



**GAIL (India) LIMITED**  
CENTRAL INTEGRITY MANAGEMENT GROUP, NOIDA

NOIDA  
8<sup>th</sup> August 2018

**Expression of Interest (EOI) – Empanelment of third party for Operating Meter Proving Facility at Hazira, Gujarat**

Interested agencies experienced in similar jobs are invited to submit necessary documents in support of their Technical capabilities in order to get pre-qualified for the proposed empanelment.

The completed Application Form along with attachments in a sealed envelope with “**Application for Pre-Qualification of Third Party for Operating Hazira Meter Prover Facility**” may be forwarded to the address mentioned below or the same can also be emailed to [cmggroup@gail.co.in](mailto:cmggroup@gail.co.in) latest by **September 25, 2018**

Agencies applying against the EOI will be screened based on submitted Application Form along with attached documents. Shortlisted agencies will be eligible to participate in the subsequent tendering process / RFP.

Brief Scope of Work and Terms of Engagement are indicated in the following sections. Detailed Scope of Work, Schedule of Rates, Evaluation Methodology, Bid Evaluation Criteria, etc. will be intimated during the subsequent tendering process.

**ADDRESS FOR APPLICATION FORM & DOCUMENTS SUBMISSION**

**Chief General Manager (O&M)-CO  
Central Integrity Management Group, CO-(O&M)  
GAIL (India) Ltd  
20th Floor, Jubilee Tower  
B-35, 36, Sector-1  
Noida-201301  
Uttar Pradesh, India  
Email: [cmggroup@gail.co.in](mailto:cmggroup@gail.co.in)  
Contact no: +91-(120) 2446400/4862400**

## **SCOPE OF WORK**

### **1.1 BACKGROUND:**

GAIL (India) Ltd is a Central Public Sector Undertaking (PSU) under the Ministry of Petroleum & Natural Gas (MoP&NG) Government of India. GAIL operates network of Natural Gas Pipelines covering more than 11000 Km with a capacity of above 206 MMSCMD & two LPG Pipelines covering 2040 Km with a capacity of 3.8 MMTPA of LPG. Along the pipelines, there are booster/compressor stations. In addition, GAIL owns seven process plants (GPUs) across India for extraction of liquid hydrocarbons from natural gas

### **1.2 OBJECTIVE:**

GAIL intends to engage third party for operating its HIGH PRESSURE NATURAL GAS METER PROVER FACILITY at Hazira in the state of Gujarat in India. The engagement would be for an initial period of 05 years and the same can be extended for further period of 05 year as per terms and conditions mutually agreed.

### **1.3 BRIEF ON METER PROVER FACILITY**

#### **1.3.1 GAIL has installed and is operating a HIGH PRESSURE NATURAL GAS METER PROVER FACILITY at the following location**

Hazira Compressor Station  
GAIL (India) Limited  
Ichchapore Magdalla Road  
P.O. ONGC Nagar  
Surat – 394518  
Gujarat, India

#### **1.3.2 The facility has wide range of gas flow meter calibration capability for Turbine and Ultrasonic flow meters**

#### **1.3.3 Hazira meter prover facility uses the master meter method based on the mass conservation principle. In this, a master meter and test meters are kept in series and mass entering and exiting the loop remains fixed. The volume quantities of the meters are converted to mass using the actual density and real gas factors calculated using an online gas chromatograph in the system. All quantities measured are corrected for deviations. In addition to these corrections the dual chronometry processing for pulses is used to achieve highest possible accuracy.**

#### 1.3.4 Technical details of the facility

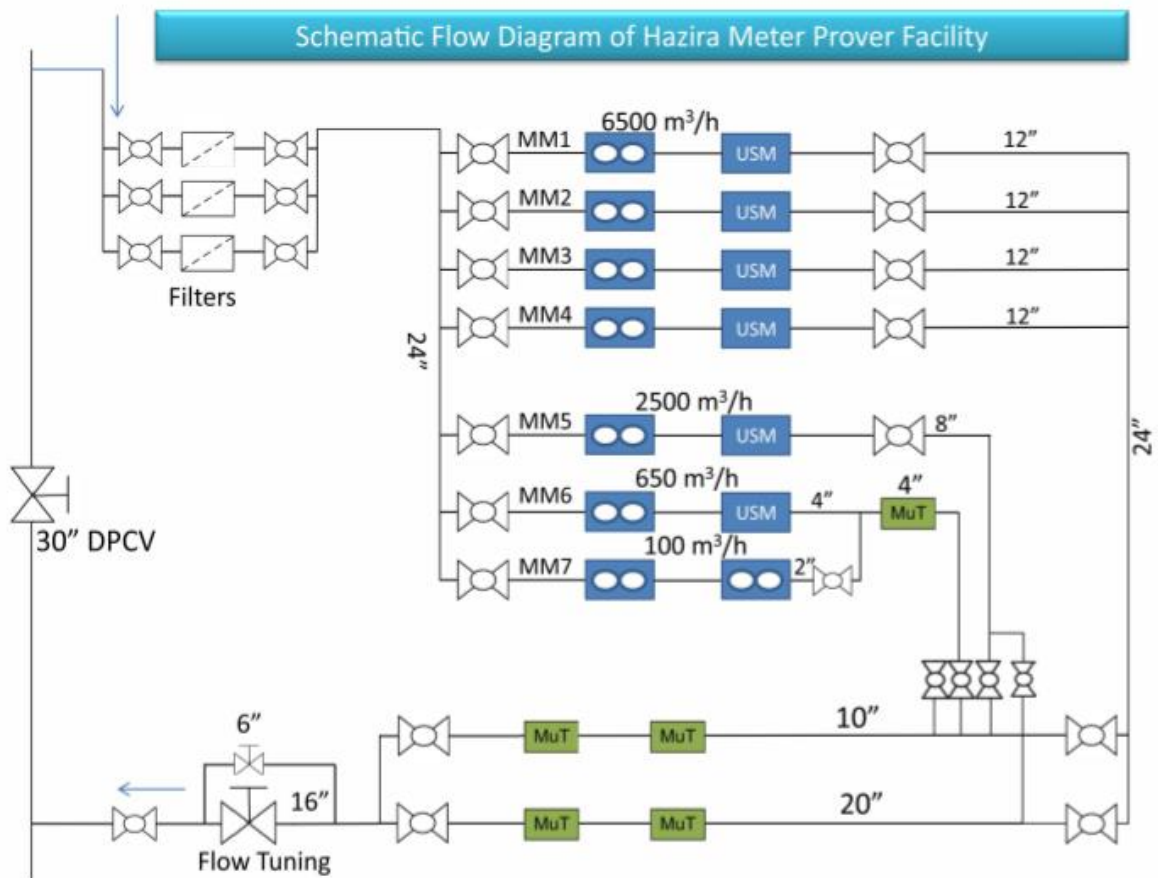
Flow Range	10 – 19000 m <sup>3</sup> /hr
Meter Sizes for calibration	2” to 24” (DN 50 – 600)
Pressure	46 – 51 bar (as per line condition)
Medium	Natural Gas
Best Overall Uncertainty (CMC)	0.2%
Temperature Stability	Better than 0.05 deg C
Pressure Stability	Better than 0.05 bar
ANSI Flange Ratings	300# & 600#

- 1.3.5 The facility is traceable to the Gas Oil Piston Prover (GOPP) of M/s VSL, the Dutch National Standards Institute. M/s VSL’s Travelling Reference Meters (TRMs) are calibrated with GOPP which have been in turn used to calibrate the Hazira Meter Prover Facility, thus making facility traceable to the GOPP of M/s VSL.
- 1.3.6 The Facility has been last revalidated against travelling reference standards of VSL, Netherlands in February 2018.
- 1.3.7 The Hazira Meter Prover facility is accredited to National Accreditation Board for Testing and Calibration Laboratories as per ISO 17025 “General requirement for the competence of Testing / Calibration Laboratories” for Fluid Flow, Pressure & Temperature Calibration.
- 1.3.8 The facility is an open loop natural gas based wet calibration facility having following:
- Each master metering stream has a turbine meter as the master meter and ultrasonic meter as reference meter
  - Master metering streams:
    - 12” x 4 Turbine meters
    - 8” x 1 Turbine meter
    - 4” x 1 Turbine meter
    - 2” x 1 Turbine meter
  - Reference metering streams:
    - 12” x 4 USM meters
    - 8” x 1 USM meter

- 4" x 1 USM meter
- 2" x 1 Turbine meter

➤ 03 Meter Under Test (MUT) lines that can be used to calibrate up to 2 flowmeters simultaneously

1.3.9 Schematic flow diagram of the facility is as under:



#### 1.4 TYPICAL SCOPE OF WORK

The brief typical scope of work as well as terms & conditions are as detailed below but not limited to the following:

- 1.4.1 The empaneled agency shall have overall responsibility of operation of the meter prover system including issuing calibration certificate for the meters whose proving is done in the facility as an independent third party operator.
- 1.4.2 Henceforth, empaneled third party shall be referred to as OPERATOR, Hazira Meter Prover Facility shall be referred to as HMPF and GAIL will be referred to as OWNER.
- 1.4.3 The primary activity of HMPF is as under:

- Perform calibration or proving of USM / Turbine meters owned by OWNER. OWNER'S meters include those used for internal metering or custody transfer metering to its customers
- Perform calibration or proving of USM / Turbine meters of external customers

1.4.4 The OPERATOR shall have complete responsibility of operating the HMPF so as to meet international standards and traceability requirements. The typical activities falling in the scope of OWNER and OPERATOR are given in the subsequent sections

**OPERATOR'S SCOPE:**

1.4.5 Scope of OPERATOR includes following:

**Operation & calibration / proving Activities:**

- a. OPERATOR to deploy at HMPF a suitable team (henceforth referred to as SITE TEAM) to carry out operation & maintenance activities at HMPF. The team may be OPERATOR's own team or an authorized agency of OPERATOR. In any case, the SITE TEAM shall carry out all the operation & maintenance activities of HMPF under the supervision & guidance of OPERATOR
- b. Meter prover is just placed at upstream of Hazira compressor station thus the operation of Hazira Meter prover facility requires close co-ordination with compressor station operation. OPERATOR to ensure the same.
- c. The SITE TEAM shall assist the OPERATOR in all activities which include the following:
  - Carrying out calibration activities ( However, verification of test results and issuance of calibration certificate shall be done by OPERATOR's Metrologist on OPERATOR letter head)
  - Carrying out all operation activities of HMPF as well as coordination with Hazira Compressor Control Room
  - Coordination for receipt of meters, unpacking, cleaning, overhauling, installing / removing the MUT, storage & dispatch of meters
  - Carryout Meter Inspection prior to and subsequent to proving
  - Carryout periodic calibration of secondary equipment, etc.
  - Changing of spools as and when required to accommodate various sizes of meters

- Unloading & Loading of meters & meter runs in truck / vehicle and transportation / movement from & to designated locations within the plant
- All other activities related to HMPF operations

All the above activities will be carried out under the supervision of OPERATOR and as per the instructions of the OPERATOR.

- d. Perform calibration / proving of USMs / Turbine Meters / Other Meters of GAIL as well as external customers.
- e. HMPF to be operated on 02 shifts per day basis through the year i.e. 365 days. SITE TEAM shall have sufficient manpower for the same.
- f. OPERATOR may opt for any of the following two options w.r.t. witnessing calibration & issuing calibration certificates:

**Option 1: Onsite deployment of OPERATOR manpower**

- Under this option, OPERATOR to deploy atleast 01 Metrologist per shift having experience in performing high pressure calibration with Natural gas at any of the ISO 17025 accredited laboratory.
- The Metrologist shall not be outsourced
- Verification of test results and issuance of calibration certificate shall be done by Metrologist on OPERATOR letter head

**Option 2: Witnessing calibration process remotely**

- Under this option, calibration process may be witnessed remotely by OPERATOR's Metrologist. OWNER will establish necessary equipment like remote desktop viewer, etc. to enable remote viewing by the OPERATOR personnel
  - Under this option, Metrologist shall visit HMPF mandatorily twice in a year which will be for a maximum duration of 04 days. The visits are envisaged for physical inspection of the facility, verification & other activities for upkeep of HMPF. Travelling, lodging & boarding expenditure towards this shall be borne by OWNER. Any additional visit made by the OPERATOR shall not be borne by OWNER
  - The Metrologist shall not be outsourced
  - Verification of test results and issuance of calibration certificate shall be done by Metrologist on OPERATOR letter head
- g. Maintain all documentation / records of HMPF as per international recommended practices as well as relevant applicable standards like AGA 9, ISO 17089, etc. Also maintain a database of all meters whose calibration / proving is done.

All the above documentation is to be provided to OWNER periodically for storing and future retrieval.

- h. All clarifications, redressal of queries of stakeholders, etc related to calibration or proving activity carried out at HMPF shall be provided by the Metrologist
- i. Schedule meter calibration / proving so that the lead time for calibration will be minimum.
- j. OPERATOR's scope includes ensuring all logistics required for SITE TEAM to carry out activities like Unloading & Loading of meters & meter runs in truck / vehicle and transportation / movement from & to designated locations within the plant
- k. Implement / ensure compliance to all requirements pertaining to accreditation of HMPF, statutory requirements, requirements of regulatory authorities (both national & international) and upkeep of the facility to meet international standards
- l. Perform periodic evaluation of the performance of HMPF against the GAIL travelling standards
- m. Prepare all the Standard Operating Procedures (SoPs) for various activities of the meter prover operation

**Performance Improvement Activities:**

- n. Carry out gap analysis and suggest improvement areas, if any, without compromising on the accreditation requirements. All expenses towards bridging these gaps / improvements will be borne by OWNER.
- o. Study the pulsation effect on the meter prover and suggest mitigation measures
- p. Establish harmonization methodology with other reputed lab in the field. However, the decision on whether to join in harmonization process will be made by OWNER.
- q. Carryout intermediate checks and suggest for improvement measures on periodic basis. Expenses towards rectification, if any, shall be borne by OWNER

**Traceability Maintenance:**

- r. The traceability requirement in line with ISO 17025 shall be maintained by OPERATOR. OWNER will arrange for travel standard for traceability chain maintenance.

- s. OWNER'S travel standards will be used for maintenance of traceability chain and checking of integrity of meter prover. OWNER will also maintain masters for secondary instrumentation. Testing shall be carried out by outsourced operations teams under the supervision of OPERATOR as per the schedule of testing provided by OPERATOR. The results will be evaluated and new uncertainty will be calculated by Metrologist.
- t. OPERATOR shall identify the requirement of calibration of Travelling Standards. The calibration charges shall be borne by OWNER. OPERATOR to identify minimum three calibration labs for calibration of Travelling Standards so as to maintain / improve the CMC. OWNER will finally select the lab as per its procedures.
- u. Documentation for maintenance of ISO 17025 accreditation shall be provided by OPERATOR as and when required by certification body. All the charges related to certification shall be borne by OWNER. OWNER will be listing the details of OPERATOR'S Metrologist as authorized signatory of its Meter prover facility. The documentation to this effect shall be provided by OPERATOR.

Alternatively OPERATOR can take the HMPF in their existing ISO 17025 certificate. In this case all the certification related fees applicable for Hazira Meter prover facility will be reimbursed by OWNER. The overhead charges, if any, shall be limited to 10% of invoiced amount.

**Other Activities:**

- v. Ensure safety of HMPF at all times
- w. Take initiatives to increase the calibration business not only from India but abroad too.
- x. Ensure proper promotion of HMPF facility. Reference of HMPF to be made part of OPERATOR'S website
- y. Planning of spares required for HMPF. OPERATOR shall identify the required spares and ensure their availability whereas procurement of such spares shall be the responsibility of OWNER

**OWNER'S SCOPE:**

1.4.6 Owner's scope includes following:

- a. Capital expenditure (CAPEX) required, if any, from time to time for upgrading the facility or complying with requirements related to the accreditation of HMPF and all other statutory requirements, requirements



of regulatory authorities both national & international, upkeep of the facility, etc. will be borne by OWNER. However, responsibility of implementation will be with the OPERATOR

- b. Master equipment required for intermediate and integrity checks will be purchased by OWNER.
- c. Procurement of spares as identified by OPERATOR from time to time

## **1.5 PROPOSED MODEL FOR REVENUE SHARING:**

Revenue for operating HMPF for 05 years is proposed as under:

- 1.5.1 Yearly fixed charges which are payable on a monthly basis on pro-rata.

This includes charges for all activities in the scope of the third party, other than carrying out calibration / proving of external meters

- 1.5.2 No fee will be charged for calibration / proving of GAIL's internal meters. Presently there are about 300 USM meters and about 500 turbine meters installed in GAIL which may go up as and when new pipelines / customers are added. As per present policy USM meters are calibrated once in 05 years while Turbine meters are calibrated once in 02 years

- 1.5.3 The revenue generated by performing calibration / proving of meters from external customers to be shared between third party and GAIL in the ratio of 50:50. Calibration cost to be charged for the external customers will be mutually determined and the same will be put-up for approval of Competent Authority of GAIL. The calibration cost will be subject to approval by Competent Authority of GAIL.

## **1.6 CONTRACT PERIOD**

- 1.6.1 The contract shall be initially valid for a period of 05 (Five) years from the date of Fax of Intent (FOI), same can be extended for further period of 05 years as per terms and conditions mutually agreed.

## **1.7 TERMS OF PAYMENT**

- 1.7.1 Detailed payment terms shall be provided in the detailed tender document after this EOI stage.
- 1.7.2 The rates shall be firm in nature for entire period of contract and no provision for enhancement of rates based on cost indexation shall be made

## **1.8 CONFIDENTIALITY OF INFORMATION AND DATA**

1.8.1 All information obtained by bidder during the interpretation work and all information/data/maps etc. provided by the Company to the bidder must be considered confidential and must not be divulged by the bidder or its personnel to any-one other than the Company's personnel. This obligation of bidder shall be in force even after the termination of the contract. For publishing scientific/technical papers based on the findings/results of the interpretation in scientific journals etc. the personnel engaged by the bidder must take prior approval of the Company in this regard.

## **1.9 ADVANCE PAYMENT & MOBILISATION ADVANCE**

Not Permissible

## **1.10 DEFECT LIABILITY PERIOD**

Not Applicable

## **1.11 PRICE REDUCTION SCHEDULE**

Not Applicable

## **1.12 CONTRACT PERFORMANCE BANK GUARANTEE**

Not Applicable

## **1.13 PRE QUALIFICATION REQUIREMENTS:**

1.13.1 Any organization / agency having experience in operating a High Pressure Natural Gas Calibration Laboratory (pressure above 25 bar and flow range  $\geq 6500$  m<sup>3</sup>/hr) and performing traceable calibrations of flow meters (including turbine & ultrasonic meters) and accredited as per ISO 17025 for fluid flow are eligible to participate in the bidding process

## APPLICATION FORM FOR ENLISTMENT

1	Name of the Organization	
2	Address (Head Quarters) of the Organization	
3	Address of the Organization	
4	Designated Person for communication along with his Job Title	
5	Address of the Designated Person	
6	Email address of the Designated Person	
7	Mobile Number of the Designated Person	
8	Landline Number of the Designated Person	
9	Tax Identification Number registered with the Revenue Authority of the native country (TIN / ITIN / PAN)	[Please attach a self attested copy of registration]
10	<p>Details of Organization who is bidding for enlistment</p> <p>[Tick ✓ the relevant box]</p> <p>[As a normal practice, GAIL encourages bids only from the Individual Company. In case bidders are JVs / Consortium, details of proposed JV or Consortium to be provided along with Application against the instant EOI]</p>	<p>An Individual (Proprietary concern) / Partnership firm / Private Limited company / Public Limited Company <input type="checkbox"/></p> <p>Wholly owned subsidiary bidding on its own credentials <input type="checkbox"/></p> <p>Wholly owned subsidiary bidding on credentials of its Parent / Sister Company / Group <input type="checkbox"/></p> <p>JV or Consortium bidding based on the credentials of individual JV members <input type="checkbox"/></p>
11	Nature of SITE TEAM to be deployed at HMPF for operation & maintenance	<p>OPERATOR's own team <input type="checkbox"/></p> <p>OPERATOR's Authorised Agency <input type="checkbox"/></p>
12	Option selected w.r.t. clause 1.4.5.f of the EOI	<p><b>Option 1</b> Onsite deployment of OPERATOR manpower <input type="checkbox"/></p>

		<b>Option 2:</b> Witnessing calibration process remotely <input type="checkbox"/>
13	Details of High Pressure (pressure not less than 25 bar) Natural Gas based Meter Prover / Calibration Facility accredited to ISO 17025 for fluid flow calibration which is Operated by the Agency i.e. Bidder [Self-attested documentary evidence in support of above is required to be attached along with Application Form]	
13a	Specify CMC of the above facility operated by the Bidder as indicated at S/N 13 above	
13b	Experience (in terms of no. of years) of Operating the above facility operated by the Bidder as indicated at S/N 13 above	
13c	Meter (MUT) size range of the above facility operated by the bidder as indicated at S/N 13 above	
13d	Flow range of the above facility operated by the bidder as indicated at S/N 13 above	
13e	No of meters (max) calibrated / proved per year in the facility above facility operated by the bidder as indicated at S/N 13 above	
14	Details of design activity of any High Pressure Natural Gas Calibration Facility carried out by Bidder	
15	Whether participated in deriving harmonized reference value? If, yes, how many instances	
16	Details of atleast 02 Metrologists (employed by the Agency) having experience in performing high pressure calibration with natural gas at any of the ISO 17025 accredited laboratory	
17	List of Key Personnel along with	

	their credentials	
18	Other information demonstrating bidder's competence [Self-attested documentary evidence in support of above is required to be attached along with Application Form]	

Place:

Date:

\_\_\_\_\_  
Authorized Signatory

Notes:

1. Documents in other than English Language have to be attached along with self-certified English translated copies