



ऑयल इंडिया लिमिटेड
(भारत सरकार का उद्यम)
Oil India Limited
(A Government of India Enterprise)

KG Basin Project

D.NO.11-4-7, Nookalamma Temple
Street, Ramarao Peta,
KAKINADA, Andhra Pradesh-533004
Ph: 0884-2302176/75
Email: kgbasin@oilindia.in

PRE-TENDER CONFERENCE INVITATION NO. OIL/KGB/DSF-II/DEV-002/2022 FROM INTERESTED ENTITIES FOR DESIGN, ENGINEERING, PROCUREMENT, CONSTRUCTION, TRANSPORTATION, INSTALLATION, HOOK-UP AND COMMISSIONING OF WELLHEAD PLATFORMS, SUB-SEA PIPELINES, AND SURFACE FACILITIES FOR TREATMENT OF WELLHEAD HYDROCARBON FLUID FROM DSF-II FIELD, KG/OSDSF/GSKW/2018 BLOCK.

1.0 PREAMBLE:

OIL INDIA LIMITED (OIL), a premier National Oil Company, is engaged in the business of exploration, production and transportation of crude oil and natural gas for over five decades. It is a Navratna Company under Ministry of Petroleum and Natural Gas, Government of India and the second largest National Oil Company in the country.

OIL's KG Basin Project office located at Kakinada is presently entrusted to coordinate activities related to development and production of oil and natural gas from the Krishna Godavari offshore basins in East Cost of India. The Project Office of OIL at Kakinada is well connected by road, rail and air.

The Block KG/OSDSF/GSKW/2018 covering an area of 93.902 Km² was awarded to Oil India Limited (OIL) with 100% stake as the Operator, by the Ministry of Petroleum & Natural Gas (MOP&NG), Govt. of India, under Discovered Small Fields (DSF) round II in March 2019, for carrying out appraisal and development for Petroleum & Natural Gas in the block. The block lies in shallow water offshore area off Amalapuram coast and south of Ravva field and is in two parts separated by a distance of around 1.75 km, with water depths ranging from 5 to 15 m. The area of the Eastern part of the block is 64.547 Km² and the Western part of the block is 29.355 Km². The closest point of block boundary to the east coast is at around 650 m, while the farthest point of the block boundary is at around 11.2 km.

2.0 OBJECTIVE:

OIL invites to participate in Pre-Tender Conference from reputed and established E&P Service Providers/Agencies/Firms who are having expertise in handling project of offshore wellhead platform with facilities, sub-sea pipelines, onshore pipelines and onshore receiving processing facilities.

This document addresses the requirement of services from a reputed SERVICE PROVIDER having adequate knowledge base and experience in the field of offshore and onshore.

Service provider’s capabilities: Interested companies, joint-ventures, consortium of companies to demonstrate their capabilities in providing such services required for establishing the offshore wellhead platforms with facilities, sub-sea pipelines, onshore pipelines and onshore receiving and processing facilities.

3.0 LOCATION OF THE AREA

The Block KG/OSDSF/GSKW/2018 can be approached by air, water and surface transport as given below:

Nearest Airports	Visakhapatnam – 180km Rajahmundry – 70 km
Nearest Sea Port	Kakinada – 15 km
Nearest Railway Junction	Samalkot – 20 km Kakinada – 5 km
National Highway	NH 5

4.0 BROAD SCOPE OF WORK:

As part of this project, the following facilities are intent to be developed.

- Offshore Wellhead Platform at East Block (DCE-1)
- Offshore Wellhead Platform at West Block (DCW-2)
- Minimum Facilities for Offshore Wellhead Platform, East Block (DCE-1)
- Minimum Facilities for Offshore Wellhead Platform, East Block (DCW-2)
- Pipeline (sub-sea and onshore) from offshore wellhead platform at east block (DCE-1) to Onshore Receiving Terminal at East (GEOT)
- Pipeline (sub-sea and onshore) from offshore wellhead platform at west block (DCW-2) to Onshore Receiving Terminal at West (GWOT)
- Onshore Receiving Terminal at East (GEOT)
- Onshore Receiving Terminal at West (GWOT)

The project scope involves the following work/services but not limited to project management, pre/post engineering surveys, basic engineering, detailed engineering design based on tender package, procurement, expediting, manufacturing, supply, fabrication, inspection, testing, surface preparation and painting, installation of jacket, piping, topside deck, offshore hook-up, mechanical completion, pre-commissioning,

commissioning and Performance Guarantee Test Run (PGTR) of project facilities defined in the tender package.

5.0 BRIEF DESCRIPTION OF FACILITIES

a) Offshore Wellhead Platform at East Block (DCE-1)

The proposed offshore wellhead platform at East Block (DCE-1)

Item	Description	East platform
1	Design Life	15 years
2	Platform Orientation	True North = Platform North
3	Water Depth	10.0m
4	Leg Batter	1 : 8 (True Batter)
5	Number of well slots	4 Nos.
6	Clamp on well slots	2 Nos.
7	Pre-installed risers	1 No.
8	Future Risers	No
9	Conductor Protector	No
10	Riser Protector	No
11	Integrated Helideck	Yes
12	CTU operation	Yes
13	Work Point dimensions	9.5m X 12.0m
14	Leg Diameter(s)	1548mm
15	Pile type / Diameter	Main pile / 1372 mm (54")
16	Cd & Cm and increase	10%
17	Marine Growth	75mm
18	Boat Landing	3 level boat landing – 1 no
19	Corrosion allowance	13mm
20	Environmental data	CAIRN's RH platform
21	Geotechnical Report	GS-15-4 platform soil data
22	Topside Load	See table 2.2
23	Barge Bumper	2 Integrated with boat landing on conductor face
24	Soil Scour	5m from mudline
25	Jackup spudcan penetration	Information will be provided at later stage

b) Offshore Wellhead Platform at West Block (DCW-2)

The proposed offshore wellhead platform at West Block (DCW-2)

Item	Description	West platform
1	Design Life	15 years
2	Platform Orientation	True North = Platform North
3	Water Depth	10.0m
5	Number of well slot	1 No.
6	Clamp on well slots	2 Nos.
7	Pre-installed risers	1 No.
8	Future Risers	No
9	Conductor Protector	Yes
10	Riser Protector	No
11	Integrated Helideck	Yes
12	CTU operation	Yes
13	Work Point Elevation	+8.50m
14	Leg Diameter(s)	1632mm
15	Pile type / Diameter	Skirt pile / 1372 mm (54")
16	Cd & Cm and increase	10%
17	Marine Growth	75mm
18	Boat Landing	3 level boat landing – 1 no
19	Corrosion allowance	13mm
20	Environmental data	CAIRN's RH platform
21	Geotechnical Report	GS-23-1 platform soil data
22	Topside Load	See table 5.3
23	Barge Bumper	No
24	Soil Scour	5m from mudline
25	Jackup penetration spudcan	Information will be provided at later stage

c) Pipeline (sub-sea and onshore) from offshore wellhead platform at east block (DCE-1) to Onshore Receiving Terminal at East (GEOT)

Description	Unit	Parameters
		East
Service	-	Well fluid
Pipeline Rating	-	Class 600
Diameter	Inch	8
Sub-sea pipeline length	km	6.5 (appx)
Onshore pipeline	km	2.5 (appx)
Wall thickness (Sch.120)	mm	18.26
Corrosion Coating (3Layer Polypropylene)	mm	3
Flow rate	MMSCFD	10 (HOLD)
Design Pressure	Kg/cm ²	100.3
Design Temperature	Degree C	149
Operating pressure	Kg/cm ²	80
Operating Temperature	Degree C	90
Fluid	-	Well-fluid

d) Pipeline (sub-sea and onshore) from offshore wellhead platform at west block (DCW-2) to Onshore Receiving Terminal at West (GWOT)

Description	Unit	Parameters
		West
Service	-	Well fluid
Pipeline Rating	-	Class 600
Diameter	Inch	6
Sub-sea pipeline length	km	3.5 (appx)
Onshore pipeline	km	2.5 (appx)
Wall thickness (Sch.120)	mm	14.27
Corrosion Coating (3Layer Polypropylene)	mm	3
Flow rate	MMSCFD	4 (HOLD)
Design Pressure	Kg/cm ²	100.3
Design Temperature	Degree C	149
Operating pressure	Kg/cm ²	80
Operating Temperature	Degree C	90
Fluid	-	Well-fluid

e) Offshore production facility

The offshore Production Facilities includes the following.

- a. Production and Test Headers

- b. Instrument / Utility Gas System
- c. Drain, Relief and Vent System
- d. Diesel System
- e. Chemical Injection System
- f. Potable Water System
- g. Future – Pig Launcher system
- h. Instrumentation and Control System on wellhead comprises of the following system for monitoring, control and safety of the platform.
 - PLC based Remote Telemetry Unit (RTU) for platform Monitoring
 - Well Head Control Panel (WHCP) for emergency shutdown (SSSV / SSV / Hydraulic shutdown valves – pneumatic controls.
 - MPFM for Online Well Testing (Future Provision)
- i. Electrical power system for offshore platform comprises of Solar Power System (SPS) as the main power source and Emergency Diesel Generator (EDG) set as the alternate power source.
- j. Navigation Aids System with four (4.Nos.) Navigation Lanterns and one (1No.) Foghorn are considered on platform, which are to be installed on Main Deck.
- k. Fire and Gas detection system
- l. Sacrificial Anodes CP System without monitoring system shall be considered for corrosion protection of platform jacket steel structure.
- m. Emergency Evacuation: In the event of hydrocarbon leak or fire, personnel on board will evacuate the platform via boat landing on to a standby boat.
- n. Safety and Fire Equipment: Potable dry chemical extinguishers and CO2 extinguishers will be provided at hydrocarbon area and electrical area respectively

f) **Onshore Receiving Terminal at East (GEOT) and West (GWOT)**

Plant Design Capacity			
Description	Gas (MMSCFD)	Condensate (BOPD)	Water (BWPD)
East Block - Total Flow	10	1000	1000
West Block - Total Flow	4	750	750
OT Arrival Conditions			
Description	Period	Pressure (kg/cm².g)	Temperature (°C)
Early Field Life	2024 to 2027	70	20 - 35
Mid Field Life	2027 to 2031	40	20 - 35
End of Field Life	2031 to 2035	20	20 - 35
Product Export Conditions			
Product	Designation	Pressure (kg/cm².g)	Temperature (°C)
Gas	@ GAIL Tie-in Point	60-65	45 (Max)
Condensate	@ Tanker Loading	1.5~2.5	45 (Max)

Product Specification

Product	Specification
Dry Gas	Water < 7 lb/MMSCF, Water & HC Dew Point < 0 deg.C #1 @ Operating Pressure
Stabilized Condensate	BS&W < 0.5% by Vol. #2 RVP < 10 Psi
Effluent Water at the outlet of Heater	Treater Oil in treated water < 10 ppm by Vol#3

- #1 – Dry Gas shall meet the requirements of PNGRB Norms. Water & HC Dew Point shall be < 0 deg.C @ Operating Pressure
- #2 - Basic Sediment and Water in product oil shall be <0.5% by volume for an average of 24 hours
- #3 - Oil in Effluent water shall be <10 ppm by volume for an average of 24 hours.

g) Onshore Terminal Production Facilities

The Onshore Processing Facilities include the following:

- a. Receiving and Primary Gas/Liquids Separation System
- b. Gas Dehydration and Dew Point Control System
- c. Sales Gas Compression (Future Provision)
- d. Sale Gas Metering and Export System
- e. Condensate Stabilization, Metering and Export System
- f. Produced Water Treatment and Disposal systems
- g. Fuel Gas System
- h. Flare system with Flare KOD, KOD Pumps and Flare Tip
- i. Chemical Injection System
- j. Closed Drain System
- k. Open Drain System
- l. Instrument Air System
- m. Diesel System
- n. Raw Water System
- o. Potable Water System
- p. Firewater System
- q. Instrumentation and Control System of Onshore Process Terminal comprises of the following system for monitoring, control and safety of the plant.
 - Dedicated process control PLC system with I/O modules shall be provided for process control. One No. OWS (Operator Workstation) and One No. OWS cum EWS (Engineering Workstation) shall be provided.
 - Common ESD/FGS PLC system with segregated I/O module shall be provided for Shutdown, Fire and Gas functions. The ESD/FGS PLC shall be SIL-2 rated minimum.
 - Local control panel with PLC / microprocessor-based system shall be provided for packages like Instrument Air package, Nitrogen Package, GDU Re-boiler BMS, Raw Water System, Potable Water System, Gas Engine Generator package, Diesel Generator package. Local control panel with relays and controller system shall be provided Flare ignition panel. The data from Local control

- panel shall be transferred to Process PLC through serial link and hardwired signals.
- Gas metering system with Senior Orifice Assembly (1 x 100%) with straight Runs with bypass shall be provided for Gas Custody Transfer. Dedicated Gas Flow Computer with Compensated flow shall be used for final dispatch gas fiscal measurement.
 - Liquid metering with Coriolis Flow Meter with bypass shall be provided in the loading bay for Custody Transfer of the liquid.
- r. The Normal Power Source for the Onshore Receiving Terminal shall be 1 x 100 % rated, 415 V, 50 Hz, 3 Ph, 3W Gas Engine Generator (GEG). The gas received from offshore facility shall be suitably conditioned to power the GEG.
 - s. A Suitably rated Diesel Engine Generator (EDG) shall be provided to cater to the Emergency Power of the ORF in case of failure of the GEG.
 - t. The firewater system shall be designed to meeting OISD 189 requirements. The firewater shall be stored in above ground RCC storage tank of required capacity. The tank shall have two equal compartments connected at bottom via sluice gate valve.
 - u. Firewater is supplied by 1x100% Diesel Engine Driven Firewater Pump and 1x100% Electric Motor Driven Firewater pump. Ring mains are to be provided on the OT to supply firewater to all the water monitors, hose stations, and deluge stations.
 - v. The pressure in the ring main is maintained at 7.0 kg/cm²g at the highest point in the Firewater System using 2x100% Firewater Jockey Pumps.
 - w. Future requirement of production facility such as Produces water treatment, gas compression, artificial lift etc are also considered

Note: The data provided above for Platform, Facilities, Pipelines is for reference only and subject to change prior to tendering.

6.0 DETAILS REQUIRED FROM SERVICE PROVIDER

Service Provider/ Contractor/ Vendor will demonstrate their experience and capability during Pre-Tender Conference through presentation and provide the following Information after Conference:

- Details of Service Provider /Contractor/ Vendor's Company /

- Similar works executed in last five (5) years
- Incorporation details along with Date and Place of Incorporation.
 - Contact Details
 - Name of concerned person
 - Designation
 - Telephone number
 - Mobile number
 - Fax number
 - Address e-mail
 - If a Joint Venture/Consortium is proposed, Name, Address, Phone, E-mail of all Joint Venture partners /consortium members along with leader of such JV / consortium.

7.0 GENERAL NOTES:

- i. All documents submitted after the Pre-tender conference should be clear & legible.
- ii. OIL INDIA LIMITED reserves the right to curtail/ enhance the scope of work stated above, if required.
- iii. This representation is non-binding in nature and submission of information should not be considered as shortlisting / selection for company in any subsequent RFP/ Tender/ Bid process that may be undertaken in future.

8.0 SUBMISSION OF DOCUMENT:

Interested parties are invited to submit their interest to participate in the pre-tender conference at our e-mail id: **kgb_dsf@oilindia.in** within **Two (2) Weeks** from the date of publication, followed by hard copies of the same through courier/post to the following address:

**OIL INDIA LIMITED,
KGB & BEP Project,
D. No.11-4-7; 3rd Floor, Nookamma Temple Street,
Ramaraopet, Kakinada-533004
Andhra Pradesh, India.**

The document(s) may also be uploaded in Parties' FTP server/ File sharing website (portal) and the link(s) may be provided to us at our e-mail within above specified period.

9.0 Date & Venue of Conference: 26th August 2022 at Mumbai (Exact address will be notified on receipt of your confirmation to participate)

10.0 This invitation for pretender conference is not a part of any tendering process.