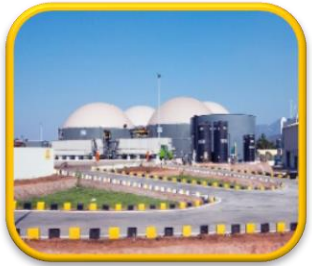




पेट्रोलियम एवं
प्राकृतिक गैस मंत्रालय
MINISTRY OF
**PETROLEUM AND
NATURAL GAS**

India: The Ambition of Compressed BioGas

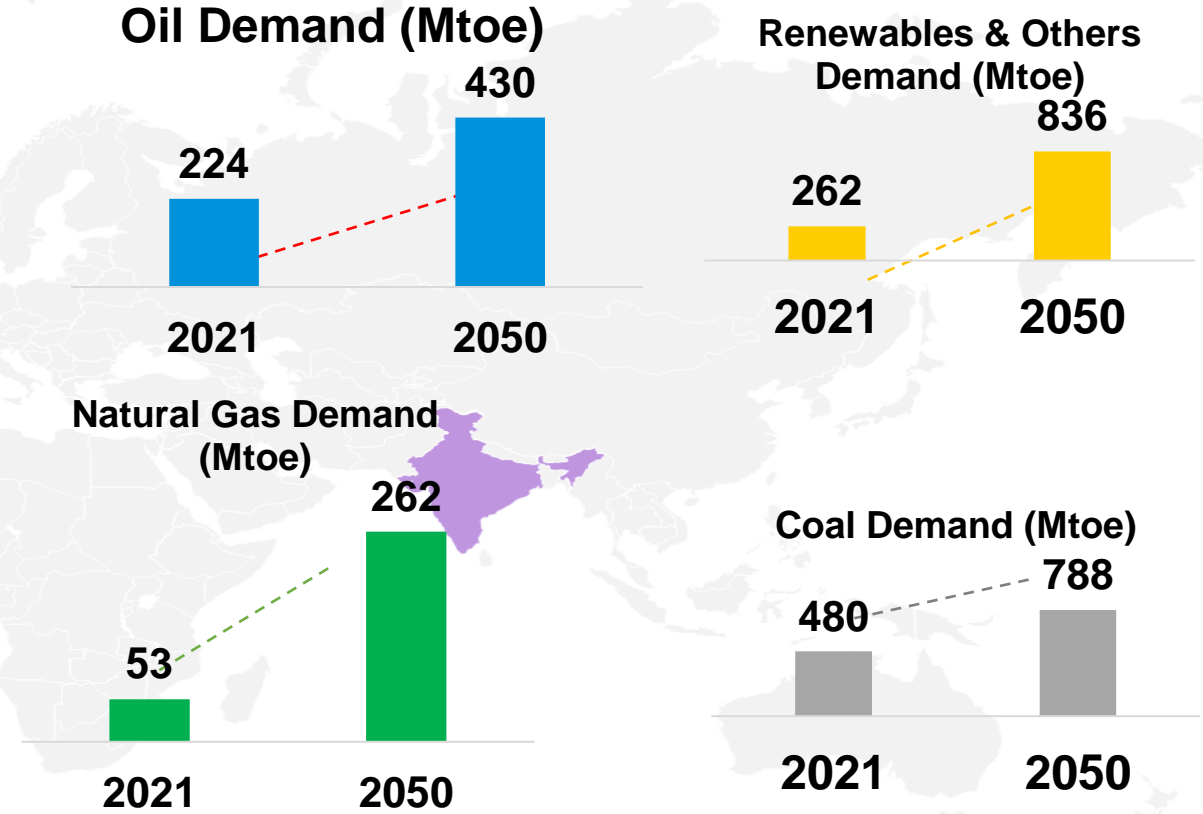
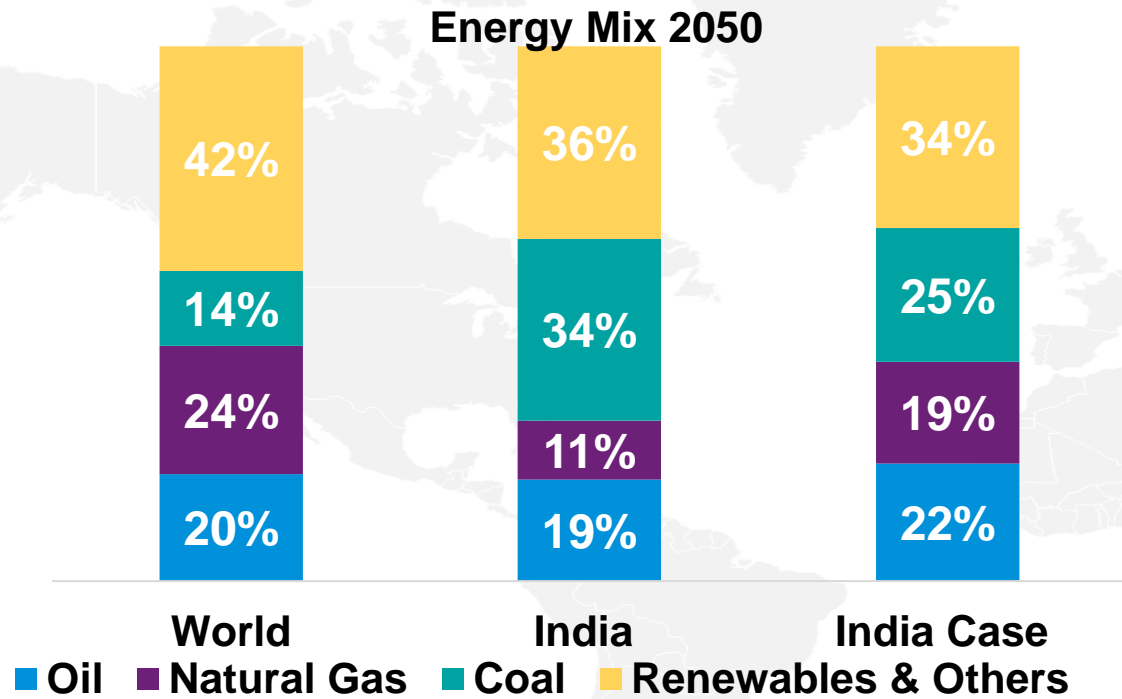
20.11.2024



***Ministry of Petroleum and Natural Gas
Government of India***

India's share in global energy consumption to rise from 5.93% (2021) to 12.75% (2050)

India's Oil and Gas Demand to triple by 2050, renewables increase 2.5 times



Note: Others includes Solar, Wind, Hydro, Bioenergy and other renewables and new energy sources. India Case is the envisioned 'Energy Mix 2050' for India as per PPAC estimates
 Source- BP Stats 2022 & PPAC

Source: BP Stats & Outlook 2022

Map indicative only

GOI Vision for India's Energy future

- **Panchamrit for Climate action:** Target of Net Zero by 2070
- **Reduction in Import:** India imports ~85% crude oil and ~50% Natural Gas.
- **Hon'ble PM's Vision:** Four pillars of India's energy future – energy access, energy efficiency, energy sustainability and energy security
- **Gas Based Economy:** Gas in India's energy mix from existing 6% to 15% by 2030
- **Circular Economy:** Creation of Waste to Wealth
- **Whole of Government Approach :** Convergence of central ministries and State government through GOBARdhan

Sustainable Alternative Towards Affordable Transportation (SATAT) initiative

Launch

- Launched on 1.10.2018 by Govt. of India
- Synergy with Swachh Bharat Mission/ COP 26 commitments

Features

- Conversion of Waste / biomass by value addition into useful CBG and Bio fertilizer
- CBG plants to be set up mainly by entrepreneurs
- Oil and Gas Marketing Companies (OGMCs) inviting Expression of Interests from entrepreneurs
- Raw material procurement and offtake of output is being facilitated Central /State Agencies

Investment

- Total investment of Rs. 1.75 Lakh crore


Benefit

- Employment in rural & waste management sectors
 - Estimated direct employment (~25 / plant) : 1,25,000
 - Estimated indirect employment (~50 / plant) : 2,50,000
- Boost to entrepreneurship and MSME sector
- Additional income to farmers from their unutilised organic waste
- Help to achieve target of Net Zero

GOI Vision for Compressed BioGas

- **Road to transition and net zero ambitions:** India's commitment for net zero by 2070
- **Potential for 15 MMTPA of CBG production** – decarbonising the transport sector
- **Organic Carbon Sequestration** – reducing dependence on chemical fertilizer
- **Monetising the different revenue streams** – gas, FOM/LFOM and carbon credits

Setting up the Ecosystem

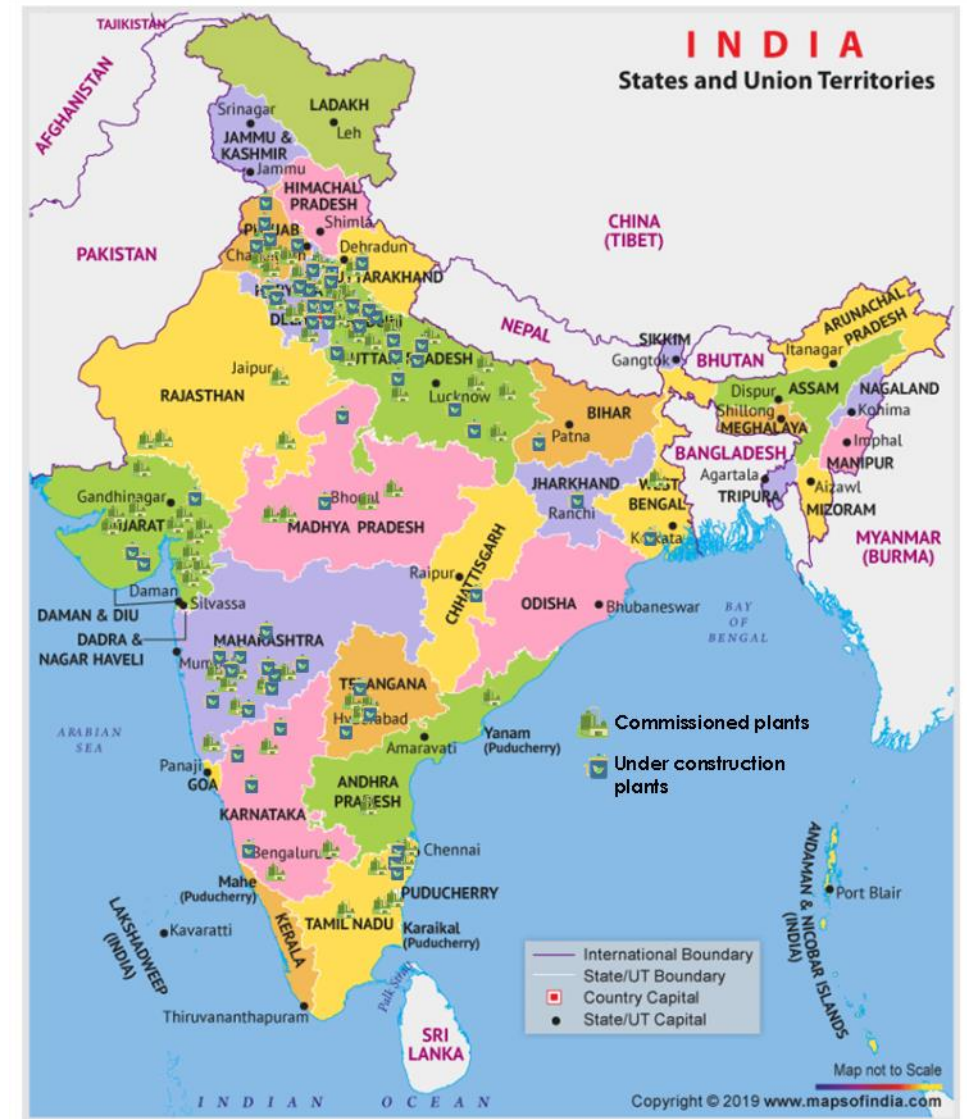
- **Financial support for biomass aggregation –**
 - Financial Assistance of 50% of cost of Biomass aggregation machinery.
 - Assistance up to Rs. 9 crore per plant
- **Financial Assistance on development of pipeline connectivity of CBG plants and CGD network –**
 - Financial support of up to 50% of cost of laying the pipeline between CBG plant and CGD network.
 - Support up to Rs. 28.75 crore per project
- **Mandatory blending of CBG –**
 - Create market for CBG
 - Progressively up to 5% of total sale of CNG (T)/PNG(D) 
 - Renewable Gas Certificates

Setting up the Ecosystem (collaborative approach)

- **Ministry of New & Renewable Energy –**
 - Central Financial Assistance of Rs. 4.0 crore per 4800 kg/day of installed capacity of CBG plants (up to Rs. 10 crore per plant)
- **Ministry of Housing and Urban Affairs –**
 - Additional Central Assistance for MSW based CBG plants
- **Department of Fertilizers –**
 - Market Development Assistance of Rs. 1500 per ton on FOM and LFOM produced from CBG plants
- **Department of Agriculture and Farmers Welfare –**
 - IEC for promotion of FOM/LFOM
 - Financial Assistance for biomass aggregation machinery
- **State Government Support –**
 - State Level SATAT committee in various states viz Gujarat, Haryana, Punjab etc.
 - State Level Policies eg. Andhra Pradesh, Bihar, Uttar Pradesh

Status of CBG Plants (SATAT on 30.09.2024)

- **78** Plant commissioned
- **72** Plants under construction
- CBG supply initiated through Retail Outlets: **245**
- GA's supplying CBG under synchronization scheme: **47**
- OGMCs to construct **195** CBG plants directly or through JVs
- Big corporates planned to establish CBG projects eg. Reliance, Adani, Ever Enviro etc.



Map is indicative

Forward Strategy

- Low cost financing for CBG projects
- Risk Sharing Facility
- CBG liquification (BioLNG) through Small Scale LNG (SSLNG) skid
- Injection of CBG in Trunk pipeline
- Monetization of Carbon Credit

Thank you

Proposal for CBG Blending Obligation (CBO)

- CGD entities shall be mandated to blend CBG as a prescribed percentage of Natural Gas (NG) consumed in the CNG(T)/PNG(D) segment of CGD sector across the country.
- Proposed CBO are as under:

Year	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29 onwards
CBO %	Voluntary		1	3	4	5

- CBO will be reviewed after FY 2028-29.
- Petroleum Planning and Analysis Cell (PPAC) shall be nominated to act as Central Repository Body (CRB).

