LNG on Wheels
Leveraging Small-Scale LNG for Accelerated CGD Expansion,
Last-Mile Connectivity
&
Market Development through Innovative Gas Supply Models

NGS "Construction Management Conclave 2026"

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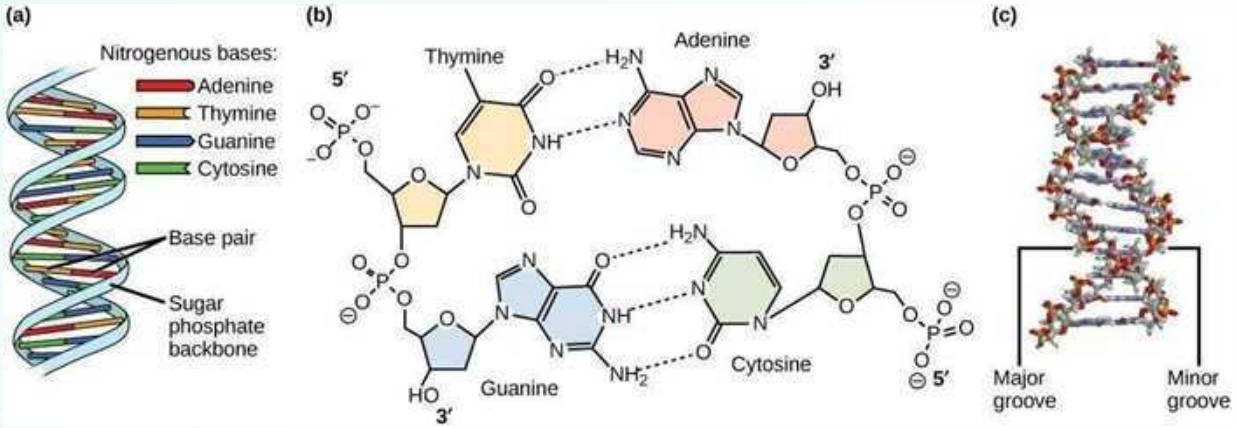
Before We start

The C-H Bond



How many CGD areas are not connected to Gas Pipeline yet?
How Many CGDs are very difficult to connect with Gas Grid?

PLL Infrastructure & Diversification

- **Dahej Terminal:**
  - Regas Capacity - 22.5 MMTPA
  - LNG storage: ~ 800 MMSCM Gas
  - 2 Jetties: LNG Cargos Berthing
  - *3rd Jetty : LNG, Ethane, Propane Cargos*
  - 8 LNG Truck tankers loading
  - C2C3 ONGC plant – LNG Feed

- **Kochi Terminal:**
  - Regas Capacity - 5 MMTPA
  - 1 Jetty: LNG Cargos Berthing
  - LNG Storage: ~200 MMSCM Gas
  - 4 LNG Truck tanker loading
  - GUCD:LNG Cargoes
  - LNG Reloading from terminal to Ship
  - LNG Bunkering

- **SSLNG:**
  - 4 LNG Fueling Stations operational
  - Under construction: 1 in Kochi
  - 10 LNG stations in pipeline

- **Solar Power Plants:**
  - ~1800 kWp generation
  - ~3300 kWp Solar Construction
  - 25 MW (200 MWH) – Dahej
  - 30 MW Hybrid RE: J-V formation
  - 161 MW RE- PetChem Complex

Other Diversification Infrastructure

- **Petrochemicals Complex – Dahej:**
  - 750 KTPA PDH and 500 KTPA PP
  - Ethane & Propane Facility
  - Ethane transportation-Concor Railways
  - 600 KTA Ethane Supply to OPaL
  - H2 & Propylene Supply to Deepak Fert
  - Propane Supply to various player

- **Other Associations**
  - ✓ Petronet Energy Limited
  - ✓ Petronet LNG Singapore Pte Ltd
  - ✓ MC^2 + : Supporting Tech start up and Innovators
  - ✓ Exploring **Joint Ventures** in various sectors

- **Gopalpur LNG Terminal:**
  - Regas Capacity: 5 MMTPA
  - Storage : Around 190 MMSCM
  - LNG Truck Loading facility

- **CBG Plants:**
  - Target: Accelerating through JV

Why LNG on Wheels Matter?

Energy Access Challenge

- ✓ Large parts of India **beyond** gas grid reach
- ✓ CGD expansion **before** gas grid connectivity
- ✓ Industries need to **reduce** diesel, FO and LPG
- ✓ Long-haul freight heavily **dependent** on diesel

SSLNG Solution

Terminal → LNG Truck → Satellite Sta ons → Consumer

- PNG Domestic
- PNG Commercial
- CNG
- LNG Fuel
- Small Manufactures

Benefits:

- Faster deployment – 1 year
- Lower capex than gas grid pipelines
- Flexible demand aggregation
- Market creation before pipeline arrival

LNG Availability in India

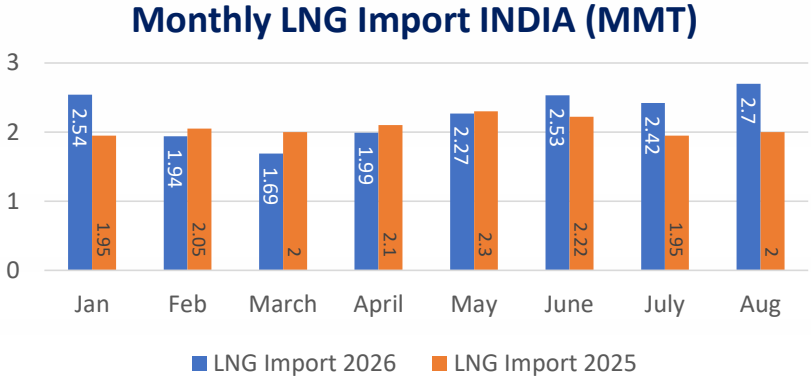
No.	TERMINAL	DEVELOPERS	CAPACITY (MMTPA)
		Existing Terminal	
1	**Dahej**	**Petronet LNG Limited**	**22.5**
2	Hazira	Royal Dutch Shell	5.2
3	Dabhol	GAIL,NTPC	5.0
4	**Kochi**	**Petronet LNG Limited**	**5.0**
5	Mundra	GSPC, Adani	5.0
6	Ennore	Indian Oil Corp, TIDCO	5.0
7	Dhamra	Adani	5.0
8	Chhara	HPCL	5.0
	TOTAL EXISTING		**57.7**
		Other Potential infra	
9	Jafrabad (FSRU)	Swan	
10	East Coast - Gopalpur	Petronet LNG Limited	
11	H-Energy	Hiranandani Group	

LNG Filling infrastructure in India

No.	TERMINAL	DEVELOPERS	TTLF Bays	Average Loading / day
1	Dahej	Petronet LNG Limited	8	47.00
2	Hazira	Royal Dutch Shell	2	5
3	Dabhol	GAIL,NTPC	2	6
4	Kochi	Petronet LNG Limited	4	9
5	Mundra	GSPC, Adani	1	6
6	Ennore	Indian Oil Corp, TIDCO	4	30
7	Dhamra	Adani	1	3
8	Chhara	HPCL	2	2.00
	TOTAL EXISTING		**24**	**108.00**

Around 5 Lacs tons of LNG is delivering on the wheels annually

LNG Availability in Crisis
Strait of Hormuz closure- LNG Supply Chain Disruption



No effect on supply
Geographical shifting of Major LNG supply to India

Year	Major Countries: LNG Trade Volume to India (MMT) *March-August*									
	Qatar	UAE	USA	Oman	Nigeria	Angola	Trinidad	Cameroon	Others	Total
2025	5.85	1.64	1.63	0.89	1.03	1.03	0.07	0.22	0.85	13.21
2026	0.35	0.95	3.88	3.01	3.03	1.39	0.22	0.34	0.87	14.04

Volume Reduced

Volume Increased

- *Out of total 200 of LNG cargos during March-August 2026, 132 cargoes traded to India through Cape of Good Hope*
- *28% (56 cargo) of total LNG imported in March- August 2026 originated from USA*

✓ **LNG export is expected to increase from 500 MMTPA to 750 MMTPA by 2030**

SSLNG Ecosystem

- ✓ LNG terminal/loading bay
- ✓ Cryogenic LNG tank trucks
- ✓ Satellite LNG stations
- ✓ Small Regasification units
- ✓ LNG fueling stations
- ✓ LCNG stations

India LNG Satellite station Construction Capability

- ✓ Manufacturing
- ✓ Installation
- ✓ Commissioning

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Applications

- ✓ Manufacturing
- ✓ CGD
- ✓ LNG fueled trucks
- ✓ Mining
- ✓ Marine
- ✓ Remote power generation

LNG stations Facility:

- ✓ LNG storage
- ✓ LNG pumps - LNG Dispensing
- ✓ LCNG pumps
- ✓ PNG Connectivity

Global SSLNG Market Growth

Major drivers:

- ✓ Last Miles connectivity of gas
- ✓ Decarbonization – Net Zero
- ✓ Reduction CO2 and PM Level
- ✓ Mix of LNG trucking in Transport
- ✓ Off-grid gas supply
- ✓ Energy security

India's LNG Opportunity
Growing Gas Economy In Energy Mix

- ✓ **Bridging fuel** to achieve Net Zero
- ✓ CGD expansion support
- ✓ Industrial fuel switching
- ✓ Transportation decarbonization
- ✓ **Replacing** LPG with PNG
- ✓ **Reducing** HSD/Petrol by CNG/LNG Fuel
- ✓ Having **diversified energy mix** along with renewable Energy

Govt Drive of PNG

- ✓ **1.74 crores domestic PNG** connection
- ✓ **33.14 crores Domestic LPG** connections
- ✓ Assuming 50% LPG connection to PNG
  - ➢ Around **82 MMSCMD** of gas needed
- ✓ Assuming PNGRB 12.6 Cr PNG – Yr 2034
  - ➢ **63 MMSCMD** of gas needed

Enabling Factor

- ✓ **307-309 GA** CGD
- ✓ Covering **784** districts
- ✓ **98% of India's population**
  - ➢ Feasible LPG to PNG conversion.

Accelerating CGD Expansion-Role of LNG on Wheels in CGD
Last mile connectivity

Challenges:

- ✓ Remote CGD areas
- ✓ Delay in Gas pipeline commissioning
- ✓ Initial low demand density

Solution:

LNG trucking enables:

- ✓ PNG rollout ahead of pipeline
- ✓ CNG stations commissioning
- ✓ Industrial customer acquisition
- ✓ **Revenue** generation from Day 1

Impact

Faster monetization of CGD licenses.

Industrial Market Development
LNG Replacing Liquid Fuels

Industries using:
- ✓ Diesel
- ✓ Furnace Oil
- ✓ LDO
- ✓ LPG

Potential users:
- ✓ Steel
- ✓ Glass
- ✓ Ceramics
- ✓ Cement
- ✓ Chemicals

Benefits of LNG:
- ✓ Lower emissions
- ✓ Stable combustion
- ✓ Reduced maintenance
- ✓ Competitive energy cost

LNG for Long-Haul Trucking Potential

- ✓ Around 56,00,000 Medium and Heavy Commercial Vehicles
- ✓ 10% Vehicles conversion can create 12-15 MMTPA of LNG market

- ✓ **Capacity of the LNG Fuel Tanks**: ~450 – 999 litres
- ✓ **Distance:** around 1200 – 1400 Km for 999 litres LNG tank

LNG Fuelled Truck Manufacturers:

- ✓ Blue Energy Motors
- ✓ Tata Motors
- ✓ Ashok Leyland
- ✓ Volvo

Global Leaders in LNG Fueled Trucking

China: The Benchmark

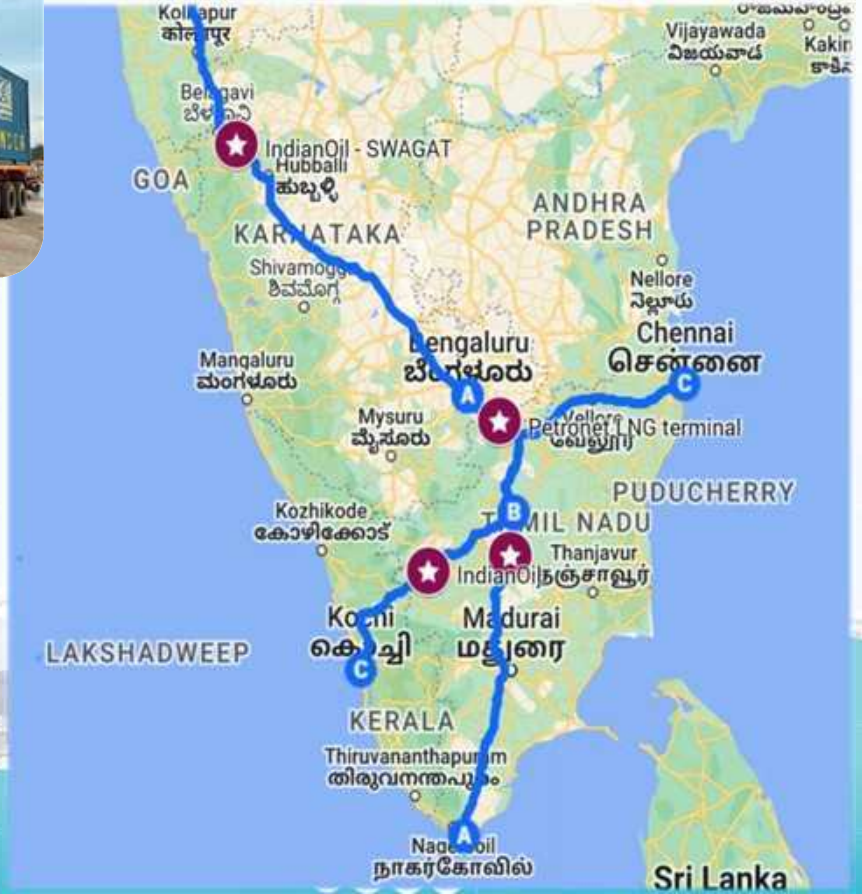
- China consumes Up to 48 MSCMD LNG in trucking

Key Learning:

- Infrastructure first creates demand.

Country	LNG Trucks	LNG Stations
China	~10,00,000	>6,000
Europe	~80,000	~700
India	~1300	~30

PLL LNG Dispensing Infrastructure



LNG Fueling Truck

PETRONET LNG LIMITED

LNG Versus Diesel

Parameter	LNG	Diesel
CO_2 Emissions	~20% Lower	Higher
SOx	Near Zero	High
PM	Very Low	High
Noise	Lower	Higher

- M&HCV accounts for ~40% road transport emissions
- LNG can reduce 20% CO2 and PM level Zero compared to Diesel

Key Challenges

- ✓ Limited LNG stations
- ✓ Limited loading bays
- ✓ High transportation cost
- ✓ Higher truck capex
- ✓ Volatile global LNG prices
- ✓ Other Energy Competitions

Global Challenges

- ✓ Methane emission concerns
- ✓ Competition from electrification
- ✓ Hydrogen development
- ✓ LNG price volatility
- ✓ Supply chain disruptions
- ✓ Other fuels

Operational

- ✓ Cryogenic handling skills
- ✓ **Boil Off Gas** handling
- ✓ Long Haul Vehicle Range anxiety
- ✓ Limited fleet availability

Emerging Trend

- ✓ LNG increasingly viewed as a transition fuel.

Future Key Enablers India

- ✓ Competitive LNG pricing
- ✓ Additional loading bays
- ✓ Fleet incentives
- ✓ Policy support
- ✓ Faster installation of LNG stations
- ✓ CGD network expansion

SSLNG Growth Areas

- ✓ LNG trucking
- ✓ LNG for PNG in GA away from gas grid
- ✓ Reducing LPG
- ✓ Marine bunkering
- ✓ Mining
- ✓ Remote power
- ✓ ***Bio-LNG integration***
- ✓ ***Small Reserves Gas Liquefaction***
- ✓ ***Cold energy harnessing***

Government Support: A task force is working under MoPNG to accelerate LNG fueled trucking

Efforts

- ✓ We are in discussion with various GA Onwers to start connecting pipeline with LNG stations
- ✓ Reaching to truck fleet to bring LNG as energy mix with EV vehicles
- ✓ Reaching to Mining sector to adopt LNG as fuel in engine
- ✓ Offering LNG as 20% discount to Diesel
- ✓ Collaborating with task force formed by GOI to increase LNG on wheels

LNG on Wheels: A Strategic Connector

- ✓ Faster CGD rollout
- ✓ Market development
- ✓ Last-mile connectivity
- ✓ Long-haul transport decarbonization
- ✓ Industrial fuel transition
- ✓ Energy access beyond pipelines
- ✓ Net Zero Bridging

Final Message

SSLNG can act as the catalyst that transforms India's gas infrastructure from a pipeline-based network into a nationwide gas-access ecosystem.

Open to Audience for Discussions