

## SCOPE OF WORK/TERMS OF REFERENCE

### 1. INTRODUCTION:

Unaccounted for Natural Gas (UFG) means, in respect of financial year, the difference between the total volume of metered gas received by Gas Utility Companies during that financial year and the volume of natural gas metered as having been delivered by the licensees to their consumers excluding there from metered natural gas used for self consumption by the Gas Utility Companies for the purposes of their regulated activity; and such other quantity as may be allowed by the Authority for use by the licensees in the operation and maintenance of their regulated activity.

UFG is one of the major operational elements and bench marking of UFG greatly determines the operational efficiency of a transmission and distribution company. The companies in their different petitions have been arguing that following factors contribute to the UFG:-

- (i.) *Leakages*
- (ii.) *Measurement errors*
- (iii.) *Size and Age of network*
- (iv.) *Law and order situation in different areas*
- (v.) *Increase in gas price*
- (vi.) *Increase in gas theft by consumers and non-consumers*
- (vii.) *Shift of gas sales from bulk to retail consumers*
- (viii.) *Allowance for minimum billing*
- (ix.) *Effect of Power outage on buried steel pipelines*

Considering the importance of the issue, OGRA intends to carry out detailed evaluation in respect of its licensees i.e. Sui Northern Gas Pipelines (SNGPL) and Sui Southern Gas Company (SSGC) on various aspects of UFG components and its quantum through a Consultant firm of eminence repute in the field.

### 2. OBJECTIVES:

a) To assist Oil and Gas Regulatory Authority (hereafter referred the Authority) for determining and fixing the UFG benchmark (s) for the gas utility companies i.e SNGPL and SSGCL for next five years and thereafter development of a formula to calculate UFG on yearly basis keeping in view all the relevant factors as well as international best practices.

### 3. TASKS:

- I. Develop rationalized overall benchmark for UFG, in natural gas sector / development of a formula to calculate UFG on yearly basis, including fixed and variable parameters, as per relevant clauses of OGRA Ordinance and UFG defination given in NGTR and applicable law.

- II. The benchmark study must elaborate international best practices as well as appropriate discounts for local operating conditions, with specific reference to countries with similar operating environment alongwith details of company's network / consumers in respective countries. References on UFG Benchmarks prepared by other renowned regulators should be included alongwith their methodology adopted to calculate UFG disallowance if any.
- III. Brief of some of the issues mentioned at Para 1 above which are the contributing factors raised by the gas companies in the specific socio economic conditions of Pakistan, is as follows:-

**a) SHIFT OF BULK SALES TO RETAIL SECTOR**

Bulk sector comprises of power, fertilizer, cement, steel mills and other corporate sector industries whereas retail sector constitutes sale to all remaining consumers.

Task

- Identify the bulk consumers in both gas companies with their respective volumes, inline with the international practices.
- To establish a formula to calculate the impact of shift of volume from bulk to retail sector for calculation of UFG, inline with the international practices also indicate reference countries.

**b) THEFT**

Two type of theft exist:

- Theft by registered consumers
- Theft by non registered consumers

Presently OGRA allows theft volume against registered consumers in the deemed gas sales upon its acknowledgement, whereas for non- registered consumers, companies are required to put all out efforts which includes vigilance, identification and removal of theft points, calculation of pilferage volume and have the same acknowledged by the court of law.

Task

- Internatioanal best practices adopted for treatment of theft by non registered consumers alongwith proper referencing vis-à-vis countries specific conditions.
- Prepration of methodology for treatment of theft volume in the UFG computation as well as what actions would be required by the companies to qualify for such volumes.

**c) LAW AND ORDER AFFECTED AREAS**

In view of the detoriating law and order in certain areas of the country gas companies are persuing to allow volumes in this account

Task

- Suggest appropriate way forward for quantification and treatment of such volumes as part of UFG in line with the best international practices with specific references alongwith legal provisions vis-à-vis local conditions.
- Define prerequisites to qualify for law and order volumes.

**d) MINIMUM BILLING**

OGRA disallows the claims of the gas companies' against minimum billing on the rationale that the same is unmeasured and is not inline with the UFG definition provided in NGTR 2002 and arises due to petitioner's own equipment fault, which is not justified and that allowance for such metering errors has already been given in the allowable UFG vis-à-vis local conditions.

Task

- Whether there is a justification to consider allowance in UFG for volume against minimum billing claimed by the gas companies, giving references, if any keeping in view applicable legal provisions.

**e) FORMULA FOR UFG CALCULATION**

SNGPL has contested the methodology of calculating UFG by OGRA in the light of the definition of UFG given in the NGTR 2002.

Task

- To suggest methodology of calculating UFG in the light of present practice, definition as per rules and international practises applicable.

**f) BTU EQUIVALENCE ISSUE IN CASE OF THIRD PARTY ACCESS**

As per Third Party Access Rules, the transporter of gas i.e. the gas companies, shall be paid for transportation charges for the contracted capacity in terms of volume at the entry point and shall account for this gas in terms of equivalent energy value at exit point irrespective of volume.

Due to lower GCV of the commingled gas in the integrated transmission and distribution network of the gas companies, the transporter of gas i.e. the gas companies have to deliver excess volume of gas to compensate the energy value at exit point which contribute to the UFG of the companies.

Task

- To devise a mechanism to stream line the above anomaly inline with the best international practices vis-à-vis local conditions.

**g) TREATMENT OF THIRD PARTY GAS VOLUME FOR CALCULATION OF UFG**

Task

- To suggest treatment of such gas volumes as per standard norm / best international practices.

V. A methodology / mechanism is to be devised for capping the volumes to be allowed (if any) as mentioned in Paras (a), (b), (c), (d) above, with a view to create a balance between consumers and the licensees and to maintain reasonable pressure on the licensees to put due efforts to control these losses.

VI. The benchmark must also cater for anticipated development in natural gas sector, which may include increase in gas input due to indigenous gas discoveries, import of natural gas through interstate pipelines /LNG, increase / decrease in gas sales volumes, load management, and other such factors as per international best practices.

VII. Develop framework for incremental improvement in all areas/components of UFG control.

4. DELIVERABLES:

- (i) Present study plans, highlighting critical milestones to the Authority, prior to the commencement of the study.
- (ii) Submit draft report to the Authority within 30 days of the commencement of the assignment.
- (iii) Submit 2<sup>nd</sup> draft report on UFG benchmark fixation to the Authority within 60 days of the commencement of the assignment.
- (iv) Submit final report on UFG benchmark fixation to the Authority by 90<sup>th</sup> day of the study period.
- (v) Consultant firm will be obligated to consult all stakeholders including sui companies and to assist the Authority in presenting the findings of study to various forums.
- (vi) The Consultant Firm shall be responsible to coordinate with the Sui Companies and other relevant stakeholders, for collection of relevant data required to carry out the said study under intimation to OGRA.
- (vii) Any direction, order, judgment or guideline issued by any court of law relating to determination of UFG shall be binding on the consultant and shall be complied with in letter and spirit.

5. QUALIFICATION OF THE CONSULTANT(S):

The Consultant firms should comprise of technical personnel with a minimum of 20 years practical experience relating to UFG monitoring, gas measurements, gas purchase-sales reconciliations and strong knowledge of the international as well as the local factors which have an impact on UFG. Interested Consultant firm(s) must provide detailed resumes of their members.

6. All consultant firms participating in the tender would be required to give detailed presentation which as well cover the following:

- Experties
- Experience
- Any UFG benchmark studies done for reknowned regulators.
- Practices adopted by the other reknowned regulators
- Resume of their experts
- Any other related information

7. TERM/DURATION OF ASSIGNMENT:

The study shall be completed within **90 days** of the award of contract

8. PROPRIETARY RIGHTS:

All documents prepared by the consultant(s) shall become and remain the sole property of the Authority. Consultant(s) shall not, during the term of contract or after expiration, disclose any proprietary or confidential information relating to the services, or the Authority's business or operations.

9. LOCATION:

All relevant correspondence and meetings will be convened in the office of Oil and Gas Regulatory Authority, currently located at Plot No. 54-B, Fazl-e-Haq Road, Blue Area, Islamabad.

10. COUNTER PARTS:

Executive Director (Gas) and Sr. Executive Director (Finance & Accounts), OGRA will be the counter parts who will provide day-to-day coordination for the project.

**TECHNICAL EVALUATION CRITERIA**

<b>Description</b>	<b>Points</b>
<b>1.0 Work Protocol</b>	<b>20 Points</b>
1.1 A comprehensive approach, strategy or methodology along with tools and techniques, which shall be adapted to carryout UFG study as per TOR's, highlighting critical path items.	
<b>2.0 General Experience of the firm</b>	<b>10 Points</b>
2.1 No. of years in business/ consultancy	5 Points
2.2 Areas of expertise(general experience, not specific experience)	5 Points
<b>3.0 Specific and relevant experience</b>	<b>40 Points</b>
3.1 Total Work experience and competency of the consultant Firm(s) in undertaking jobs relating to similar assignments like natural gas purchase / sale reconciliation, UFG related studies, energy efficiency audits of prominent gas distribution and transmission companies, with supporting documents.	20 Points
3.2 Experience of work with similar agencies, and in similar conditions.	20 Points
<b>4.0 Key staff to be deployed on the assignment on permanent basis</b>	<b>20 Points</b>
4.1 Qualification	10 Points
4.2 Experience	10 Points
<b>5.0 Financial/Technical Strength of the firm and presence in Islamabad</b>	<b>10 Points</b>
5.1 Organizational Structure, How they handle assignments/professional supervision	5 Points
5.2 Professional presence in Islamabad	5 Points
<b>TOTAL:</b>	<b>100</b>

**NOTE: Minimum requirements for technical pre-qualification shall be 70 points.**

**For overall evaluation following weightage will be given:-**

**Technical Proposal = 85% weightage**

**Financial proposal = 15% weightage**