

Date: April 27, 2018

To
The Chairman
Petroleum and Natural Gas Regulatory Board
First Floor, World Trade Centre,
Babar Road, New Delhi - 110001

for na as per regulation

Secy

Member (I+T)

H
1/5/18

AA(AK) / L-1753
1/5/18

V
1/5

AA(AU)

3/15

DACM7A1

Subject: Proposal for "Tie-in Connectivity" from proposed LNG terminal at Karaikal to GAIL's Narimanam- Kuthalam Natural Gas Pipeline Network

Dear Sir,

AGP Karaikal LNG Private Limited (AGPKLPL) is developing an LNG terminal at Karaikal Port in the union territory of Puducherry. AGPKLPL has intimated PNGRB about proposed development vide its letter (enclosed) dated February 21, 2018.

For evacuation of natural gas from the terminal to its customers, the terminal shall be connected to GAIL's Narimanam - Kuthalam natural gas pipeline network at a tie-in point in the vicinity of the terminal. In this regard AGPKLPL would like to submit its proposal for "Tie-in Connectivity" from the proposed LNG terminal, in accordance with PNGRB (Authorizing Entities to Lay, Build, Operate or Expand Natural Gas Pipelines) Regulations, 2008 as amended on August 8, 2014.

As per amendment 21 (1) (a) of the said regulation (tie-in Connectivity), the following information is required to be submitted to the board along with the proposal

1. Details of the gas source or Injection Point Facility
2. Existing natural gas pipeline infrastructure in the vicinity
3. Demand-supply projection along with the length of the proposed tie-in connectivity and
4. Capacity of the proposed tie-in connectivity

Accordingly, a proposal for the subject tie-in connectivity, along with the detailed information is enclosed as Annexure-1 for kind consideration and authorization by the board.

Yours Sincerely

For AGP Karaikal LNG Private Limited


(Abhilesh Gupta)
Director



AGP Karaikal LNG Private Limited

CIN: U40300DL2018FTC329340

1005, 10th Floor, Ambadeep Building, 14 Kasturba Gandhi Marg, New Delhi-110001

Phone: +91 (11) 40224573 | namrata.gupta@agp.ph | www.agp.ph

Annexure-1
Details for proposed "Tie-in Connectivity" from proposed LNG terminal at Karaikal to GAIL's Narimanam- Kuthalam Natural Gas Pipeline Network

| S. No | Particulars | Details |
|-------|--|---|
| 1 | Details of the gas source or Injection Point Facility | <ul style="list-style-type: none"> The gas in the form of Re-gasified LNG would be supplied from AGP Karaikal LNG Pvt. Ltd.'s LNG terminal at Karaikal Port. The terminal shall have an initial capacity of 1 MMTPA (3.6 MMSCMD) which may be expanded in a phased manner considering the increase in the demand. AGP Karaikal LNG private Limited has already intimated PNGRB regarding setting up of the LNG terminal vide its letter dated February 21, 2018 (Enclosed). The Karaikal Port has also informed PNGRB vide its letter dated February 20, 2018 providing exclusivity to AGP for developing of the LNG terminal at Karaikal Port (Enclosed). |
| 2 | Existing natural gas pipeline infrastructure in the vicinity | <ul style="list-style-type: none"> GAIL owns and operates the Narimanam- Kuthalam Natural Gas Pipeline Network which is about 4 kms from the battery limit of Karaikal Port. GAIL's letter dated April 10, 2018 confirming its willingness to provide "Tie-in Connectivity" is also enclosed for your perusal. |
| 3 | Demand-Supply projection along with the length of the proposed tie-in connectivity | <ul style="list-style-type: none"> The anchor customer of the terminal - PPN power has a demand of 1.4 MMSCMD with its existing PPA valid up to April 2031. Further, there is an additional unmet demand of approximately 1 MMSCMD from the customers already connected to the GAIL's existing pipeline network which includes other power plants and industrial customers. |
| 4 | Length of the tie-in (Kms) | <ul style="list-style-type: none"> About 4 Kms, 18", 300 class pipeline within the Port limit and about 4 Kms from Port limit to the nearest tie in point. |
| 5 | Capacity/Volume of the proposed tie-in connectivity | <ul style="list-style-type: none"> Capacity of the 18" pipeline will be 1.2 MMTPA (4.32 MMSCMD) at 45 barg operating pressure. Capacity can be increased in future as per requirement. |

Other Details:

 Operational pressure at inlet and outlet points: 45 kg/cm² at Custody Transfer Point (CTP)


Proposed Scheme

| | |
|------------------------------|---|
| Custody Transfer Point (CTP) | 1) Custody transfer of natural gas will be made at the custody transfer metering station located at terminal boundary before the line exits port boundary. |
| Pipeline | 1) Diameter – 18” 2) Length - ~4 Km within port limit and ~4 Km from port limit to nearest Gail tie-in point. 3) 3LPE internally coated, Grade: X-65/X-70 4) Class: 300 from AGPKLPL terminal to GAIL tie-in point. |
| Pipeline Route | ROU for pipeline route from LNG terminal to port boundary will be provided by Karaikal Port. ROU for the section of the line from port boundary to GAIL’s pipeline network tie-in point along the National Highway No NH-45 will have to be obtained. |
| Facilities at CTP | <p>Two sets of gas metering skids with gas chromatographs, pressure & temperature transmitters and common flow computer.</p> <p>There will be Fire & Gas (F&G) detection system with independent PLC.</p> <p>The flow computer and the F&G system will be connected to the LNG terminal control room for monitoring purposes and for receiving alarms and alert.</p> <p>Remote controlled shut-off valves will be provided at both the metering skids for shutting down flow to GAIL’s pipeline network and for isolating metering skid for maintenance purpose.</p> <p>Communication facilities like telephone and base station for radio communication will also be provided.</p> |



(Handwritten signature)

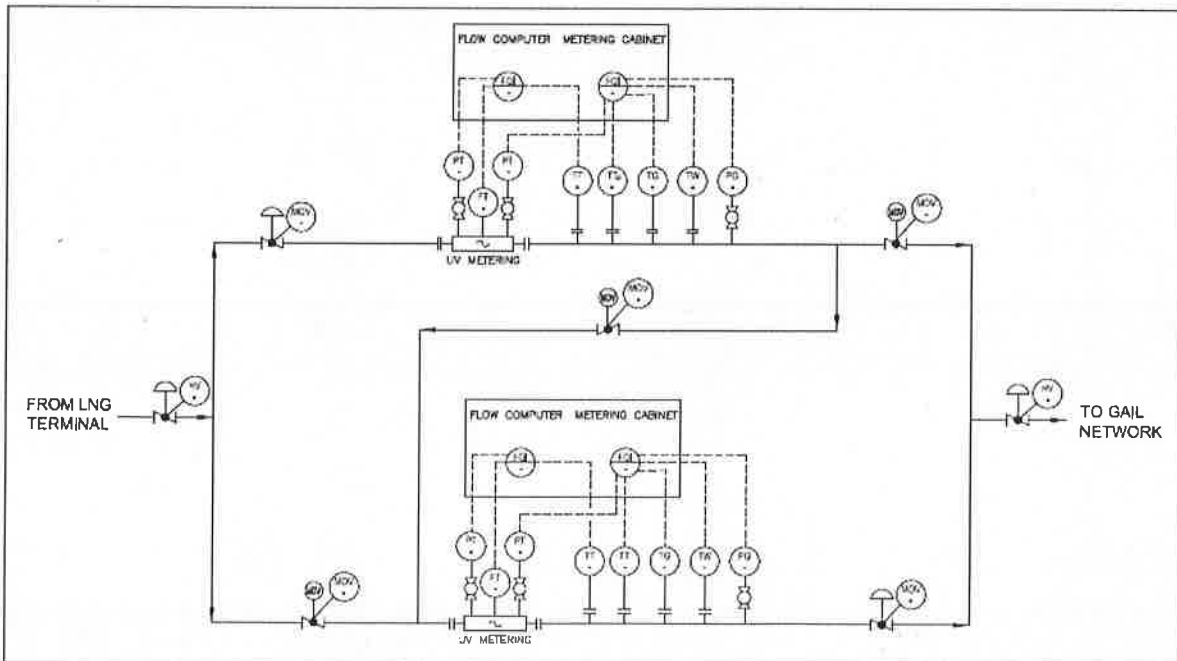
Cost Estimation (Capex) and Operation & Maintenance (O&M) Cost:

| Sr No. | LNG Terminal | Capex (INR Crores) | O&M cost (INR Crores per year) |
|--------|--|-----------------------|-----------------------------------|
| 1 | Pipeline section from CTP to GAIL network, Installation of two metering skids along with associated facilities like gas chromatograph, transmitters, flow computers, F&G detection system and communication system for communication to terminal's main control room | Approx 35 | Approx 7.5 |

Project Schedule:

The terminal is expected to be commissioned and start operation within 18 months from the date of start of construction.

Schematic of Pipeline Routing



List of Attachments:

1. GAIL's letter to AGP Karaikal LNG Pvt Ltd. Confirming willingness to allow Tie-in to network.
2. AGPKLPL's letter to PNGRB dated 21st Feb-18, intimating about setting up LNG Terminal at Karaikal port
3. Karaikal port's letter to PNGRB dated 20th Feb-18, intimating about exclusivity given to AG&P for setting up LNG terminal at Karaikal port.





गेल (इंडिया) लिमिटेड

(भारत सरकार का उपक्रम - महारत्न कंपनी)

GAIL (India) Limited

(A Government of India Undertaking - A Maharatna Company)

Ann - 1 06

गेल भवन,
16 भीकाएजी कामा प्लेस
नई दिल्ली-110066, इंडिया
GAIL BHAWAN,
16 BHIKAJIJI CAMA PLACE
NEW DELHI-110066, INDIA
फोन/PHONE : +91 11 26182955
फैक्स/FAX : +91 11 26185941
ई-मेल/E-mail : info@gail.co.in

GAIL/CO/Transmission /Karaikal/18-19

10th April 2018

Sh. Dharendra Kumar Mishra,
Project Director,
M/s AGP Karaikal LNG Private Limited,
1005, 10th Floor,
Ambadeep Building,
14 Kasturba Gandhi Marg,
New Delhi- 110001

Sub: Development of LNG import terminal at Karaikal Port, Puducherry

Sir,

This has reference to your letter dtd. 05.03.2018 and subsequent meetings held on the abovementioned subject. In this regard following is submitted for your kind information:

1. GAIL will provide access to its existing Narimanam-Kuthalam natural gas pipeline network to meet the RLNG demand of PPN power (approx.. 1.4 MMSCMD) by suitable expansion of the capacity of the existing pipeline network subject to AGP executing firm GTA, Techno-economic feasibility and Regulatory/ Statutory clearances.

Further, for supplying gas to any other customer on the network, AGP will be required to provide the parameters such as volume, supply pressure etc. as the rest of GAIL's network will be operating at low pressure and based on feasibility , such supplies can be undertaken.

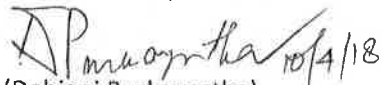
2. Firm booking of pipeline capacity on Ship or Pay basis may be done either by AGP or its customer and the same shall be governed by mutually agreed terms & conditions and applicable regulatory provisions.

3. In case of a direct Tie-in connectivity from RLNG Terminal at Karaikal port to GAIL's pipeline network, AGP may like to submit a detailed proposal to PNGRB.

4. The details as sought by AGP in the meetings and subsequent deliberations are enclosed as Annexure-I.

Thanking you.

Yours sincerely,


(Debjani Purkayastha)
CGM (Gas Mktg)

Annexure-1

1. Discharge Pressure at our battery limit: **45 Kg/cm² (Minimum)**
2. Line size of GAIL to which AGP will supply gas: **18"**
3. Design class of pipeline and flange at the interconnection point: **300#**
4. Clarity on the exact location of battery limit (terminal battery limit) and that scope of GAIL includes construction of pipeline from the battery limit: **To be finalized after authorization of the Tie-in pipeline.**
5. Maximum Capacity (Present & Future) at which GAIL network can operate with the above pressure for supplying to various existing & future customers on the network: **The current scheme is for supplying additional gas to PPN Power only. Gas supply to other customers will be based on feasibility.**
6. Temperature requirement at which RLNG to be supplied: **8 -10 deg C (approx.)**
7. Emergency shutdown valves if any in GAIL network so as to design AGP pipeline & terminal protection system: **Actuator valves at Dispatch terminal, Karaikal port and sectionalizing valves en-route, based on detailed engineering.**
8. Any specific requirement for designing the metering station: **As per standard design of metering station for natural gas.**
9. Land requirement for setting up custody transfer point: **Land size of 50Mx50M (approx.) to be provided for Dispatch terminal at Karaikal port premises.**
10. Provisional time-line for construction: **Will be informed based on the options finalized by GAIL.**
11. Provisional route to lay interconnection pipeline: **Will be based on point no. 10 and 12 above.**
12. Way forward including applying to PNGRB for setting up interconnection pipeline: **AGP may take up with PNGRB for the Tie-in Connectivity.**

Date: February 21, 2018

Mr D K Saraf,
Chairman
Petroleum and Natural Gas Regulatory Board,
First Floor, World Trade Centre, Babar Road
New Delhi- 110001

Received on 22/2/18
at 4:35 PM

हालियम और प्राकृतिक गैस नियंत्रण बोर्ड
Petroleum & Natural Gas Regulatory Board
प्रथम तल, वर्ल्ड ट्रेड सेंटर
1st Floor, World Trade Centre
बाबर रोड, नई दिल्ली-110001
Babar Road, New Delhi-110001

Subject: Intimation regarding setting up of LNG terminal at Karaikal port in India

Dear sir,

We, AGP Karaikal LNG Private Limited ("AGP India"), an Indian private limited company incorporated under the Companies Act, 2013 with CIN U40300DL2018FTC329340, are writing to inform you that AGP India proposes to develop a liquefied natural gas ("LNG") import, storage, regasification and send out terminal ("LNG Terminal") at Karaikal Port in the Union Territory of Puducherry, India and that steps have been initiated for establishment of the LNG Terminal. Our registered office is at 1005, 10th Floor, Ambadeep Building, 14 Kasturba Gandhi Marg New Delhi, 110001.

The LNG Terminal will include, among others: (a) a Floating Storage Unit ("FSU") of capacity 125,000 to 216,000 cubic meters; (b) a jetty suitable to berth the FSU and LNG delivery vessel in side by side configuration; (c) an onshore LNG regasification system with a capacity of approximately 1 MTPA with a provision for expansion up to approximately 6 MTPA in a phased manner, and can be further expanded as per market needs; (d) LNG truck loading facility; and (e) R-LNG/LNG pipelines and a custody transfer gas metering system. f) others utilities and facilities

By way of background, AGP India is an affiliate of Atlantic Gulf and Pacific Company of Manila, Inc. ("AG&P") which is a corporation organized and existing under the laws of the Philippines. AG&P is a leading global supplier and developer of LNG solutions, including regasification and floating storage, specifically focused on standardized, modular structures to roll out LNG in the fastest and the most economic manner.

AG&P has executed a binding term-sheet ("Term Sheet") with Karaikal Port Private Limited ("KPPL"), a company incorporated under the Companies Act, 1956, having its registered office at Keezhavanjore Village, T.R. Pattinam, Karaikal- 609 602, India for setting up the LNG Terminal at the Karaikal Port. A letter from KPPL in this respect is attached herewith.

KPPL is a port developer based in Chennai and has been granted a concession in 2006 by the Government of Puducherry, wherein, amongst other things, it has been granted the exclusive right and authority to design, finance, build, own, maintain, operate and transfer the Karaikal Port. Pursuant to the Term Sheet, KPPL and AG&P/AGP India are negotiating a sub-concession agreement for grant of, among others, the exclusive right and authority to AGP India to design, finance, build, own, maintain, operate and transfer the LNG Terminal at the Karaikal Port.



We understand that pursuant to the Petroleum and Natural Gas Regulatory Board Act, 2006, any entity desirous of establishing or operating an LNG terminal and meeting the prescribed eligibility conditions is required to make an application to the PNGRB for its registration in such form and such manner and accompanied by such fees as determined by the PNGRB by regulations. However, we understand that such regulations are yet to come into effect.

In absence of the notified regulations and prescribed application procedure, we would like to communicate to PNGRB that we have initiated steps for establishment of the LNG Terminal with above mentioned configuration. AG&P/AGP India is currently finalizing the sub-concession and sub-lease agreements along with the other definitive agreements including the EPC to be executed in connection with the establishment and operation of the LNG Terminal.

Yours faithfully,
For AGP Karaikal LNG Private Limited



Abhilesh Gupta
Director



Encl - Letter from KPPL dated February 20, 2018 addressed to PNGRB

Karaikal port



Date: February 20, 2018

Shri. D K Saraf
Chairman, Petroleum and Natural Gas Regulatory Board
First Floor, World Trade Centre,
Babar Road, New Delhi - 110001
Telephone No.: 011- 23457700
Fax No.: 011 - 23709151

Subject: Developments at Karaikal Port for the proposed floating based LNG terminal

Dear Sir,

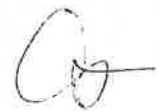
Karaikal Port is a multi cargo port located 320 km south of Chennai in Karaikal district of Puducherry. Karaikal Port Pvt. Ltd. (KPPL) was incorporated as a special purpose company for the implementation and operation of port after a concession agreement was signed in 2006 with the Government of Puducherry to develop the port facilities. The port is operational since 2009. Currently the port has 5 operational berths and handles 9 MTPA cargo which includes coal, cement, edible oil, crude oil, grains, sugar etc.

Atlantic Gulf and Pacific Company of Manila (AG&P) is a leading global supplier of LNG solutions including re-gasification and floating storage specifically focused on standardized, modular structures to roll out LNG in the fastest and the most economic manner.

KPPL and AG&P have seen the potential in Cauvery Basin area for a floating based LNG terminal wherein existing pipeline network is available up to 276 km and the pipeline gas supply is being made to about 53 customers. KPPL and AG&P were in mutual discussions to develop LNG terminal at Karaikal Port.

This is for your kind information that KPPL has signed a Term Sheet with AG&P on 27th October 2017 for development of LNG import terminal at Karaikal Port. This agreement gives AG&P exclusive rights to develop LNG terminal at Karaikal Port for an agreed time period.

AG&P's Indian subsidiary 'AGP Karaikal LNG Private Limited' will be developing the proposed LNG terminal at Karaikal Port. The proposed floating based LNG terminal will be initially of 1 MTPA capacity and can be expanded up to 5 MTPA and further as per market needs.



KARAIKAL PORT PRIVATE LIMITED

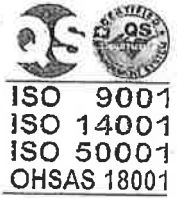
CIN: U45203PY2006PTC001945

Registered Office

Kheezhavanjoor Village, T.R. Pattinam, PB No. 33, Karaikal - 609 606. Tel. : +91 4365 256600 (5 Lines) Fax : +91 4365 256603

Corporate Office

Chettinad Business Chamber, 3rd Floor, Dr. Radhakrishnan Salai, 5th Street (Near AVM Rajeswari Marriage Hall)
Mylapore, Chennai 600 004. Tel. : +91 44 4562 2000 Fax : +91 44 4562 2032



AGP Karaikal LNG Private Limited as project developer and operator of the proposed LNG terminal will lead all the necessary actions that have to be taken for the supply of RLNG through existing GAIL Cauvery Basin network to various other customers in the hinterland.

The port was awarded the Environmental Clearance in the MOEF meeting held on 25th May 2017.

AGP Karaikal LNG Private Limited will take all the necessary actions to follow up on PNGRB and also to secure statutory clearances like PESO for development of LNG terminal at Karaikal Port.

We request your kind co-operation for necessary clearances to AGP Karaikal LNG Private Limited for the execution of the LNG terminal project and supply of LNG to various customers within the hinterland.

Thanking You,

Yours Sincerely,

GRK Reddy
Director, Karaikal Port Private Ltd.

KARAIKAL PORT PRIVATE LIMITED

CIN: U45203PY2006PTC001945

Registered Office

Kheezhavanjour Village, T.R. Pattinam, PB No. 33, Karaikal - 609 606. Tel. : +91 4365 256600 (5 Lines) Fax : +91 4365 256603

Corporate Office

Chettinad Business Chamber, 3rd Floor, Dr. Radhakrishnan Salai, 5th Street (Near AVM Rajeswari Marriage Hall)

Mylapore, Chennai 600 004. Tel. : +91 44 4562 2000 Fax : +91 44 4562 2082