



GAIL (India) Limited
CENTRAL INTEGRITY MANAGEMENT GROUP, NOIDA

NOIDA
06th January, 2018

Expression of Interest (EOI) – Inviting technical proposals from Consultants for setting up ‘PIPELINE TECHNOLOGY INSTITUTE’ for GAIL in India.

GAIL (India) Limited has proposed to set up a Pipeline Technology Institute as a stand-alone institution specialising in analytical, experimental, laboratory and test facilities in different technical domains that constitute pipeline engineering and technology. The primary objective of the institute shall be serving GAIL’s need in the field of pipeline engineering & construction, operations and integrity management activities in supporting various units of GAIL by carrying out regular and advanced studies covering entire life cycle of pipeline. The institute will provide capabilities of pipeline engineering & design, risk assessment, evaluation of materials & technologies, integrity assessments, failure analysis, root cause analysis, remaining life assessments, risk based inspection studies, flow modelling and studies, corrosion modelling and assessment etc. The institute will also cater to advanced training of trainers for other GAIL Training Institutes.

Interested agencies having expertise in establishing and running technology centres / laboratories / test facilities in pipeline technology areas such as Material characterization, Welding, Geotechnical Engineering, Structural Engineering, Corrosion Sciences & Engineering, Coatings and Paints, Cathodic Protection, Flow Assurance and Custody Metering are invited for submitting their technical proposal either for individual or multiple domains from above towards realising GAIL’s intent of setting up the ‘Pipeline Technology Institute’ .

The completed Application form along with attachments in a sealed envelope super-scribed with **“Application for Pre-Qualification of Consultants – Setting up Pipeline Technology Institute for GAIL”** may be forwarded to the address mentioned below or the same can also be mailed to selvan@gail.co.in within 30 days of publication of this EOI i.e. latest by **06th February, 2018**. Application received after 06th February, 2018 will not be entertained.

Consultants applying against the EOI will be screened based on the technical proposals submitted by them in the attached template along with supporting documents. Shortlisted Agencies will be eligible to participate in the subsequent tendering process for engagement of consultant(s) for the project.

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 Submission of Proposal & Documents

General Manager (CIMG)
Central Integrity Management Group, CO-(O&M)
GAIL (India) Ltd
20th Floor, GAIL Jubilee Tower
B- 35 & 36, Sector-1
Noida-201301
Uttar Pradesh, India

Email: selvan@gail.co.in
Contact no: +91-(120) 2446400/4862400

SCOPE OF WORK & SPECIAL CONDITIONS

1.0 BACKGROUND

- 1.1 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 MTPA of LPG. Along the pipelines, there are booster/compressor stations. In addition, GAIL owns seven process plants across India for extraction of liquid hydrocarbons from natural gas and integrated petrochemical complex producing 900 KTA of polymers.

2.0 OBJECTIVE

- 2.1 GAIL intends to set up an institute that will provide advanced analytical, investigative and engineering studies on all pertinent technical areas that constitute pipeline technology mainly focussed on GAIL's pipeline design, engineering & construction and operations & integrity management. The institute is being planned to house expertise and facilities capable of supporting activities being performed by GAIL's different departments and units in the area of pipelines.

It is envisaged that in each of the technical area pertinent to pipeline design, construction and operation, the capabilities of the proposed institute, would cover three critical spheres of studies viz., (a) Software modelling to predict & validate a phenomena, (b) Laboratory & workshop work to confirm modelling / field results and (c) scale model physical set up such as flow loops for intensive study of the phenomena under dynamic test conditions. The outline of capabilities for each technical area is given briefly asunder:

2.1.1 *Materials, Welding & NDT*

Material Characterization is an essential component of any study including assessment of suitability for service, failure investigation, etc. This area would cover activities of positive material identification, metallography, strength testing, toughness testing, elemental analysis, crystallography etc.

Welding is again an important activity in manufacturing and fabrication and different areas of study such as weldability, heat treatment, etc. including the tests covered above in material characterization as applicable for weldments.

2.1.2 *Structural Engineering- Integrity*

Structural Engineering with respect to pipelines and piping shall cover the pipeline stability under internal and external pressures in variety of scenarios such as loading due to overburden, vehicular traffic in transport corridors, buoyancy forces in water bodies, free spanning due to erosion of earth cover, flexibility analysis for thermal expansion and support design, strain monitoring in controlled shifting / lowering of pipelines etc.

2.1.3 *Geotechnical Engineering*

Pipelines being predominantly constructed as buried in earth, various geotechnical aspects come into play during pipeline design, construction and operation. A variety of

studies are often required in evaluation of pipeline stresses and stability due to ground movement, evaluation of soil characteristics for bearing strength and design of pipeline anchor supports, addressing geotechnical hotspots such as earth quake fault zones, slope stability in hilly terrains and so on.

2.1.4 *Corrosion Engineering*

Corrosion is the single most serious threat to pipeline integrity in every stage of the pipeline life cycle. Evaluating the potential corrosion mechanisms in specific cases and managing them in the most cost effective way is an important part of the pipeline project and O&M teams. The capabilities envisaged in this vast subject would include corrosion modelling through software, lab experiments and testing, evaluation of materials including coating materials, coating system design and testing, evaluation of chemicals and their effectiveness, evaluation, selection and testing of corrosion monitoring equipment, cathodic protection system design and monitoring, study of stray current effects and mitigation design and testing, microbiological set up to study microbes associated with corrosion and their management, analysis of corrosion products from filter streams and pipeline debris etc.

2.1.5 *Flow Assurance*

Flow assurance is a multidisciplinary process designed to prevent pipe blockage and help ensure uninterrupted, optimum productivity in oil and gas streams. The studies involve sampling, specialized lab testing, and production and facilities engineering. Specific services include hydrate testing to determine the temperature and pressure conditions of hydrate formations in reservoir fluids, testing to evaluate the effectiveness of chemical inhibitors, and reservoir flow testing to detect and characterize precipitated solids that inhibit flow. Flow Assurance studies also help in corrosion assessment through flow modelling to predict phase behaviour of pipeline fluid, water condensation rate, liquid accumulation spots etc. Flow loop studies simulate flow conditions to validate model predictions and help in addressing flow and corrosion related issues.

2.1.6 *Metering & Instrumentation*

Metering is an important part of the pipeline transmission and distribution domain which has direct fiscal impact. Advanced custody transfer metering equipment and instruments are employed in purchase as well as sales points to accurately measure the volumetric and energy content of pipeline fluids. Proving of such meters is a critical activity to assure correctness of measurement to both the seller and purchaser. GAIL operates two Meter Prover facilities at Hazira and Dibiyapur. The facility proposed in the institute will work closely with the meter provers and the various metering terminals of GAIL to assure soundness of system and towards evaluation & adoption of emerging technologies in the area.

In addition to metering, the instrumentation capabilities proposed for this unit in the institute will be essential to support the various other units, labs and test loops of the institute enumerated above.

- 2.2 In the above endeavour, GAIL intends to hire reputed consultants (including those who may have set up or are running institutes in different technical domains similar to those mentioned above) to provide consultancy services pertaining to conceptualization, defining tender packages, defining the requirements scope and specifications for

software and hardware, laboratory test equipment & facilities, test and flow loops, plot development and building layout & plans, power & utility system for GAIL to float individual tender packages, evaluation of tenders and award recommendations & assistance to GAIL in award of contracts, inspection of equipment and facilities during implementation, defining management philosophies in manning and running the institute, assistance to GAIL in securing collaborations and funding from international bodies and institutions etc. in the overall realisation of GAIL's intent in setting up the institute.

- 2.3 It is recognized that expertise pertaining to all the required technical areas as mentioned above may not be available from a single consultant. It is therefore required that the interested and capable consultants may submit their proposal for one, multiple or all of the domains described above and indicate the same clearly in their offer document. In case multiple consultants are required to be hired, one among them will be designated as a lead consultant and consent for the same shall be deemed to be part of the offer in case an agency offers or is selected for part or whole of the domain areas.

3.0 SCOPE OF WORK

- 3.1 The scope of work by the consultant(s) engaged for this project shall include the following:
- 3.1.1 Preparation of Project Report consisting Intent, survey of similar institutes or centres worldwide with strengths, conceptual plan for the proposed institute, scope & capabilities of each center for the specific technical domain comprising the institute, land requirement and factors in locating the institute, Estimate of Capital and Operating Costs, Implementation methodology, Project Schedule & Milestones, Manning philosophy, Access to expert resources etc.
 - 3.1.2 Design of contract packages and contracting philosophy
 - 3.1.3 Bid documentation and specifications for Computer Laboratories for each technical domain including screening of available software, hardware and IT framework
 - 3.1.4 Bid Documentation and specifications for equipment, test instruments, laboratory set up required to meet the defined capabilities
 - 3.1.5 Bid Documentation and specifications for field installations, test set up, test / flow loops for the technical domains
 - 3.1.6 Bid documentation and specifications including plot layout, buildings / Workshops / Warehouses, test loops, work stations, interior and exterior finish, equipment foundations, furniture and fixtures, power & lighting etc.
 - 3.1.7 Assistance to GAIL in invitation of bids, evaluation of bids and award of contracts.
 - 3.1.8 Construction supervision and expediting
 - 3.1.9 Quality Assurance and Quality Control in implementation
 - 3.1.10 Certification of labs and facilities to international quality standards applicable to each domain

- 3.1.11 Definition of expertise at different levels required in running the centres, mode of engagement, qualification, certification, experience and skill set of resources to be deployed
- 3.1.12 Preparation of Lab Manuals, workflow, form and report templates for each of the defined capability / Center / Lab.
- 3.1.13 Coordination amongst consultants (if more than one are engaged) for different domains (in case of Lead Consultant)
- 3.1.14 Assistance to GAIL in identifying agencies for collaboration, preparing documentation and discussions / negotiations.
- 3.2 The scope of services shall include all other activities not specifically mentioned above but required to complete the project in all respects and commence operations.

4.0 CONTRACT PERIOD

4.1 The contract period shall be divided into four phases viz., (i) Conceptualisation and Planning phase (ii) Implementation phase (iii) Operations Commencement phase and (iv) Project close out and handover. Each of these stages may overlap into the next stage, each setting the stage for the next.

4.2 The tentative timeframe for the above three phases are depicted below:

| | Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 |
|------------------------------|----|----|----|----|----|----|----|----|----|-----|-----|-----|
| Concept & Planning | | | | | | | | | | | | |
| Implementation | | | | | | | | | | | | |
| Operations Commencement | | | | | | | | | | | | |
| Project Close-out & Handover | | | | | | | | | | | | |

4.3 The contract period estimated on the basis of above is 3 (Three) years. Allowing for intervening time between phases if required and time for GAIL to procure land & develop it and line up contracts for materials and services, the overall contract period is expected to be 4 (four) years.

4.4 Suitable provision in contract period and provision for enhancement of rates based on indexation shall be made in the tender document for engagement of consultants to be issued to enlisted consultants after this EOI stage.

5.0 TERMS OF PAYMENT

- 5.1 Detailed payment terms shall be provided in the tender document for engagement of consultants after this EOI stage. This will broadly be based on phase-wise work content and milestones.
- 5.2 Provision for enhancement of rates based on cost indexation shall also be made to suit the long term nature of the contract.

6.0 CONFLICT OF INTEREST

6.1 GAIL policy requires that consultants provide professional, objective, and impartial advice and at all times hold the client’s interests paramount, without any consideration

for future work, and that in providing advice they avoid conflicts with other assignments and their own corporate interests. Consultants to be engaged for this assignment that would be in conflict with their prior or current obligations to other clients, or that may place them in a position of being unable to carry out the assignment in the best interest of GAIL, shall not be eligible to participate in this process of engagement. Without limitation on the generality of the foregoing, consultants shall not be hired under the circumstances set forth below:

- (a) Conflict between consulting activities and procurement of goods, works or services (other than consulting services covered in the scope of present engagement): A firm that has been engaged by GAIL to provide goods, works, or services (other than consulting services covered by these Guidelines) for a project, and each of its affiliates, shall be disqualified from providing consulting services related to those goods, works or services for the Project. Conversely, a firm hired to provide consulting services for the preparation or implementation of a project, and each of its affiliates, shall be disqualified from subsequently providing goods, works or services (other than consulting services covered by these Guidelines) resulting from or directly related to the firm's consulting services for such preparation or implementation.
- (b) Conflict among consulting assignments: Neither consultants (including their personnel and sub-consultants) nor any of their affiliates shall be hired for any assignment that, by its nature, may be in conflict with another assignment of the consultants. As an example, consultants hired to prepare engineering design for an infrastructure project shall not be engaged to prepare an independent environmental assessment for the same project, and consultants assisting a client in the privatization of public assets shall neither purchase, nor advise purchasers of, such assets. Similarly, consultants hired to prepare Terms of Reference (TOR) for an assignment shall not be hired for the assignment in question.
- (c) Relationship with Employer's staff: Consultants (including their personnel and sub-consultants) that have a business or family relationship with a member of the Employer's staff (or of the project implementing agency's staff) who are directly or indirectly involved in any part of: (i) the preparation of the TOR of the contract (ii) the selection process for such contract or (iii) supervision of such contract may not be awarded a contract, unless the conflict stemming from this relationship has been resolved in a manner acceptable to the Employer throughout the selection process and the execution of the contract.
- (d) A Consultant, who prepares Detailed Feasibility Report (DFR) of a Project is not debarred from participating as Project Management Consultant (PMC) for the same Project as both are services in nature.

7.0 CONFIDENTIALITY OF INFORMATION AND DATA

- 7.1 All information obtained by bidder/consultant/expert during the project and all information / data / maps etc. provided by the Company to the bidder / consultant / expert must be considered confidential and must not be divulged by the bidder / consultant / expert or its personnel to any-one other than the Company's personnel. This obligation of bidder/consultant/expert shall be in force even after the termination of the contract. No part of the consultancy work shall be permitted to be presented and

/ or published in scientific / technical papers / journals etc. without prior approval of the Company in this regard.

8.0 PRE QUALIFICATION REQUIREMENTS

8.1 Financial

The agency to be engaged through this EOI process, shall be of sound financial standing evidenced by the following:

- a) In case of Consulting agency, their turnover in any of the preceding three financial years shall be minimum Rs 2 Crores (US\$ 0.30 Million)
- b) In case of Institute and if it is owned in whole or part by any government or governmental agency, no financial credential required; otherwise, the turnover in any of the preceding three years shall be minimum Rs 1 Crores (US\$ 0.15 Million).
- c) In both the above cases, the net worth of the agency shall be positive in the immediate preceding financial year.

Documentary evidence in support of the same shall be provided along with the proposal.

8.2 Technical

The agency to be engaged by GAIL shall either be a consultant who shall have provided Consultancy Services in setting up of a technology center or laboratory (or) institutions who shall have set up similar institutes / centres for their own operations in any of the domains mentioned in 2.1 or related thereto.

- 8.3 Agencies interested in participating in the project shall forward their credentials and their detailed proposal on setting up GAIL's Pipeline Technology Institute. The format given herein below shall be duly filled and submitted along with supporting documents.
- 8.4 After evaluation of offers against this EOI, shortlisted agencies shall be invited for making a presentation to GAIL at GAIL's Noida office. This shall be deemed as part of the prequalification exercises and shall be evaluated as such. The presentation shall include past and present ongoing work being done by the agency, competence and capabilities, proposal by the agency outlining the concept as understood by them, capabilities required of such an institute, methodology, time frame, tentative estimate of institute (order of magnitude), collaborations possible/identified etc. The presentations by the agencies will be marked and ranked by GAIL team and the same will be input in the prequalification process.
- 8.5 Subsequent to the above, a tender shall be issued to prequalified bidders based on their response to EOI and their presentation to GAIL as per Quality & Cost Based Selection (QCBS) process of GAIL in engagement of Consultants.

APPLICATION FOR PREQUALIFICATION

| S No | Particular | Response by Applicant | |
|------|---|---|--|
| 1 | Name of the Agency | | |
| 2 | Address (HQ) | | |
| 3 | Address (Bidding Unit) | | |
| 4 | Designated Person for Communication with Jot Title | | |
| 5 | Address of Designated Person | | |
| | e-mail address | | |
| | Mobile Number | | |
| | Landline Number | | |
| | Fax Number | | |
| 6 | Nature of Business (Tick the appropriate box) | a) Consultant | |
| | | b) Organization / Institution having established & similar institute in operation | |
| 7 | If bidder is (a), indicate the qualifying experience and attach supporting documents (contract agreement, work order, completion certificate) | | |
| 8 | If bidder is (b), indicate the details of the institute owned /operated by them with supporting documents (certificate of incorporation, brochure, certifications, contract agreements/work awards / completion certificate pertaining to study work (3 works max) completed | | |

| S No | Particular | Response by Applicant |
|------|--|--|
| 9 | Indicate the domain of expertise for which enlistment is being applied for (Please mark a tick against all applicable domains) | Material Characterization |
| | | <i>Structural Engineering</i> |
| | | <i>Geotechnical Engineering</i> |
| | | <i>Flow Assurance</i> |
| | | <i>Corrosion Engineering</i> |
| | | <i>Metering & Instrumentation</i> |
| 10 | Financial (Indicate Currency) | |
| | Turnover in last 3 years | |
| | Net Worth as on 31.3.2017 | |
| | Attach Audited Balance Sheet – last 3 years | |
| 11 | Key Personnel | Provide a list of key personnel with CVs |

Place:

Date:

(Authorised Signatory)

Note:

1. Documents in other than English Language shall have self-certified English translated copies.