1.0 PROJECT INTRODUCTION

The Mansuriya gas field is located in Diyala governorate approximately 45 km north of Ba’quba city in Iraq. This location is about 100 km north-east Baghdad and south-west of Hamrin Lake. The location of the field is provided in Figure 1.1.

Figure 1.1 – Mansuriya Field Location

Turkish Petroleum Overseas Company (TPOC), Kuwait Energy Company (KEC) and Korean Gas Company (KOGAS) (Consortium) have signed an initial agreement with the Iraqi Oil Ministry for the Mansuriya Field Development Project. The development plan involves two phases; Phase 1 is to achieve 100 MMSCFD of dry gas production. Phase 2 involves an expansion of the production capacity to 320 MMSCFD by 2023.

The development plan is to reach a planned 100 MMSCFD by Q2 2018 based on EPC award in January 2016, subject to security status.
The wellstream production is sour (contains approximately 2.5 mol% H2S and 2.5 mol% CO2) and will require acid gas treatment.

2.0 EPC SCOPE OF WORK

The CONTRACTOR will consider the entire Phase 1 development as a stand-alone facility.

The project philosophy of maximising packages is to be adopted to reduce on site construction effort and minimise schedule.

The facility shall include:

- Infield gas gathering system from four well sites to the CPF.
- 100 MMSCFD modular surface facilities for the gas plant to be provided by process package suppliers in skids (units inside the dashed lines in figure 2.2). EPC Bidder shall prepare its Bid with one of the process package supplier either recommended which could be found below or any other of their choosing, provided process guarantees can be maintained.
  - Inlet separation facilities
  - Gas processing – AGRU, Gas Dehydration, Hydrocarbon Dewpointing, LPG Recovery, Condensate Stabilisation, Produced Water Treatment and SRU
- Power Generation & Utilities.
- Dry gas export pipeline to Mansuriya Power Station app 4.1 km.
- Condensate export facilities and pipeline to Naft Khana tie-in to an existing pipeline to Dura Refinery app 45-50 km (TPOC and Petrofac are working on preparation of the shortlist for Pipeline companies who are willing to work on Mansuriya Project; EPC bidder could take advantage of the list or may choose any other company).
- Treated Water disposal to evaporation pond.
- LPG filling station located in the facility.
- Raw water intake facilities and pipeline from the northern bank of Diyala River app 15 km.
- Roads & Infrastructure.
- Start up, commissioning, and operation of the Phase 1 facilities for a minimum of 1 year (extendable to 3 years).

The following are excluded from CONTRACTOR’s scope: Permanent camp (will be used by EPC Contractor during O&M period (1 to 3 years) and TPOC will cover all expenses of this permanent camp); Police/security camp; Drilling of the wells.
2.1 Modular Process Packages

A modular approach to EPC is proposed, with the CONTRACTOR to integrate modules supplied by the package supplier for the Gas Plant. Pre-selection of Process Package Suppliers is currently underway during FEED to provide offers for the design, engineer, procure, and supply of the following process packages. The supply of these process packages shall be included within successful EPC’s scope. The following are anticipated but not an exhaustive list:

- Gas Compression
- Power Generation
- Packaged Substation
- Packaged Control Room
- Utility Systems as appropriate
- Inlet Separation and Condensate Stabilization
- Gas Dehydration
- Mercury & Acid Gas Removal
- LPG Extraction & Recovery
- Sour Water Treatment
- Sulphur Recovery/Liquid storage and Pelletization

Table 2.1 - Prospective Process Package Vendors

<table>
<thead>
<tr>
<th>VENDOR NAME</th>
<th>LOCATION</th>
<th>CONTACT</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENERFLEX LTD.</td>
<td>UK</td>
<td><a href="mailto:wyoungs@enerflex.com">wyoungs@enerflex.com</a></td>
</tr>
<tr>
<td>ENTERPRISE STEEL FABRICATORS LTD.</td>
<td>CANADA</td>
<td><a href="mailto:sales@entsf.ca">sales@entsf.ca</a></td>
</tr>
<tr>
<td>EXTERRAN</td>
<td>UAE</td>
<td><a href="mailto:Mandar.Luktuke@Exterran.com">Mandar.Luktuke@Exterran.com</a></td>
</tr>
<tr>
<td>FRAMES</td>
<td>NETHERLANDS</td>
<td><a href="mailto:n.vd.kolk@frames-group.com">n.vd.kolk@frames-group.com</a></td>
</tr>
<tr>
<td>KNM GROUP</td>
<td>MALAYSIA</td>
<td><a href="mailto:jennlai@knm-group.com">jennlai@knm-group.com</a></td>
</tr>
<tr>
<td>LE GAZ INTEGRAL</td>
<td>FRANCE</td>
<td><a href="mailto:a.hashem@gazintegral.com">a.hashem@gazintegral.com</a></td>
</tr>
<tr>
<td>PROCESS GROUP (DEGREMONT)</td>
<td>UAE</td>
<td><a href="mailto:adil.shaikh@processgroupintl.com">adil.shaikh@processgroupintl.com</a></td>
</tr>
<tr>
<td>PROPAK SYSTEMS</td>
<td>USA</td>
<td><a href="mailto:sales@propaksystems.com">sales@propaksystems.com</a></td>
</tr>
<tr>
<td>TURBO DIESEL &amp; ELECTRC SYSTEMS INC.</td>
<td>USA</td>
<td><a href="http://www.tdesystems.com">www.tdesystems.com</a></td>
</tr>
<tr>
<td>UOP HONEYWELL</td>
<td>UAE</td>
<td><a href="mailto:satish.kumar2@honeywell.com">satish.kumar2@honeywell.com</a></td>
</tr>
<tr>
<td>VALERUS</td>
<td>UAE</td>
<td><a href="mailto:cmcmillan@valerus.com">cmcmillan@valerus.com</a></td>
</tr>
<tr>
<td>COMART</td>
<td>USA</td>
<td><a href="mailto:dave.diba@tozziholding.com">dave.diba@tozziholding.com</a></td>
</tr>
</tbody>
</table>
Note: This is a preliminary list, is not mandatory and EPC bidders are free to liaise with any vendor. Package vendors engaged in the FEED will clearly be already familiar with the project scope and details.

**Figure 2.2 - CPF Process Block Diagram & Scope of Supply**

![CPF Process Block Diagram](image)

### 3.0 EXPRESSION OF INTEREST

Petrofac Engineering & Consulting Services, based in Woking are currently in the early FEED phase of the project, and are supporting TPOC with the ITT for EPC Contract.

#### 3.1 Preliminary ITT schedule:

- **EOI closing date:** Wednesday 24th June 2015
- **Prequalification Questionnaires issue date:** Friday 10th July 2015
- **Prequalification closing date:** Tuesday 28th July 2015
- **ITT issue date:** Friday 11th September
- **Technical EPC tenders closing date:** Friday 20th November
- **Commercial EPC tenders closing date:** Friday 18th December
- **EPC Award date (tentative- subject to settlement of Iraq):** January 2016

Please confirm whether you are interested in receiving the prequalification questionnaire, and formal ITT package. Please also confirm your ability to meet the key dates for EOI, and Prequalification submittal provided above. To award EPC Contract, it is vital to see if prevailing security situation in Iraq and Contract Area is adequate or not at the time of contract signature.
Therefore, TPOC and winner of this tender shall mutually agree on the contract signature date: this might require some extension on Bid Validity Period. However, production of gas from Mansuriya Field is already behind schedule and Consortium is eager to produce gas at earliest possible date. TPOC will get all necessary approvals to sign the contract with the winner of this tender and will not unreasonably delay the signature date.

You are hereby requested to e-mail your response to the undersigned with a copy to:

James Swankie
Petrofac Projects Procurement Manager
Email: james.swankie@petrofac.com
Tel Direct: +44 (0) 1483 738599

Together with any relevant supporting information like contact details of personnel who will be handling these enquiries, by no later than **Wednesday 24th June 2015**.

Yours sincerely,

Umut Onder Su
Project Control Manager

Turkish Petroleum Overseas Company

TP Mansuriya LTD

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Email: umutsu@tp.gov.tr