. This Engine is used to drive high pressure Triplex pump via power shift transmissions and flexible drive lines.

Ladder along with hand rails and certified harness points should be provided for an easy access of filling oil and inspection purpose. Steps of the ladder must have anti-slip material. All hydraulic hoses must be tagged and recorded and should have stainless steel muffler & exhaust.

Performance Certificate along with specs from OEM must be submitted along with the Bid.

4.2 Deck Engine:

The Engine should have minimum Caterpillar 3406C (Industrial) or equivalent rated 375BHP to 465BHP @ 2100RPM along with Allison or equivalent transmission. This Engine is used to drive Boost pump, Hydraulic system etc.

Ladder along with hand rails and certified harness points should be provided for an easy access of filling oil and inspection purpose. Steps of the ladder must have anti-slip material. All hydraulic hoses must be tagged and recorded and should have stainless steel muffler & exhaust.

Handwritten signatures and initials in the right margin, including a large signature and several smaller initials.

Performance Certificate along with specs from OEM must be submitted along with the Bid.

5. Hydraulics

5.1 Hydraulic/Lube System:

A hydraulic Pump Drive Box should be installed to provide power to variable speed closed loop piston hydraulic system, which includes pumps/motors to drive triplex pump lube system, and boost pump etc. A minimum of 90-gallon hydraulic c/w filters, sight glass, fill spout, cleanout access and all necessary hyd. flushing, sequence and relief valve should be provided.

6. Pumps:

6.1 Triplex Pump:

A suitable triplex reciprocating pump for Nitrogen service (cryogenic) which meets the following operating parameters, is required. Frictionless roller bearing should be incorporated for more durability.

6.1.1 Maximum operating pressure----- 10,000psi

6.1.2 Maximum flow rate----- 180,000scfh

Specification sheet form the OEM must be attached with the Bid.

6.2 Boost/Centrifugal Pump:

Mission or equivalent Pump should be specifically for Nitrogen service (cryogenic) and must be compatible with Triplex pump to maintain operating parameters.

Specification sheet form the OEM must be attached with the Bid.

7. Tank

7.1 Nitrogen Tank

A cryogenic Tank having gross capacity of 3,200 US Gallon and Net Liquid Nitrogen (pump able) 3,040 US Gallon, 46psi will be required along with the following specifications:

7.1.1 Material of construction of Inner Vessel must be Stainless Steel and Outer Vessel must be of Carbon Steel. Specification sheet along with confirmation of material of construction form the OEM must be attached with the Bid.

- 7.1.2 Meets CGA-341 & ASME Boiler & Pressure Vessel Code certificates should be attached with the Bid.
- 7.1.3 Must be super insulated and normal evaporation rate must not be more than 0.75%/day.
- 7.1.4 Should have Liquid level & Tank pressure gauges.
- 7.1.5 Vacuum probe valve with thermocouple probe for vacuum inspection must be installed.
- 7.1.6 Tank Manifold c/w tank blowdown, road relief and dual safety relief valves should be installed.

7.2 Valves

Following valves should be installed:

Low Pressure: Flowserve (Worcester) or equivalent Valves & Actuators

High Pressure: 2"-1502 Plug Valve

8. Piping Work

The high-pressure piping of the unit must be laid out such that the operator can pump gaseous nitrogen to operational requirement.

The gaseous nitrogen discharge piping and associated components will be 1502. An analog pressure gauge will be connected at the pump liquid discharge manifold. Immediately downstream of the vaporizer there will be an autoclave type check valve and downstream of this valve will be a 1502 tee. The tee will be fitted with a 1502 bull plug which will be used to pump only gaseous nitrogen. Between the autoclave type check valve and the tee there will be a temperature probe and bleed valve for relieving trapped pressure. Downstream of the tee, there will be a 1502 hydraulically operated plug valve and a 1502 dart style check valve.

8.1 Nitrogen

- 8.2.1 All cryogenic low and high-pressure piping must be brand new.
- 8.2.2 Low pressure piping must be stainless steel and flex hoses where necessary, to allow the movement.
- 8.2.3 Stainless steel drip pans must be installed where possibility of liquid nitrogen contacting surface structure exists.

- 8.2.4 Liquid load lines must be placed to allow loading from either side as well as the rear of the unit and be fitted with 1.5" CGA (compressed gas association) connectors with dust caps.
- 8.2.5 Cryogenic ball valves must be installed.
- 8.2.6 Relief valves must be placed where possibility of liquid nitrogen could be trapped.
- 8.2.7 All high pressure connections rated to 15,000 psi MAWP (Maximum allowable working pressure).
- 8.2.8 Liquid nitrogen tempering valve circuit must be installed to allow the operator for easy control the gaseous nitrogen discharge temperature.

9. Vaporizer and Heat Exchanger

A proper OEM certified non-fired Nitrogen vaporizer must be installed which will use waste heat from the Engine to make LN₂ to GN₂ and will maintain GN₂ temperature above 70 degF prior to enter in the well.

Vaporizer heat should be supplied by a cogenerate diesel power pack, which will convert the waste engine heat and waste system heat into useful heat for nitrogen vaporization. The high-pressure liquid then flows through the non-fired nitrogen vaporizer, which absorbs a sufficient amount of heat from the power unit cooling system and dynamic heat generator to raise the temperature to 70°+ Fahrenheit and flows out through the discharge valve as high-pressure gas at the maximum flow rate of 180,000 scfh. To balance the heat load on the cooling system, waste system heat and heat generated by the hydraulic heat builder, provide sufficient heat for nitrogen vaporization, while simultaneously ensuring that heat influx to the hydraulic system and diesel engine is properly dissipated under all conditions.

10. Truck Deck

- 10.1 All system components will be mounted directly to the truck deck.
- 10.2 Folding walkways must be installed on both sides of the deck at pumping and operating equipments along with handrails and ladders.
- 10.3 Preferably tandem axle to bear the entire load (at least 75,000lb) with Tires Michelin (or equivalent) (standard size) along with a spare tyre and rim which should have adequate clearance from the deck.

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- 10.4 Maximum Unit Height should not be more than 16 feet, Width 8.5 feet (Total length with truck should not exceed to 45 feet). Units of measurement should be in feet. (Complete Unit schematic with Truck and dimensions must be attached with the Bid).

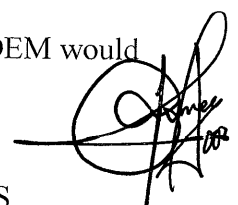
11. Unitization and Completion

The unit should be fully assembled ready for unitization and completed to the specifications of the customer. This will include the following items (if these items are already detailed above, these will not be duplicated).

- 11.1 LED Flood lights to illuminate areas between N2 tank, cabin and engine areas.
- 11.2 Fittings basket and tool box (lockable).
- 11.3 Nitrogen triplex pump lube oil tank incorporated into the power frame.
- 11.4 All manufactured components built to withstand vibration/shock and to be as light as possible and one hose storage tube will be installed near tank (includes fill hose equipped with 1.5" CGA fittings).
- 11.5 Installation of all Electrical systems along with 24-Hour Lighting Systems.
- 11.6 Installation of all Pneumatic Systems.
- 11.7 Installation of all hydraulic/lubrication systems.
- 11.8 All oils, coolants and other operating fluids.
- 11.9 All steel and misc. fittings to complete the unit.
- 11.10 All labor to complete the unit.
- 11.11 All tyres of the unit preferably be of the same size along with a spare tyre with carrier assembly and suitable hydraulic jack.
- 11.12 General workmanship should be of excellent quality and appearance.
- 11.13 Unit packed and prepared for under deck sea shipment.
- 11.14 Unit should be painted with OGDCL monogram which is attached at **Annexure 'M'**.
- 11.15 Complete unit prepped, primed and painted to Post Office Red and control cabin should have white in color.
- 11.16 Complete unit assembled and tested for customer acceptance at OEM facility. OEM would notify the purchaser atleast two (2) weeks prior to customer acceptance testing.

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- 11.17 Three (03) owner's manuals (hard copy) in English along with USB (soft copy) are supplied with unit. Manuals include operating instructions, assembly breakdowns with service part numbers, maintenance procedures, and Schedules, spares part number, Drawings, MSDS etc.
- 11.18 Flame Cut Edges Ground Smooth.
- 11.19 No Sweated or Brazed type hydraulic fittings.
- 11.20 All Hoses supported with clamps, collars or ties as needed.
- 11.21 All Hoses protected by secured rubber sleeves, where required, to prevent rubbing.
- 11.22 There should be a high precision NRV in the line of Pump discharge Nitrogen line, to avoid load/ damage to Triplex Pump.

12. Codes and Standards

The following valid, clear, readable certificates should be provided from the OEM along with the web addresses where these may be confirmed.

- 12.1 ASME Boiler & Pressure Vessel Code
- 12.2 CGA 341
- 12.3 ISO (9001:2015)
- 12.4 OHSAS 18001/ISO 45001

Note: Clause 12.1 & 12.2 must be provided by the Liquid Nitrogen Tank manufacturer.

13. Tools

Following Tools (Snapar, Facom, Proto or equivalent) should be provided with the unit.

S.NO	DESCRIPTION	QUANTITY
13.1	Heavy duty socket set with extension rods and adopters.	01 SET
13.2	Open end spanner set ranging 10-75 mm set.	01 SET
13.3	Ring spanner set ranging from 5/16"-2" with kit bag.	01 SET
13.4	Screw driver set consisting of (+) and (-) assorted sizes.	01 SET
13.5	Cutting pliers.	01 NO.
13.6	Adjustable joint pliers.	01 NO.
13.7	Needle nose pliers.	01 NO.
13.8	Vise-grip pliers.	01 NO.
13.9	Ball pin and claw hammer with suitable weight.	01 NO.
13.10	Engineering style hammer set including sledge hammer.	01 NO.
13.11	Punches.	01 SET
13.12	Chisels.	01 SET
13.13	Puller set multiple size for replacing bearings etc.	01 SET

13.14	Torque wrench up to 1-1/2" square drive with gauge reading dial and follow up pointer, with extension hand t-bar & torque adopters up to 2000 lbs-ft. Torque.	01 NO.
13.15	24" pipe wrench heavy duty Aluminum.	02 NOS.
13.16	36" pipe wrench heavy duty Aluminum.	02 NOS.
13.17	High pressure bucket type grease gun with assorted adopters.	01 NO.
13.18	Low pressure grease gun	01 NO.
13.19	20 m ton capacity trailer hydraulic jack.	01 NO.
13.20	Tool box for storage of trailer and other special tools	01 NO.
13.21	Water gun along with Pump for Unit Cleaning 3 in 1. (steam, diesel, chemical)	01 NO.

13.1 Treating Iron:

Sr. No	Description	Configuration / Connection	Service	Quantity Required (Nos.)	Redress Kits (Nos.)
1	10ft 2" 1502 Pipes	M x F Hammer Union	Acid, H ₂ S	8	-
2	6ft 2" 1502 Pipes	M x F Hammer Union	Acid, H ₂ S	4	-
3	4ft 2" 1502 Pipes	M x F Hammer Union	Acid, H ₂ S	2	-
4	2 Way 2" 1502 Swivels	M x F Hammer Union	Acid, H ₂ S	10	6
5	3 Way 2" 1502 Swivels	M x F Hammer Union	Acid, H ₂ S	2	6
6	2" x 2" 1502 Plug Valves (Manually Operated)	M x F Hammer Union	Acid, H ₂ S	5	6
7	1" x 2" 1502 Plug Valves (Manually Operated)	M x F Hammer Union	Acid, H ₂ S	3	6
8	2" x 2" 1502 Plug Valves (Air Operated)	M x F Hammer Union	Acid, H ₂ S	2	6
9	2" 1502 Check Valve (Dart Type)	Standard Flow (flow towards wing)	Acid, H ₂ S	2	6
10	2" 1502 Laterals	M x F x F	Acid, H ₂ S	3	-
11	2" 1502 Tee	M x F x F	Acid, H ₂ S	3	-
	2" 1502 Double Wing	M x M	Acid, H ₂ S	3	-
	2" 1502 Double Thread	F x F	Acid, H ₂ S	3	-
12	2" 1502 Hammer Union (along with retainer & Ring)	Hammer Union Wing	Acid, H ₂ S	10	-
13	2" 1502 Weco Seals		Acid, H ₂ S	30	-
14	Pipe Chokers For 2"1502 pipe			20	-

Note:

The cost of Tools and Treating iron are the part of main equipment and will not be quoted separately.

14. Spares

A list of necessary spares for maintenance of unit for a period of 02 years is mentioned below. However, the bidder can include additional spares if he deemed necessary.

S.NO	DESCRIPTION	QUANTITY
Nitrogen Pump		
1	Cold End Assembly	03 Nos.
2	Kit, Spare Parts	06 Nos.
3	Element, Lube Oil Filter	08 Nos.
4	Relief, Lube Oil	04 Nos.
Miscellaneous Cryogenics		
5	Boost Pump	01 No.
6	Boost Pump Seal Kit	04 No.
7	Gasket, Fill Line	30 Nos.
8	Seal Ring	20 Nos.
9	Repair Kit, Ball Valve	10 Nos.
10	Line Safety Valve	08 Nos.
11	Flex Hose	10 Nos.
12	Relief Valve	04 Nos.
13	Actuator, Air	04 Nos.
14	Rupture Disc,	04 Nos.
15	Needle Valve	02 Nos.
16	Ear safety Muffs	06 Nos.
Hydraulics		
17	4 Way Rotary Valve	02 Nos.
18	Element - Hi-Pressure Filter	03 Nos.
19	Element - Hyd Tank Filter	08 Nos.
20	Valve Assy, Boost Rlf/Seq	01 No.
21	Relief Valve, Hyd Heat Cntl	01 No.
22	Valve, B-Pump Control	02 Nos.
Water System		
23	Thermostat	02 Nos.

	Engine	
24	Oil Filter	10 Nos.
25	Primary Fuel Filter	10 Nos.
26	Secondary Fuel Filter	10 Nos.
27	Coolant Filter	10 Nos.
28	Air Filter	10 Nos.

Note

The quantity of spares can be reduced or increased according to the OGDCL requirement. Bidders are advised (in their own interest) to mention 100% true spares on the basis of two-year consumption. Cost of spares should not exceed 10% of the main equipment cost. Un-priced list along with quantity to be submitted with Technical Bid and price list along with unit quantity of spares to be submitted with Financial Bid. Spares will not be the part of financial evaluation.

15. Facility Acceptance Test (FAT)

OGDCL may conduct OEM facility visit to confirm physical establishment, infrastructure and machinery involved for the manufacturing/assembly of Nitrogen Pumping Unit.

If deemed necessary, 02 Nos. OGDCL Engineers (STIM Dept.) can visit the facility of the technically responsive bidders before finalization of technical evaluation, in case the bidder has not provided similar Unit to OGDCL in the past. The FAT will be conducted at OGDCL expense, while Bidder shall facilitate boarding/lodging (hotel booking, visa invitation) and local transportation (from hotel to facility and vice versa) of visiting officials.

16. Inspection

Third Party Inspection (TPI) in the presence of OGDCL Stimulation Engineers will be conducted prior to the shipment of Unit at manufacturer facility. TPI will be done at OGDCL expense. The Bidder shall facilitate boarding/lodging and local transportation of visiting officials. 02 Nos. Stimulation Engineers from OGDCL will witness the whole inspection conducted by Third party and will remain available at OEM facility throughout the inspection procedure.

Scope of TPI:

- 16.1 All the Technical specs/requirements have been met as per TOR.
- 16.2 Confirm that all the items are brand new, free from defect and non-refurbish.
- 16.3 Confirm that the Items arranged from other manufacturers are genuine and will check item serial numbers with OEM. The Serial No./Part No. must be clearly engraved on each part/equipment.
- 16.4 Any other quality inspection, including inspection plan/drawings required for this project.

16.5 All the gauges must be calibrated prior to function test of new NPU instruments/gauges.

Final report will cover all the aspects detailed above and has to be submitted before the delivery of Equipment.

17. Commissioning & Training of Unit in Pakistan

- 17.1 Commissioning & Training of the unit in Pakistan will be Bidder's responsibility.
- 17.2 Commissioning period should be at least 02 weeks. During Commissioning, the cost of any failure/breakdown of any part of NPU will be borne by the bidder.
- 17.3 A certified OEM service engineer would be deputed to OGDCL facility upon arrival of the Unit. The engineer will inventory all equipment, ensure successful startup of the Unit, and perform at least one full job to ensure the Unit is in perfect working condition. Both Commissioning and job execution will be in a single trip.
- 17.4 All fluids/lubricants requirement during commissioning must be provided by the Bidder. OGDCL will only provide diesel during the procedure.
- 17.5 OEM /Supplier is responsible for airfare and lodging upon arrival in Pakistan.
- 17.6 OGDCL is responsible for local ground transportation, boarding and lodging of the OEM/Supplier service engineer at Field/Base.
- 17.7 Upon completion of successful commissioning, a document will be signed by both parties.
- 17.8 The training during commissioning must comprise of the followings at least:
- Maintenance and operational practices of NPU.
 - Nitrogen low pressure and high pressure systems.
 - Electrical system
 - Hydraulic system
 - Triplex Pump
 - Centrifugal Pump

19. Warranty

OEM will repair, replace or rectify any of the supplied goods (or any replacement) which are defective. The warranty period will be twelve (12) months after commissioning in Pakistan.

20. Terms and Conditions

- 20.1 Supplier/Bidder should provide the O.E.M (Original Equipment Manufacturer) Certification of all major parts of the Nitrogen Pumping Unit (NPU). Manufacturing date should clearly be mentioned on the certificate and all major component should be brand new.

- 20.2 Supplier/Bidder will warrant that all goods supplied against the contract should be new, not refurbish and have no defect arising from design materials and manufacture and that the **supplier should rectify any defect at no cost for a period of one year** under normal use of supplied goods and conditions prevailing after commissioning in Pakistan.
- 20.3 If any part of the Unit/goods found refurbished or used, then OGDCL has the right to forfeit the Bank guarantee of the supplier/Bidder.
- 20.4 Supplier/Bidder should provide the drawings, specifications and dimensions of the equipment mounted on NPU.
- 20.5 Authority letters in original from the manufacturer(s) to bidder and from bidder to local agent for offered NPU with tender enquiry number must be furnished with the technical offer. The authority letter must be on company letter head, showing the name and contact details (E-mail) of the signing authority.
- 20.6 Evaluation will be done on main equipment wise.
- 20.7 Maximum **delivery period** of the unit is 28 weeks after LC opening.
- 20.8 Each Bidder/Manufacturer has to submit latest valid certificates as per Clause 12 (Codes and Standards) of TOR.
- 20.9 Supplier/Bidder will clearly mention the differences of specifications if any, with OGDCL specification and provide valid reason to OGDCL for suggesting such modifications.
- 20.10 Original Brochure on USB of the manufacturer(s) containing technical literature/specification sheets stipulating physical/performance properties of quoted NPU must be submitted with the technical Bid.
- 20.11 The Bidder/Manufacturer must submit at least 03 Purchase Orders (without price) issued recently for sale of NPU to multinational/International companies (other than the manufacturer's country).
- 20.12 The Manufacturers/Bidders will be required to quote CFR Karachi basis.
- 20.13 Successful Bidder/manufacturer must provide all manuals (Technical, Operational & Maintenance) in high quality color prints on high quality paper in "**Three**" copies. All of the said manuals and documents should also be provided in soft form in USB.
- 20.14 Supplier/Bidder must provide traceable certifications of the major items procure from other manufacturer (like Engine, Transmission, Truck, pumps etc.) along with their manufacturing date, Serial No. Part Numbers for future references.

ANNEXURE I

Evaluation for Technical Bids:

Evaluation of technically qualified bidder will be based on merit. The minimum selection criteria will be 85% aggregate and 75% for each discipline. The weightage percentage allocated for each discipline is shown below:

S/N	Description	Max. Score
01	Bidder must meet all the Technical specifications. Major deviation will lead to disqualification (Engine, transmission, pumps, truck chassis, vaporizer and Heat Exchanger Nitrogen Tank).	Mandatory
02	The manufacturing company will provide supply record regarding sold units to international clients (from other than the manufacturer's country) for similar Nitrogen Pumping Units (NPU) during last 15 years. (01 mark for each supplied units).	25
03	The manufacturing company will provide record regarding number of international clients (from other than the manufacturer's country) for similar Nitrogen Pumping Unit (NPU) during last 15 years. (01 mark for each client).	25
04	The manufacturing company will provide certificate of incorporation to confirm age of manufacturing of Nitrogen Pumping Unit (NPU) (01 mark deducted for each year less than 15 years).	15
05	Valid Certifications (ASME Boiler & Pressure Vessel, CGA 341, ISO 9001:2015, OHSAS 18001/ISO 45001). Details are given in TOR at 20.8 & 12 (Codes and Standards)	10
06	Performance certificates from "E&P and/or oilfield Services companies" of international repute (from other than the manufacturer's country). (05 marks for each verified certificate).	25
	Total	100

CRITERIA FOR FINANCIAL EVALUATION

Contract will be awarded to the bidder that will be financially Lowest and technically Responsive.