

Public Consultation Note for City Gas Distribution (CGD) Authorization in Andaman & Nicobar Islands

1. Background

Petroleum and Natural Gas Regulatory Board (PNGRB), has authorized 307 Geographical Areas (GAs) covering entire country (except islands). The combined targets for all GAs includes minimum 12 Crore PNG connections, 17000 CNG stations and 5 lakh inch-km of the pipelines by 2030. PNGRB has also taking various steps to increase the consumption of natural gas in the country. PNGRB is intends to develop City Gas Distribution (CGD) Infrastructure in Andaman & Nicobar Islands.

The Government of Andaman & Nicobar (A&N) has undertaken several initiatives to integrate cleaner fuels into the Union Territory's energy mix, with a focus on adoption of natural gas in the primary energy mix of the country. As part of this commitment, discussions have been initiated to develop LNG demand and supply infrastructure in the Andaman & Nicobar Islands. Given the significant reliance on high-speed diesel (HSD) for power generation, the A&N administration has explored the feasibility of replacing diesel-based power generation with natural gas-based alternatives.

Key Developments in the Energy Sector of A&N Islands:

- NTPC is setting up a 50 MW gas-based power plant to replace diesel-fired power generation
- Ministry of Petroleum and Natural Gas, Government of India (GoI) has nominated Indian Oil Corporation Ltd. (IOCL), as a special agency to facilitate execution of the LNG infrastructure for Great Nicobar and 50 MW LNG Power Plant under Ministry of Petroleum and Natural Gas (MoPNG)

2. Andaman & Nicobar Islands – Geography & Demographics

Andaman & Nicobar Islands, one of the 8 Union Territoriesⁱ (UTs) of India, are an archipelago of over 836 Islandsⁱⁱ in the Bay of Bengal. Out of 836 islands, 31 islands are inhabited. There are 3 districts (North and Middle Andaman, South Andaman, Nicobar) and 9 Tehsils¹ spread across 8,249 sq. km area of Andaman & Nicobar Islandsⁱⁱⁱ. Port Blair, the capital of UT, is about 1,200 kms away from the mainland cities of Chennai and Kolkata. The map of A&N Islands is enclosed as Figure 1.



¹ 9 Tehsils are in 3 districts- 1. South Andaman (Port Blair, Ferrargunj and Little Andaman), 2. North & Middle Andaman (Diglipur, Mayabunder and Rangat), 3. Nicobar (Car Nicobar, Nancowry and Great Nicobar)

Figure 1: Geographical Map of Andaman and Nicobar (Source: Maps of India)

Further, Andaman and Nicobar has an estimated population^{iv} of ~4,34,192 (2019) with more than 94,000 households. Majority of the population resides in South Andaman district with least residence in Nicobar district as per the 2011 census^v. Majority of the urban concentration is in Port Blair, Andaman and Nicobar islands have a literacy rate^{vi} of 86.6%

3. Existing Utility Infrastructure in Andaman and Nicobar Islands

Andaman and Nicobar Islands have the following utility infrastructure:

1. **Airport Infrastructure:** A&N islands have 3 airports (Veer Savarkar International Airport (Port Blair), Car Nicobar Airport and Chidiya Tapu Heliport)
2. **Road Transport:** A&N islands have 420 Kms of national highway (NH4) with number of vehicle registrations as per RTO data (31.03.2023)- Truck: 3959; Bus: 1,198; Auto Rickshaw: 5565; Car /Taxi: 38424 and Two wheelers-1,22,626
3. **Ports and Harbors:** There are 23 notified ports^{vii}, key ones include Port Blair, Campbell Bay, Mayabunder, and Diglipur. Two major Jetties such as Haddo Jetty and Hopetown Jetty exists in South Andaman for receiving and berthing of vessels.
4. **Power Infrastructure:** Peak Power demand is **61** MW with total installed capacity of ~**116.5** MW (HSD driven DG set -**82** MW and RE-**34** MW)
5. **Oil & Gas Infrastructure:** Mentioned below are the Oil & gas infrastructure in India
 - a. **POL terminal** (1) with a storage capacity of 27.847 TKL
 - b. **LPG bottling plant** (1) with bottling Capacity of 11,000 TPA
 - c. **Retail Outlets** ~19 Nos. spread across islands
 - d. **Aviation Fueling Station** ~3 Nos across 3 airport or heliport

4. Current Petroleum Products Supply & Distribution in Andaman and Nicobar

IOCL is the sole supplier of energy commodities (Petrol, Diesel, LPG, ATF) in the A&N Islands, with established infrastructure a POL terminal, LPG bottling plant, retail outlets, and aviation filling stations to cater to the region's energy needs.

4.1 Operation of Key Oil & Gas infrastructure

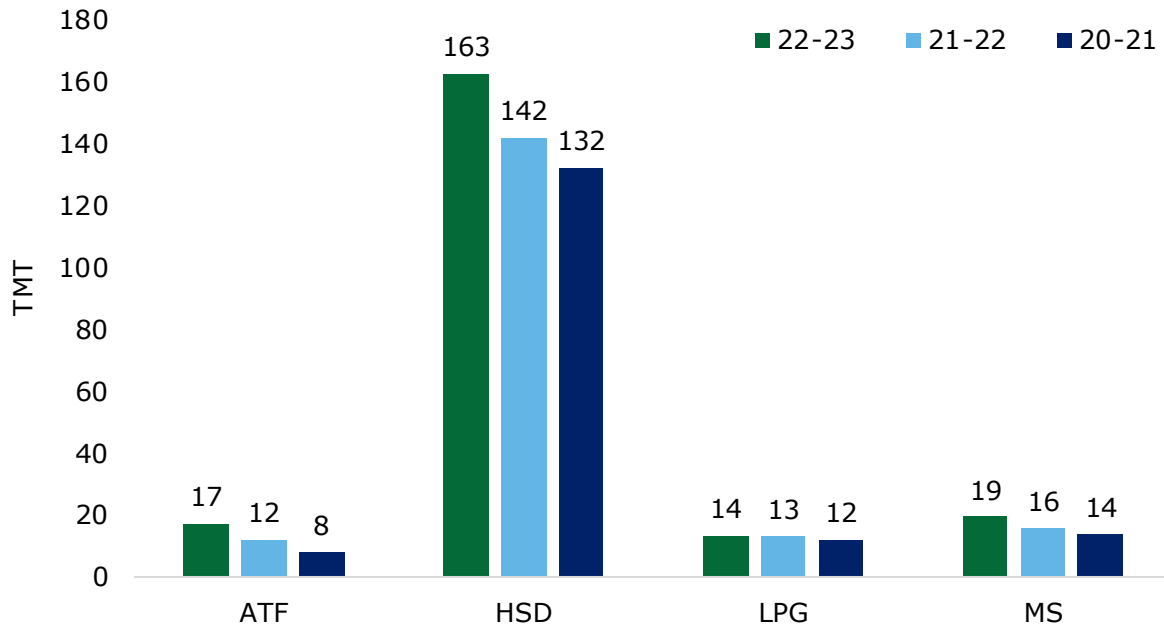
The existing Oil & Gas infrastructure is operated by Indian Oil Corporation Limited.

These key infrastructures include:

- **POL Terminal** is located at Port Blair with a storage capacity of 27.8 TKL and achieved throughput of 235 TKL (FY 2022-23). It is being owned and operated by IOCL. The petroleum products are distributed to various Islands using Tank Trucks, ISO containers of 10KL & 4KL capacities. Bunker fuel is supplied through a pipeline to the consumers such as Indian Navy, Indian Coast Guard and Directorate of Shipping Services, A&N Administration, etc. Inter-Island supplies are done using 200 liters barrels, which are transported through small vessels.
- **LPG Bottling Plant**, located at Hopetown, has a bottling capacity of 11,000 MT per annum. Its owned and operated by IOCL.
- **Aviation Fuel Supply** – IOCL supplies Aviation Turbine Fuel (ATF) to dedicated fueling stations located at Port Blair, Car Nicobar, and Campbell Bay for aviation operations across the Andaman & Nicobar Islands.
- **Retail Fuel Outlets** – IOCL operates 19 Ros across the Andaman & Nicobar Islands. Out of these 19 Ros, 8 are operational in Port Blair.

4.2 Outlook on Petroleum Product Consumption

Total fuel consumption (Diesel, Petrol and LPG) for the FY23 in the Andaman and Nicobar Islands is ~195 TMT (162.76 TMT Diesel, 19.4 TMT Petrol, 13.58 TMT LPG).



4.3. Outlook on Fuel utilization

It is to be note that:

- Oil and Gas infrastructure is owned and operated by IOCL
- Out of total fuel consumption of ~195 TMT in FY23, Port Blair alone accounts for 53% of total fuel consumption (~103.57 TMT).
- There is dependency on diesel for generation of power across A&N islands. For reference-

- In Andaman and Nicobar, approximately ~45% (72 TMT) of total diesel consumption of ~163 TMT is used for power generation.
- Approximately 65% (~54 TMT) of Port Blair's total diesel consumption (~85 TMT) is utilized for power generation.

5. Demand & Supply status of Natural gas

Natural gas across A&N islands could be utilized primarily in following segments:

1. Power Plants
2. Domestic PNG
3. CNG for vehicles
4. Commercial / Industrial PNG

Currently, there is no infrastructure in place for the demand of natural gas in Andaman and Nicobar Islands.

Further, following is status of developments which have taken place on the demand and supply aspect of natural gas in Andaman and Nicobar Islands,

- **For Gas-based Power Plant**, NTPC is in the process of setting up a 50 MW gas-based power plant at A&N islands. This project would attract natural gas demand to replace HSD generated power.
- **For Gas-Supply infrastructure** at A&N, IOCL has been designated as special agency to facilitate execution of the LNG infrastructure for Great Nicobar and 50 MW LNG Power Plant under Ministry of Petroleum and Natural Gas (MoPNG). IOCL would cater to the supply of natural gas to the gas based power plant being built by NTPC and any other additional demand of natural gas

- **For CGD infrastructure**, currently there is no authorized entity to carry out the development of city gas distribution across A&N islands.

6. Efforts made to develop Natural Gas Infrastructure in Andaman & Nicobar

There are efforts taken for the development of LNG infrastructure in Andaman and Nicobar Islands driven by the A&N government's commitment to cleaner fuels, in collaboration with key stakeholders. Efforts taken in this direction with sequence of events are as follows:

- In 2011-2012, A&N explored possibilities of diesel replacement with eco-friendly fuels
- In 2014, Petronet LNG Ltd. (PLL) submitted a feasibility report proposing LNG supply and infrastructure in June 2014 to A&N
- In 2018, A&N administration decided that NTPC would execute the project (LNG infrastructure development- FSRU and 50 MW gas-based power plant)
- In April 2019, PNGRB issued public notice for CGD network in A&N
- In July 2019, During open house discussion, PLL conveyed that NTPC Vidyut Vyapar Nigam Limited, NVNN (Subsidiary of NTPC) is in the process of issuing a tender for a gas-based power plant and associated infrastructure
- In September 2019, NVNN floated a tender for FSRU and supply of gas to A&N
- In Feb 2020, NVNN invited bids for dual fuel power project (50 MW) at Hope Town, Port Blair, Andaman and Nicobar but later the tender was cancelled in June 2020.
- In 2022, NVNN, subsidiary of NTPC issued RFP for LNG infrastructure at Hope Town
- In 2023, IOCL conducted various studies for participation in the NVNN's tender
- In Sept 2023, NVNN withdraws its tender

- In Oct 2023, Hon'ble Minister for Petroleum emphasizes CGD coverage for island areas, signaling a renewed push for LNG development
- In Dec 2023, discussion held at PNGRB for addressing infrastructure requirements of A&N islands with IOCL, GAIL, NTPC
- In September 2024, Andaman administration urges Centre to rethink plan to build 50-MW gas-based unit
- In November 2024, NTPC Vidyut Vyapar Nigam Ltd (NVVN) invited bids to set-up 50-MW gas-based unit.

In January 2025, IOCL has been instructed by Ministry of Petroleum and Natural Gas, Government of India (GoI) for the development of LNG infrastructure in Andaman and Nicobar Islands.

7. Proposal considering current developments

Considering the ongoing government initiatives in the power and natural gas sectors to promote cleaner fuels and reduce dependency on liquid fuels in the Andaman & Nicobar (A&N) Islands, PNGRB is considering the authorization of geographical areas in A&N islands for the development of City Gas Distribution (CGD) network.

As per the provisions of the Section 19 of the PNGRB Act, When, either on the basis of an application for authorization for laying, building, operating or expanding a common carrier or contract carrier or for laying, building, operating or expanding a city or local natural gas distribution network is received or on sue motto basis, the Board forms an opinion that it is necessary or expedient to lay, build, operate or expand a common carrier or contract carrier between two specified points, or to lay, build, operate or expand a city or local natural gas distribution network in a specified geographic area, the Board may give wide publicity of its intention to do so and may invite applications from interested parties to lay, build, operate or expand such pipelines or city or local natural gas distribution network. Section 19 (2) of the Act provides that the Board may select an entity in an objective and transparent manner as specified by regulations for such activities.

The Regulation 4 to 10 of the PNGRB (Authorizing entities to lay, build, operate or expand a city or local distribution networks) Regulations provides for competitive bidding route for authorization of a Geographical area. The Board has tried to explore this route in year 2019, when on the EoI of Petronet LNG Limited (PLL), Board vide Public notice dated 27th May, 2019 had initiated public consultation process, however after discussions/meetings with various stakeholders including A&N administration, PNGRB acknowledges that there may be challenges around stand-alone economic viability of CGD in Andaman and Nicobar Islands. Hence, PNGRB is evaluating an integrated model combining CGD with LNG supply for power generation, which may be a more viable solution compared to stand alone CGD.

As IOCL has been designated as a special agency under Ministry of Petroleum and Natural Gas (MoPNG) to facilitate execution of the LNG infrastructure for Andaman for the 50 MW LNG Power Plant, the integrated model may only be feasible, if IOCL is entrusted with the authorization for development of CGD network in A&N.

In light of the above, PNGRB is considering the authorization of the GA of A&N Islands for CGD development to IOCL. However, if any other entities are interested to develop CGD network on standalone basis in A&N, the entity may apply in writing to the Board with a credible plan for development of CGD network on standalone basis, within 30 days from the date of this notice. If any such application(s) will be received, the Board will initiate a competitive bidding process as per the provisions of the CGD authorization Regulations. However, in case of no application, PNGRB will initiate the process of granting authorization for development of CGD network in A&N to IOCL.

ⁱ <https://knowindia.india.gov.in/states-uts/>

ⁱⁱ <https://andaman.gov.in/>

ⁱⁱⁱ <https://andaman.gov.in/>

^{iv} <https://andaman.gov.in/>

iv <https://andaman.gov.in/>

v <https://www.and.nic.in/andaman/population.php>

vi 2011 Census for Andaman and Nicobar

vii [Port Management Board](#)