

NOTICE INVITING GLOBAL EXPRESSION OF INTEREST (EOI)

Srl. No.	EOI No.	Brief Description of Services
1	EOI/GMS/P/CNG-LNG/355/2022	“Utilisation of Natural Gas available in Remote Locations in the oilfields of Oil India Limited (OIL) in Assam and Arunachal Pradesh, India on pilot basis by converting it to CNG/LNG, transporting the produced CNG/LNG to consumption centres and by injecting the same to Main Gas Network after Depressurizing/Re-gasification or by directly supplying the produced CNG/LNG to bulk consumers”

Interested Parties/Vendors/Contractors/Agencies/Firms/Service Providers having relevant experience and expertise (**details are available at OIL's website-www.oil-india.com**) are invited to submit their EOI(s) at our e-mail ids: sumitragoswami@oilindia.in / poranbaruah@oilindia.in / akamalapuri@oilindia.in / shantambora@oilindia.in within 5th October, 2022, or hard copies of the same in sealed envelopes super-scribing **Expression of Interest (EOI) NO. EOI/GMS/P/CNG-LNG/001/2022 dated 20.09.2022 for "Utilisation of Natural Gas available in Remote Locations in the oilfields of Oil India Limited (OIL) in Assam and Arunachal Pradesh, India on pilot basis by converting it to CNG/LNG, transporting the produced CNG/LNG to consumption centres and by injecting the same to Main Gas Network after Depressurizing/Re-gasification or by directly supplying the produced CNG/LNG to bulk consumers"** through courier/post to the following address:

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OIL INDIA LIMITED
(A Government of India Enterprise)
GMS Department
P.O. Duliajan, Pin –786602
Dist-Dibrugarh, Assam

EOI No. EOI/GMS/P/CNG-LNG/355/2022 dated 20.09.2022

EXPRESSION OF INTEREST(EOI)

for

“Utilisation of Natural Gas available in Remote Locations in the oilfields of Oil India Limited (OIL) in Assam and Arunachal Pradesh, India on pilot basis by converting it to CNG/LNG, transporting the produced CNG/LNG to consumption centres and by injecting the same to Main Gas Network after Depressurizing/Re-gasification or by directly supplying the produced CNG/LNG to bulk consumers”

Expression of Interest:

Expression of Interest is invited by Oil India Limited (OIL) from Turnkey Solution / Service Providers (TSP) / Technology Providers for offering suitable service/solution package to tap stranded natural gas in the order of 10,000 to 30,000 standard cubic metre per day (SCMD) in one of its oilfields located in Arunachal Pradesh and Upper Assam, India. The job includes primarily setting up of a CNG / small scale LNG plant and related facilities like CNG Cascade Storage/ LNG Storage, Cascades / Cryogenic Tankers for transportation of CNG/LNG, provision for transportation of other intermediate fractions produced during the compression/liquefaction process along with installation of Disposal Facility / Pressure Reduction Station/ Re-gasification Plant, etc. for the CNG / LNG. The produced CNG/LNG will be required to be transported to a distance of about 90 to 100 KM to reach the Disposal Facility / Pressure Reduction Station /Regasification Station / Consumption Site.

1.0 Preamble:

Oil India Limited (OIL), a national oil company of India, engaged in exploration, drilling, production & transportation of crude oil & natural gas and production of LPG, intends to hire the services of a competent Turnkey Service Provider (TSP) / Technology Providers / Eligible Indian or Global Companies having their subsidiaries in India for tapping stranded natural gas of volume about 10,000-30,000 SCMD with an objective to monetise it by converting it to CNG/LNG, transporting CNG/LNG by Cascades/Cryogenic Tankers to Disposal Facility / Pressure Reduction Station/Re-gasification Site and finally injecting the same into available existing gas grid / delivering to marketing entities. OIL has dedicated gas collection and distribution grids including compression facilities to utilise natural gas in various industries like Power Sector, Fertilizer sector,

Petrochemical sector, Tea Sector and as fuel for commercial and domestic uses, and for supplying to various other external and internal consumers.

2.0 Background:

OIL has been carrying out its exploration and development activities in various areas in the state of Assam and Arunachal Pradesh. Many of the discoveries are in remote areas. The crude oil produced in these areas is transported through bowlers but due to the non-availability of local consumers as well as pipeline evacuation facilities, the natural gas produced in these areas is not put in to proper use. Hence, alternate arrangements are required to be planned for gainful utilization of such valuable energy source. OIL, looking for a suitable solution in order to utilize/monetise this gas, intends to establish commercially viable and proven Compressed Natural Gas (CNG) / small scale Liquefied Natural Gas (LNG) plant including related facilities like CNG storage/LNG Storage, CNG/LNG Transportation along with depressurization / re-gasification plant. This concept of conversion of gas to CNG/LNG is considered as one of the options for monetisation/utilisation of this unutilized gas.

3.0 Project Overview:

OIL has a sizeable reservoir of oil and gas in some of its satellite fields like Kumchai located in Arunachal Pradesh, at a distance (by road) of around 115 km from its Field Head Quarter, Duliajan, Assam. At present around 10,000 to 30,000 SCMD associated gas produced from this field is available for utilisation. OIL is planning to utilize this gas by converting to CNG/LNG and then transporting through Cascade/tankers to consumption sites located near Duliajan. The CNG/LNG will be offloaded at the consumption centres and injected in the existing gas grid or supplied to consumers.

As per present plan, the CNG / LNG facility will initially be set-up in Kumchai, located in Changlang district, Arunachal Pradesh and will later be transferred to other locations like Lakuwagaon located near Moran in Sivasagar district, Assam where also a sizeable quantity of stranded natural gas is available.

4.0 Scope of Work for the Project:

Under the Project Scheme, Turnkey Solution / Service provider / Manufacturer is expected to set-up a CNG / mini LNG plant on BOO (Build, Own and Operate) Basis to produce CNG / LNG, transport the produced CNG / LNG by Cascades / Tankers to consumption sites located within a distance of around 100 Km, Depressurize / Re-gasify the CNG / LNG and then inject the gas into existing gas distribution grids or supply directly to bulk consumers. Provision for transfer of other intermediate fractions produced during the compression/liquefaction process will also have to be made.

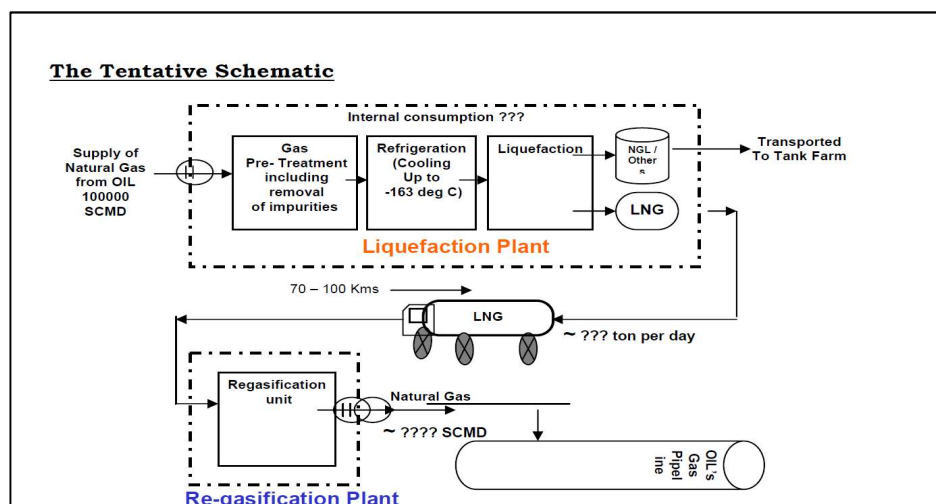
The plant will be modular and portable and will be required to be shifted to different locations within a distance of around 100Km of Duliajan, based on gas availability.

Interested Parties are requested to offer to carry out the job on **Build, Own & Operate (BOO)** concept by supplying and commissioning the Plant & accessories / related facilities and subsequently providing operation& maintenance services for an agreed period of 5 - 6 years on yearly/monthly rental basis. Under this option, the party will undertake all activities as listed below but not limited to:

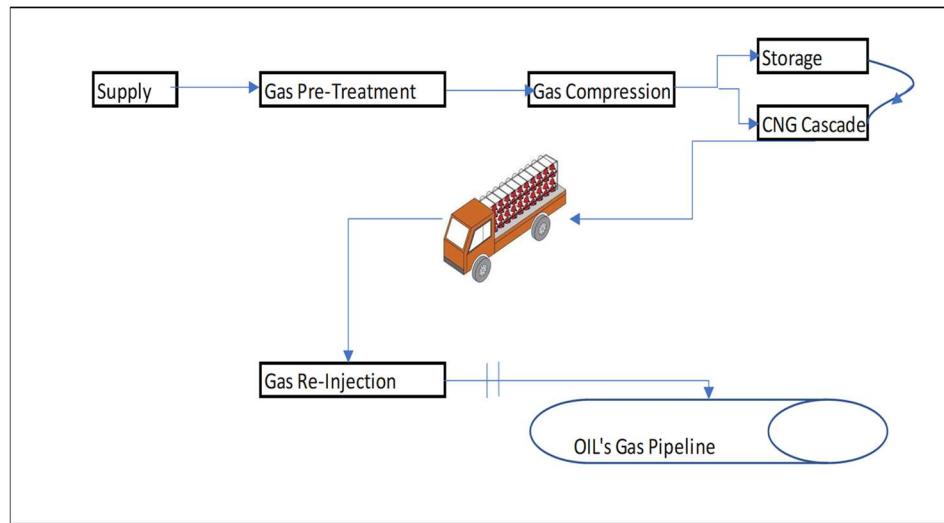
- a) Land Acquisition & Development - for LNG Production & Regasification Plant or for CNG Production Plant. The CNG / LNG production plants should be located within 500m of the site where OIL's stranded gas for production of CNG / LNG is available. Similarly, the depressurization / regasification sites should be located within 500m of the gas pipeline network where gas will be injected.
- b) Design, Supply, Erection & Commissioning of LNG Production & Regasification Plant or CNG Prodn Plant & Depressurization Facility.
- c) Construction of pipeline from OIL's production centre to CNG / LNG plant and from depressurization / regasification facility to OIL's gas network.
- d) Installation of gas filtration / dehydration / conditioning facilities for the inlet gas to the CNG / LNG plant as per requirement.
- e) Production of LNG / CNG from natural gas supplied by OIL.
- f) Transportation of CNG / LNG to Depressurization Facility/ Regasification Plant or to disposal sites.
- g) Depressurization/Re-gasification of CNG/LNG and injection to Pipeline identified by OIL or disposal to bulk consumers.
- h) Creation of storage facilities as required.
- i) Operation and Maintenance of all Facilities and Plants
- j) Security of all Facilities and Plants
- k) Creation of requisite utilities
- l) Compliance to all statutory rules & regulations
- m) Transfer of the Plant & accessories / related facilities to OIL's other satellite field/location in Upper Assam as and when required.

5.0 Tentative Schematics:

a) LNG



b) CNG



6.0 Battery Limit Conditions:

6.0.1 Process Design conditions at Site:

Gas will be available at
Pressure : 1.5 - 3 Kg/cm²
Temperature : 15-45°C

6.0.2 Gas Composition:

Typical gas composition is given below:

Component	% v/v
Methane	84.60 – 93.37
Ethane	7.24 – 3.96
Propane	3.37 – 0.66
Iso-Butane	1.15 – 0.50
Normal-Butane	1.50 – 0.18
Iso-Pentane	0.60 – 0.16
Normal-Pentane	0.41 – 0.03
Hexane+	0.77 – 0.30
Nitrogen	0.16 – 0.05
Oxygen	NIL
Carbon Dioxide	0.20 – 0.79
Water	Saturated

The gas composition indicated above is on dry basis. However, the gas is saturated with water with occasional carryover of oil. Moreover, the gas composition is typical and is subject to variation.

6.0.3 Site Conditions :

Near EPS-Kumchai , Arunachal Pradesh

- a. Ambient conditions: Tropical.
- b. Ambient Temperature (Min/ Max): 05 to 42 Deg C.
- c. Altitude: 128 m asl.
- d. Latitude & Longitude : 27.56N and 96.04 E.
- e. Nature of top soil: Usually Clay/Alluvium/ Unconsolidated.
- f. Average annual rainfall: 250 / 300 cm (Rains for 7-8 months/year).
- g. Humidity: Max. 98%.
- h. Nearest Port of Entry : Kolkata , India.
- i. Distance from District Head Quarter (Changlang) : 55 Km
(approx. aerial distance).
- j. Distance from National Highway (NH-215): 16 Km (approx.).

Near Lakuwagaon, Assam

- a. Ambient conditions: Tropical.
- b. Ambient Temperature (Min/ Max): 05 to 42 Deg C.
- c. Altitude: 97 m asl.
- d. Latitude & Longitude : 27.13 N and 94.77 E.
- e. Nature of top soil: Usually Clay/Alluvium/ Unconsolidated.
- f. Average annual rainfall: 250 / 300 cm.(Rains for 7-8 months/year).
- g. Humidity: Max. 98%.
- h. Nearest Port of Entry: Kolkata, India.
- i. Distance from District Head Quarter (Sivasagar): 25 Km (approx.).
- j. Distance from National Highway (NH-37): 2 Km (approx.).

7.0 Qualification Criteria for the Parties:

Interested parties must fulfil the following criteria to become eligible for the proposed project:

A. Minimum one of the following:

- (i) The Party should be a Manufacturer of CNG / LNG plant and must have supplied and commissioned at least 1(one) no. small scale LNG Plant / CNG Plant and the accessories/ facilities as explained above in last 10 years in any part of the world.

- (ii) The party should be a Solution/Service provider who has the experience of undertaking and completing minimum 1(one) no. similar project successfully in respect of small-scale LNG plant / CNG plant as explained above in any part of the world in the last 10 years.
- (iii) The party should have the experience of providing at least one BOO / BOOT Service earlier to any reputed organisation in crude oil and natural gas sector in the last 10 years and should have tie up with any manufacturer of CNG/LNG production plant.
- (iv) The party who do not possess the above experience as indicated for carrying out all functions independently, but have experience in any one or more such functions in matters of cryogenic plant activities and/or cryogenic transportation activities and/or providing services for E&P activities (Construction and/or Operation & Maintenance of 'crude oil and natural gas production facility, crude oil and natural gas processing/(separation, distribution and metering facility), natural gas compression facility'; Supply & Operation of 'drilling rig, work over rig, coil tubing unit') may also show interest on the strength of collaboration with manufacturer of CNG/LNG production plant to cover the shortfall of relevant experience as mentioned above. The kind of collaboration shall be through a pretender bi-partite agreement or MoU between the primary interested party and collaborator well documented.

For clarifications, if any, interested parties may send queries to the following e-mail addresses:

- a) sumitragoswami@oilindia.in
- b) poranbaruah@oilindia.in
- c) akamalapuri@oilindia.in
- d) shantambora@oilindia.in

8.0 Requisite Documents / Details:

Interested parties meeting above requirements must forward their Expression of Interest along with initial proposal and relevant supportive documents meeting the qualifications given above. The parties are required to submit their Expression of Interest clearly detailing how they wish to carry out the job and their execution plan.

Interested parties are requested to positively include the following documents and details in the Expression of Interest along with the details:

- (i) Technical :
 - a. Power generation system.
 - b. Instrument air system.
 - c. In case of offering LNG system –

- i. Gas dehydration and pre-treatment for reaching suitable composition for liquefaction.
- ii. Liquefaction: Technology offered and advantage/disadvantage w.r.t competing technologies.
- iii. Separation, storage, transfer facility for NGL.
- iv. Boil-off gas handling system
- v. On-site cryogenic iso-tanks for LNG storage connected to a truck loading point.
- vi. Arrangement to load LNG onto tank trucks that can transport and deliver it to off-site customers. No. and size of trailers from identified sites to Duliajan considering road condition.
- vii. Modules to deliver from the LNG trailers as (i) LNG (ii) regasification facility for injecting to Gas distribution network at around 15 KSC pressure.
- d. Similar relevant information in case of offering CNG system.
- e. PESO and other relevant approval status of the equipment offered
- f. Safety provisions.

(ii) HSE Systems:

Existing HSE Management System of the company.

(ii) Company information as under:

- b. Name, Address, Phone, E-mail of the company that would execute the Contract.
- c. Name, Address, Phone, E-mail address of the collaborator.
- d. Organizational Structure.

(iii) Company's Financial Performance Documents i.e. Audited Balance Sheets, Profit and Loss Account & Cash Flow Statements for the preceding 03 (three) financial/accounting years reckoned from the original EOI publication date & following details separately:

- a. Company Turnover based on last 3 (Three) audited Financial statements.
- b. Company's Net Worth based on last 3 (Three) audited Financial statements.
- c. Working Capital based on last 3 (Three) audited Financial statements.

(iv) Experience:

- a. List of projects successfully executed in the last 10 (ten) years or currently under execution in India or abroad meeting the requirements detailed under Para 7.0 (Qualification Criteria for the Parties), with completion certificate(s) as applicable.
- b. Details of current commitments including percentage completion of the ongoing works.

(v) Manpower & Infrastructure Details:

- a. Details of Key Members who shall be involved in the Project execution including their experience levels.

- b. Detail of logistical infrastructure owned by the Company relevant to execution of the job.
- (vi) Quality / Other Systems:
- a. Copy of current ISO Certificate or other certifications as applicable.
 - b. Certification of the Companies QA system by an accredited certification body, if applicable.
 - c. QMS of the Company, if applicable.
 - d. Copy of registration certificate (Labour Law, EPF etc. as applicable).

9.0 Note :

- (i) Interested Agency/Firm/Vendor/Contractor/Service Provider must write clearly the EOI number and EOI Description on their EOI.
- (ii) All documents submitted with the EOI must be self certified by the vendor's authorized person. However, OIL reserves the right to verify the original documents.
- (iii) All the copies of document submitted along with the EOI should be clear and legible.
- (iv) OIL INDIA LIMITED (OIL) reserves the right to physically check the original documents/certificates, copies of which are submitted along with the EOI.
- (ii) The EOI is liable to be ignored in case of submission of any misleading/false representation by the vendor in the form of statements and attachments.

10.0 Contact Person of The Service Provider:

- a) Name :
- b) Position :
- c) Telephone Number :
- d) Address :
- e) E-mail :

11.0 Undertaking By Service Provider

The following undertaking shall be provided by the intending Service Provider: -

"The information provided in the support of qualification criteria is factually correct and the company meets the pre-qualification criteria".

12.0 Submission of EOI:

Interested Parties/Vendors/Contractors/Agencies/Firms/Service Providers having relevant experience and expertise (**details are available at OIL's website-www.oil-india.com**) are invited to submit their EOI(s) at our e-mail ids: sumitragoswami@oilindia.in / poranbaruah@oilindia.in / akamalapuri@oilindia.in / shantambora@oilindia.in within 5th October, 2022, or hard copies of the same in sealed envelopes super-scribing **Expression of Interest (EOI) NO. EOI/GMS/P/CNG-LNG/355/2022 dated 20.09.2022 for "Utilisation of Natural Gas available in Remote Locations in the oilfields of Oil India Limited (OIL) in Assam and Arunachal Pradesh, India on pilot basis by converting it to CNG/LNG, transporting the produced CNG/LNG to consumption centres and by injecting the same to Main Gas Network after Depressurizing/Re-gasification or by directly supplying the produced CNG/LNG to bulk consumers"** through courier/post to the following address:

**CHIEF GENERAL MANAGER (GMS)
OIL INDIA LIMITED
GMS DEPARTMENT
P.O. DULIAJAN-786602
DIST.DIBRUGARH, ASSAM, INDIA**

Vendor/Contractor/ Service Provider may also upload their offer in their file sharing portal and the link(s) may be provided to us at our e-mail within above specified period.

- 13.0** Oil India Limited reserves the right to (a) either accept or reject any / all EOI(s) (b) cancel the process, without assigning any reason whatsoever.
- 14.0** It is to be noted that this EOI is not an invitation for bid. Responding Parties will be shortlisted based on their EOIs submitted and will be called for a pre-tender meeting where they will get an opportunity to give a presentation of their tentative technical cum commercial proposal with completion timeline along with their technical capabilities, credential etc.
- 15.0** Exact Date & Venue for the Pre-Tender meeting, which is expected to be held in mid-October, 2022, shall be intimated separately.

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