

OIL AND GAS DEVELOPMENT COMPANY LIMITED
Chanda LPG Plant

SCHEDULE OF REQUIREMENT
TENDER ENQUIRY # TE/COF/M/06/2024

Technical services for Maintenance jobs of Chanda LPG plant during ATA-2024.

S#	<u>Description</u>	<u>Reference #</u>	<u>Rate</u>	<u>Total rate (inclusive of all Taxes)</u>	<u>Deviation</u>
1	As per scope of work given in tender documents				

Note: Separate rate to be quoted for each and every activity as mentioned in scope of work.

TERMS & CONDITIONS FOR ATA-2024 OF CHANDA LPG PLANT

GENERAL:

1. Technical services are required for Maintenance jobs at Chanda LPG Plant during Annual Turn Around (ATA-24) for an estimated period of **09 days** tentatively schedule from **21-08-2024 to 29-08-2024**; however, the schedule and duration of shut down may change.
2. Bids are required in PKR against each activity as mentioned in the scope of work. Detail of jobs (scope of work) is elaborated in tender documents.
3. Working hours will be considered 24 Hrs. with 02 shifts (12 Hrs. day shift & 12 Hrs. night shift). Sunday/holiday will be considered as normal working day.
4. Payment will be made as per actual work done through cross cheque after completion of the job being verified by OGDCL rep. at site.
5. Skilled manpower should be well experienced in their respective crafts.
6. Management of the plant reserves the right to terminate the services of any hired staff at any time without any justification.
7. HSEQ Rules & Regulations will be strictly observed. 01 HSEQ Officer must be included in ATA team.
8. All the participating companies should have 05 years of experience of ATA jobs in Oil & Gas Processing Plants or Fertilizers Companies (reference must be provided)
9. Jobs will be carried out as per priority set by OGDCL supervisors and contractor will utilize all its resources to complete the jobs as per time frame given by OGDCL.
10. OGDCL may delete, add or change any type of activity given in the scope of work.
11. The technical manpower must be skilled having at least five years' experience in respective trade. Contractor skilled manpower will be interviewed by OGDCL professionals in all disciplines, if deemed necessary. Contractor should arrange the interview at their premises. The detailed CV's of direct manpower/supervisors is mandatory.
12. Use of mobile phone and camera is prohibited in the plant premises.
13. Any required technical clarification/detail regarding scope of work should be cleared before submission of bid. No change in substance of bid will be entertained after bid submission date.
14. The firm should have valid NTN and GST/KPST no's and have active status on FBR website.
15. The Firm should have active Professional tax certificate of concerned Excise office where operating business.
16. FBR Annex-C in submitted status to be provided along with Invoice or at time of payment.

CONTRACTOR RESPONSIBILITIES:

1. Site administration personnel with associated resources like computer, printers, photocopiers etc.
2. Provision of PPE (Safety helmet, Coverall, safety shoes, gloves etc.) of all kinds to hired crew.
3. CV's of all the skilled Personnel (Millwright, Rigger, Scaffolder, Mechanic etc.) will be provided well before ATA. Evaluation of all the short listed skilled personnel will be carried out by Field personnel well before the ATA.
4. Accommodation of all crew to be managed by contractor and outside of plant premises.
5. Daily progress report of all activities on daily basis.
6. Local labors will be given preference while hiring services for ATA.
7. All kind of tools/consumables required for the job.
8. Provision of Rigging and hoisting equipment.
9. Scaffolding material & services if required.
10. Removal of Insulation/ Cladding & installing back by skilled insulators.
11. Security of all the Hired Crew.
12. Drinking Water, Boarding/ Lodging, refreshment to all the Crew.
13. Pick and drop from Plant to accommodation and back.
14. In case of any accident, medical treatment or compensation, whichever is applicable.
15. Electrical Supply Boards along with cables as per HSE standard.
16. Head trolley for movement of parts inside the Plant will be arranged by the contractor.
17. Arrangement of Consumable material like cotton rags, gloves, glasses etc.
18. Arrangement of Pipes & Fittings for vessel flushing.
19. Proper housekeeping and skids cleaning of all equipment's must be ensured.

OGDCL RESPONSIBILITIES:

1. Electricity for Lighting & Fans.
2. Spare parts.
3. Blinds & Spads for Isolation & Pressure Testing.
4. Logistic support i.e. Cranes, Lifters.
5. Nitrogen purging & Leak test.

Scope of Work for ATA-24 Jobs of Dehydration /Hot Oil/CPI Pit/LPG/Utility Area Along With Rotary Equipment

1. ROTARY EQUIPMENT:

1.1 Pumps:

General Overhauling, Inspection, cleaning and repair (if required), decoupling & coupling of motors with proper alignment.

ACTIVITY	DESCRIPTION	TAG NO	SPECIFICATION
LPG101	Stabilized Crude Pumps	P-100 A/B/C	Centrifugal Pump 230 Psig 126 GPM
LPG102	Condensate Transfer Pump	P-102 A/B	Centrifugal Pump 300 psig 22 GPM
LPG103	LPG Column Reflux Pumps	P-103 A/B	Centrifugal Pump 310 Psig 415 GPM
LPG104	LPG loading Pump	P-104 A/B	Centrifugal Pump 140 Psig 121 GPM
LPG105	MEG Pumps	P-200 A/B/C	Plunger Type 800 psig 1.5 GPM
LPG106	Hot Oil Pumps	P-400 A/B	Centrifugal Pump 100 psig 285 GPM
LPG107	Flare Liquid Transfer Pump	P-500 A/B	Centrifugal Pump 70 psig 22 GPM
LPG108	Condenser Water Circulation Pumps	P-701 A/B	Centrifugal Pump 06 meters Head
LPG109	KIMRAY/TEG/Glycol Pumps	A/B/C	PD Pumps 1000psig 450 GPH
LPG110	Fire Water Main Pump	P-800 A/B/C	Centrifugal Pump 80 psig 960 GPM
LPG111	Jockey Fire Water Pump	P-801 A/B	Centrifugal Pump 80 psig 60 GPM
LPG112	Utility Pump	P-802 A/B	Centrifugal Pump 60 psig 300 GPM
LPG113	Condensate Loading pump	P-1200	Centrifugal Pump 60 psig 300 GPM
LPG114	Recovered Oil Transfer Pump	P-1201	Centrifugal Pump 30 psig 50 GPM

1.2 Compressors & Engines

ACTIVITY	DESCRIPTION	TAG NO	SPECIFICATIONS	PREVENTIVE MAINTENANCE
LPG115	Feed Gas engine & Compressor	Feed Gas	Ariel Compressor 16 MMSCF Waukesha engine P9390GSI	Lube oil & oil filters change, greasing at all desig. Points, skid cleaning, belts checks/replace if required.
LPG116	Sale Gas Engine	Sale Gas	Waukesha engine F3521GSI	
LPG117	Sale Gas Compressor	Sale Gas	Ariel Compressor 08 MMSCF	
LPG118	All Generator Sets	G1,G2, G3,G4,DG	Caterpillar Engine 3412 & 3408, Cummins NTA855	
LPG119	Fire water pumps engine	P-800 A/B/C	Clark 04 Cylinder& Perkins 03 Cylinder Engine	General Routine maintenance
LPG120	Ref package compressor	K700	SAB 85	General Routine maintenance
LPG121	Instrument Air Compressor	K-600A/B/C	INGERSOLL RAND	General Routine maintenance

2. STATIONERY EQUIPMENT:

2.1 VESSELS/COLUMNS

Opening of man ways, inspection, cleaning, flushing and box up of the below mentioned vessels and columns, repair and maintenance if required.

ACTIVITY	DESCRIPTION	TAG NO	SPECIFICATION
LPG122	HP Separators	V-116 A/B/C	OD = 36"Length = 15'Manway = 16" Design = 1440 Psig at 180°F
LPG123	Flash Separator	V-100	ID = 60"Length = 177"Manway = 20" Design = 175 Psig at 190°F
LPG124	Flash Separator	V-101	ID = 51.2"Length = 153.5"Manway = 20" Design = 75 Psig at 190°F
LPG125	Flash Separator	V-102	OD = 51"Length = 153.5"Manway = 20" Design = 175 Psig at 190°F
LPG126	LT Separator	V-108	ID = 66"Length = 307"Manway = 20" Design = 925 Psig at 150°F
LPG127	Flare KOV	V-500	ID = 55"Length = 192"Manway = 20 " Design = 50 Psig at 480°F
LPG128	LPG Column reflux drum	V-109	ID=3.42' length= 10.33' Design= 240psig at 210°F
LPG129	De-Ethanizer column	C-100	Top/Bottom ID=2/3' No of beds=2 height=23/11.5', Design pressure=300/260.8psig at 220°F (Top), Design pressure=310/263.8psig at 220°F (Bottom)
LPG130	LPG column	C-101	Top/Bottom ID=2.5/3.5' No of beds=4 height=23/11.5', Design pressure=240/207.3psig at 440°F (Top), Design pressure=250/210.3psig at 440°F (Bottom)
LPG131	TEG ABSORBER TOWER	V-1001	ID=914mm Design Pressure= 1200psig Design Temp=150°F

2.2 Miscellaneous Jobs

ACTIVITY	DESCRIPTION	REMARKS
LPG132	PAINT JOB OF AJAX COMPRESSORS BODY AND RADIATOR'S BODY TO AVOID CORROSION ON RADIATOR SIDE SPECIALLY.	
LPG133	E-111 PRODUCT COOLER JET CLEANING TO BE CARRIED OUT.	
LPG134	E-108 LEAKAGE TO BE RECTIFIED. (C100 REBOILER)	
LPG135	FILTER ON HOT OIL RETURN LINE TO BE INSPECTION/CLEAN/REPLACE	
LPG136	REF. PACKAGE COOLING TOWER WATER SHOWERING LINE TO BE INSPECTED/CLEANED FOR PROPER SHOWERING.	
LPG137	LEAKAGE AT MEG COIL INSIDE STILL COLUMN TO BE RECTIFIED.	
LPG138	HOT OIL FURNACE BURNERS INSPECTION, REPAIR AND MAINT. IF REQUIRED	
LPG139	MEG DOUBLE PIPE EXCHANGER AFTER CHARCOL FILTER CLEANING INSPECTION TO BE CARRIED OUT	
LPG140	FEED GAS COMPRESSOR'S LOUVERS PROPER MAINTENANCE IS REQUIRED TO RECTIFY DISCHARGE GAS TEMP PROBLEM.	
LPG141	TEG SURGE TANK AND TEG REBOILER CLEANING AND FLUSHING	
LPG142	REPLACEMENT OF E105 EXCHANGER.	
LPG143	TEG REBOILER AND STACK / INTERNAL INSPECTION TO BE CARRIED OUT.	
LPG144	SALE GAS COMPRESSOR NRV INSPECTION/REPLACEMENT/REPAIR.	
LPG145	FEED GAS OIL LEAKAGES FROM VARIOUS POINTS TO BE PROPERLY RECTIFIED.	
LPG146	FEED GAS COMPRESSOR FINAL STAGE DAMADGED LEVEL GLASS TO BE REPLACED.	
LPG147	K-600-A/B/C WET AIR RECIEVER INSPECTION/REPLACE	
LPG148	GAS PRE- TREATMENT UNIT FILTERS INSPECTION/REPLACE	
LPG149	RO UNIT OVERHAULING/PREVENTIVE MAINTENANCE SHOULD BE CARRIED OUT.	
LPG150	TEG/MEG UNIT CARTRIDGE & CHARCOAL FILTERS TO BE REPLACED	
LPG151	INSTALLATION OF PRE-COOLER AT LP COMPRESSOR.	

3 HEAT EXCHANGERS

3.1. FIN FAN COOLERS

ACTIVITY	DESCRIPTION	TAG NO	SPECIFICATION	REMARKS
LPG152	Refrigeration Package Cooling Tower	K-700	Length: 12' Width: 10'	General inspection and Mechanical cleaning. Repair if required
LPG153	Refrigeration Package CAT engine radiator	K-700	Length: 5.5' Width: 5.5'	Radiator external and Mechanically internal cleaning of tubes. Repair if required
LPG154	Sale Gas Engine (WAUKESHA)	Sale Gas Unit	No. of Tubes= 160 Nos. Tube Dia: ½" Length per tube 17.5'	Radiator external and Mechanically internal cleaning of tubes. Repair if required

LPG155	Feed Gas Engine (WAUKESHA)	Feed Gas Unit	No. of Tubes= 90 Nos. Tube Dia: 1-1/4" Length per tube: 45'	Radiator external and Mechanically internal cleaning of tubes. Repair if required
LPG156	CAT 3412 GENSET	G1 & G2	RADIATOR CORE SIZE 104"X87"X26" No. of Tubes= 132 Nos. Tube Dia: 1/2" Length per tube: 8.5'	Radiator external cleaning, fins straitening and Mechanically internal cleaning of tubes. Repair if required
LPG157	CAT 3408 GENSET	G3 & G4	RADIATOR CORE 29" x 62" x 7" ROW FLAT FINS	Radiator external and Mechanically internal cleaning of tubes. Repair if required
LPG158	CUMMINS NTA-855 GENSET	DG	RADIATOR CORE 29" x 62" x 7" ROW FLAT FINS	Radiator external and Mechanically internal cleaning of tubes. Repair if required
LPG159	AJAX COMPRESSORS	K-100, K-101, K-102	Vary for each compressor	Cooler external and Mechanically & chemically internal cleaning of cooler tubes and jacket water circuit and circulation of cleaner in complete circuit. Repair if required

3.2. SHELL AND TUBE TYPE EXCHANGERS

Only Inlet/outlet connections of shell side will be opened and flushing will be carried out.

ACTIVITY	DESCRIPTION	TAG NO	SPECIFICATION
LPG160	TEG Reboiler	H-500	OD=1016mm, Design Pressure psig=ATM Design Temp=450°F

3.3 Tube bundle of the following exchanger will be pulled out for cleaning

ACTIVITY	DESCRIPTION	TAG NO	SPECIFICATION	REMARKS
LPG161	Crude Oil Heater	E-100A/B	Dia=635mm,Length=3000mm No. of tubes=218,Tube OD=25.4mm	For E100A Tube bundle will be pulled out, internal Inspection and Jet/mechanical Cleaning of tubes bundle will be carried out and then same cleaned bundle will be installed back. For E100B Tube bundle will be pulled out, internal Inspection and Jet/mechanical Cleaning of tubes bundle will be carried out and then same cleaned bundle will be installed back.

LPG162	MEG Reboiler	E-201	OD= 20"Length = 7' - 6" Design = 5 Psig at 450°F	Internal Inspection and jet/mechanical Cleaning of U tube bundle will be carried out.
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4. Valves Replacement/ Fabrication Jobs

ACTIVITY	DESCRIPTION
LPG163	P-100-A/B PRIMMING/ DRAIN LINE COMPLETE SPOOL SHOULD BE REPLACED. APPROX. PIPE LENGTH IS 30FT AND SIZE IS 2".
LPG164	V-101 CRUDE SIDE LCV BOTTOM ISOLATION VALVE INSPECTION /REPLACEMENT/REPAIR.
LPG165	E-100B HOT OIL SIDE OUTLET VALVE INSPECTION /REPLACEMENT/REPAIR. 4"X3"X300 BALL VALVE QTY 02 NOS
LPG166	K-100 ISOLATION VALVE TO BE INSTALLED AT SUCTION SCRUBBER.
LPG167	P-100C BOTH DISCHARGE VALVE PASSING PROBLEM TO BE RECTIFIED. GATE VALVE 4"X150 QTY 01 NO
LPG168	RECTIFICATION OF V116B FLARE VALVE PASSING (BALL VALVE 3"X600 QTY 01 NO), V-100 WATER SIDE LEGS MAIN ISOLATING VALVE PASSING, V-101 CRUDE SIDE LEVEL MAIN ISOLATING VALVE PASSING TO BE DONE.
LPG169	C-100 PCV BY PASS VALVE TO BE REPLACE/REPAIR.
LPG170	V 108 LTS MAIN ISOLATION VALVES OF LIQUID SIDE TO BE REPLACE/REPAIR.
LPG171	MEG REGENERATION UNIT STILL COLUMN COIL LEAKAGE TO BE RECTIFIED.
LPG172	P-800-C (MAIN FIRE WATER PUMP) DISCHARGE VALVES TO BE REPLACE/REPAIR. GATE VALVE 3"X150 QTY 02 NOS
LPG173	K-100, K-101, K-102 (AJAX COMP) ENGINE/COMPRESSOR WATER JACKET CLEANING TO BE PERFORMED.
LPG174	MP AND LP DISCHARGE LINES NRV TO BE REPLACE/REPAIR.
LPG175	AJAX HP- COMPRESSOR SUCTION SCRUBBER (V-106) ISOLATING VALVE TO BE REPLACE/REPAIR. BALL VALVE 4"X300 QTY 01 NO
LPG176	INSTALLATION OF ISOLATING VALVE ON MP DISCHARGE LINE.
LPG177	P100 C RECYCLE LINE CONNECTION TO MAIN RECYCLE LINE.
LPG178	C101 AND V101 RECYCLE LINE COMPLETION.
LPG179	REPLACEMENT OF UNDERGROUND FIRE HEADER LEAKED LINE NEAR DEHYDRATION UNIT
LPG180	INSTALLATION OF SPRINKLING SYSTEM HEADER ON PROPANE BUILT
LPG181	CLOSED DRAIN LEAKAGE PROPER RECTIFICATION AT V101 (REPLACEMENT OF T) AND MAIN LINE NEAR LP COMPRESSOR.
LPG182	REPAIRING OF DAMAGED INSULATION AT VARIOUS AREAS OF PLANT.
LPG183	HOUSE KEEPING OF PLANT AREA'S AND CLEANING OF OPEN DRAIN CHANNELS.
LPG184	APPROX. DIA INCHES FOR WELDING/FABRICATION JOBS: 500

NOTE:

A separate commissioning/start-up team (for static and rotary equipment's) will be required at time of Plant commissioning/start-up after ATA, which will be released from site after completion of commissioning/start-up activities.

Provision of team for connection/ blinding for depressuring/Nitrogen purging and pressure test etc.