

**TENDER No. OGDCL-SCM-FC-CB-PROJ-KH-  
10005672-2023**

**Scope of Work  
(Terms of Reference)**

**For**

**Engineering Consultant**

**For**

**Adequacy Check of Existing Complete Gas  
Processing Circuit at Sinjhoru including  
Water Bath Heater, Filter Coalescer & Flare  
System**

**For**

**Accommodating 10~15 MMscfd Raw Gas of  
Suleman Wells**

# **Terms of Reference**

## **Development of Khewari Field**

### **OBJECTIVE & BACKGROUND**

OGDCL intends to transport Suleman gases (Sulrman-01 & Suleman-02 wells) for processing at Sinjhor. Suleman gases will be transported to Chabaro tie-in point by laying of approximately 12 Km pipeline. Suleman gases will be injected in to Chabaro flow line. Commingled gas from Chabaro will be transported to Sinjhor through already operated 8", approximately 59 Km pipeline.

Gathering area facility will be designed and installed near Suleman-1 well comprising of in-house available equipment like Separators, Metering skid, water disposal / drainage system and flare stack / open pit with required allied utilities. Some modification / upgradation & addition in existing processing system at Sinjhor will also be carried out to accommodate and process the additional 10~15 MMscfd Suleman gases (Suleman-1 & 2).

### **KHEWARI FIELD DATA**

The following two wells in Khewari Field will be connected to Chabaro tie-in point:

- Suleman-01
- Suleman-02

The following data is attached:

|   |               |
|---|---------------|
| Schematic / block diagram                                   | Anexxure "A1" |
| Pipeline network diagram                                    | Anexxure "B"  |
| Production profile  | Anexxure "C"  |
| Post Well Completion test results of Suleman-01, Suleman-02 | Anexxure "D"  |
| Suleman wells & Commingled Raw gas Composition              | Anexxure "E"  |
| Available data of existing processing equipment at sinjhor  | Anexxure "F"  |

Engineering consultant will review the scheme, adequacy check of complete gas processing circuit and perform the engineering covering as minimum H&MB, Hydraulics, PFDs, P&IDs, offsites & utilities requirements for membrane treatment plant.

### **SCOPE OF WORK**

A schematic / block diagram showing the scheme is attached with this TOR. Initially approximately 19~20 MMscfd (Bitrism+Gundanwari+Chabaro wells) was handled through membrane train at Sinjhor. Currently approximately 10 MMscfd is passing through membrane train at Sinjhor. OGDCL now intends to accommodate and process approximately 10~15 MMscfd gas of Suleman 1 & 2 wells in addition to current flowing of gasses from other wells through this membrane train at Sinjhor. OGDCL internally reviewed the scheme and found that adequacy check and evaluation of all equipment will be required in membrane train including water bath heater for safe processing of Suleman gas with respect to flow and composition.

Engineering consultant will review and vet the complete gas processing circuit at Sinjhor to evaluate the impact of additional 10~15 MMscfd raw gas (from Suleman-1 & 2 wells) on membrane system. If there be any requirement for additional membrane bank or any other

equipment, then same will be arranged and shifted from OGDCL in house inventory, engineering consultant will also review and check the adequacy of additional equipment (if require) considering all design parameters for processing of additional 10~15 MMscfd raw gas (from Suleman-1 & 2 wells) at Sinjhoru.

Engineering consultant will perform the following tasks:

- Evaluate, vetting and validation of OGDCL scheme - (Figure-A1)
- Development Design Basis
- Process simulation, generation of PFDs and Heat & Material balances
- evaluate the impact of additional 10~15 MMscfd raw gas (from Suleman-1 & 2 wells) on
  - membrane system for optimization of membrane elements, permeate flow, pressure accordingly
  - evaluate the effect on LPG production rate (in M Tons per MMscf) after injection of Suleman wells on commingled raw gas of Bitrisim, Gundawari and Chabaro at Sinjhoru plant (as per Figure-A1).
  - flare system (flare header, KO pumps, vessels and flare stack etc.)
- Adequacy check of all equipment in processing circuit including water bath heater
- Development of P&IDs for additional equipment and modification (if any)
- Adequacy check of interconnection piping
- Mechanical condition / integrity recommendations (if any)

A joint meeting between OGDCL and consultant will be held in the office of consultant upon 70% completion of adequacy study to discuss with OGDCL before finalization of final scheme report.

Consultant will submit adequacy report with recommendations of all modifications, addition of equipment and material with estimated costing ( $\pm 10\%$ ) along with report.

#### **NOTE:**

**Prospective engineering consultant will visit site in first week after issuance of web tender to collect information and required data to submit competitive bid. The bids / proposals of only those prospective consultant will be entertained who will visit the site.**

**Successful bidder is responsible to visit site to collect data physically to complete the study.**

Any information / data missing above or additional requirement which deemed necessary for the scheme and safe operation of plant shall be in the scope of the consultant and mentioned in the quotation as a separate line item. For any further information / technical details of membrane train at Sinjhoru, engineering consultant may contact the following:

| <b>Sinjhoru Gas Field</b>  | <b>OGDCL Head Office, Islamabad</b>   |
|--|---|
| Mr. Muhammad Sohail Hayat<br>Senior Engineer Process<br>I/C Process, Sinjhoru Plant<br>Cell # 03006553245<br>Tel # 0235808211<br>Email: <a href="mailto:process.sgf@ogdcl.com">process.sgf@ogdcl.com</a><br><a href="mailto:fmsinjhoru@ogdcl.com">fmsinjhoru@ogdcl.com</a> | Mr. Faisal Mumtaz<br>C.E (Projects)<br>Cell # 0333-9174581<br>Tel: 051-92002-4139<br><a href="mailto:faisal_mumtaz@ogdcl.com">faisal_mumtaz@ogdcl.com</a> |

## **DELIVERABLES**

- Process simulation with Heat and Material balance
- PFD & P&IDs of proposed scheme as per figure A-1 / with additional equipment if required
- Adequacy check report of existing equipment (but not limited to specially filter coalescer, water bath heater and flare system) as per figure A-1
- For the Modification / addition in existing scheme, following documents are required as minimum to be furnished:
  - Data sheets of new equipment
  - Tie-in details, BOQ and isometrics of additional/new equipment
  - Cost estimate of new equipment and required bulk material

## **PRICE / COST & PAYMENT TERMS**

Fair lump sum charges to be quoted by the Consultant to undertake and completion of above mentioned study. Payment will be made upon completion of assignment and submission of final report to OGDCL.

Quoted prices shall inclusive of all applicable taxes of Provisional and Federal government separately. The quoted price will remain fixed and there will be no escalation in charges whatsoever.

## **ELIGIBILITY & TECHNICAL EVALUATION CRITERIA**

- Applicants must be incorporated in Pakistan.
- Engineering consultant firms having relevant experience in the field of consultancy and registered with sales tax department are encouraged to apply for provision of services as defined in this document.
- Engineering consultant must have registered with PEC as a consultant with valid certification.
- Engineering consultant must have at least 07 years' experience in designing and construction consultancy of oil and gas sector projects.
- Further, engineering consultant must have carried out at least two project during last 07 years in oil and gas sector for plant modification / revamp / adequacy check.

## **BID SUBMISSION TIME**

Bid submission time as per tender notice

**Consultancy Services Cost Schedule Format**  
(To be filled as a part of proposal)

|   | ITEM                                      | Time line | COST (PKR) |
|---|---|-----------|------------|
| 1 | Adequacy Check Study                      | 05 weeks  |            |
| 2 | Total with all taxes except provincial ST |           |            |
| 3 | Provincial Sales Tax @                    |           |            |
|   | Total with sales tax                      |           |            |

**Notes:** OGDCL reserves the right to conclude the consultancy services contract at any stage by making payment of completed jobs only.

Timeline for completion of the services shall be 05 Weeks from the date of acceptance of service order

Bidding procedure shall be single stage single envelope

Financial evaluation shall be carried out including sales tax (Sum of 1-3)

Bid bond amounting to PKR 50,000/- to be submitted along with the bid

Payment shall be made on satisfactory completion of all activities on submission of verified invoice and Annexure-C (issued by relevant tax authority) any other requirement in the TOR and service order

Successful bidder shall furnish performance bond amounting to 10% of contract price which shall be released six (06) months after satisfactory completion of services

Copy of complete signed stamped tender document to be enclosed with the bid proposal