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## Policy Dialogue Report

High Level Policy Dialogue

# INDIA'S GAS VISION

Mapping the Demand Trajectory

24th July 2025 | 9:30 AM

The Claridges New Delhi



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## ABOUT CRF

**Chintan Research Foundation** is an independent think tank committed to shaping policy through rigorous research and thought leadership. With a strong focus on fostering collaboration between policymakers and industry, CRF aims to incorporate practical insights into its research and advocacy efforts. It conducts comprehensive research to support informed decision-making and engages with stakeholders through discussions, events, and workshops. By publishing research papers, articles, and op-eds, CRF seeks to address key challenges in India and the Global South, fostering diverse perspectives and contributing to impactful policy advocacy.

**Policy Dialogue Report**

# **HIGH-LEVEL POLICY DIALOGUE ON INDIA'S GAS VISION**

**Mapping the Demand Trajectory**

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*July 24, 2025, The Claridges New Delhi*



**Chintan  
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**FSR** **GLOBAL**  
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## FOREWORD

India's energy landscape is undergoing a profound transformation as the country navigates the twin imperatives of meeting growing energy demand and achieving ambitious climate goals. The Government of India has committed to raising the share of natural gas in the primary energy mix to 15% by 2030, up from the current 6%. This transition is not only essential for reducing carbon intensity but also critical for ensuring a cleaner, more resilient energy future. As a versatile fuel with significantly lower emissions than traditional solid and liquid fossil fuels, natural gas is well positioned to support India's journey towards Viksit Bharat by 2047 and Net Zero by 2070.

However, scaling up the use of natural gas is not without challenges. Limited domestic gas availability, high import dependence, infrastructure delays, price volatility, and policy fragmentation continue to hinder progress. At the same time, industrial users often face disincentives due to the availability of cheaper but polluting alternative energy resources. Unlocking the potential of natural gas, therefore, requires bold and coordinated action on multiple fronts - policy, regulation, infrastructure, and market design.

It is against this backdrop that the High-Level Policy Dialogue on "India's Gas Vision: Mapping the Demand Trajectory" was convened by Chintan Research Foundation (CRF) in association with FSR Global on July 24, 2025, in New Delhi. The dialogue brought together thought leaders from government, industry, academia, think tanks, and international agencies to deliberate on how India can bridge the gap between its current gas share and its ambitious targets.

Discussions during the event underscored five urgent priorities: boosting domestic gas supply, overcoming infrastructure bottlenecks, ensuring policy coherence, advancing market and pricing reforms, and driving mission-mode expansion with an end-user focus. Participants emphasised that bringing natural gas under goods and services tax (GST), enabling fiscal incentives for industries, harmonising permissions for infrastructure rollout, and diversifying gas applications are critical to achieving the desired outcomes. The dialogue also highlighted the need for a level playing field vis-à-vis alternative fuels and stronger policy and regulatory support to attract private investments.

The deliberations reaffirmed that natural gas could play a pivotal role in driving India's energy transition and is expected to remain a key component of the energy mix over the next two to three decades. Achieving this vision will demand collaborative effort across central and state governments, regulators, industry stakeholders, and investors. This report captures the insights and recommendations that emerged from the discussions. It is our hope that these findings contribute meaningfully to shaping policies in the gas sector and driving actionable steps toward a cleaner, affordable, and secure energy future for India.

Warm regards,

**Mr. Shishir Priyadarshi**

President, Chintan Research Foundation



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## Executive Summary

The High-Level Policy Dialogue on India's Gas Vision: Mapping the Demand Trajectory, hosted by Chintan Research Foundation (CRF) in association with FSR Global, convened a range of stakeholders from government, industry, international agencies, and researchers to deliberate on India's evolving gas landscape. The dialogue emphasised the urgency of accelerating natural gas adoption to support the country's dual goals of achieving Viksit Bharat by 2047 and Net Zero emissions by 2070. The dialogue underscored natural gas as a pivotal component in India's energy transition, crucial for achieving the dual objectives of Viksit Bharat by 2047 and Net Zero emissions by 2070. From the discussions and deliberations during the Dialogue, five critical focus areas emerged highlighting the need for targeted policy support and enabling regulations. These include:

- **Need for Policy Coherence and Regulatory Reforms:** Participants highlighted the importance of unified and climate-aligned policy frameworks, goods and services tax (GST) integration for gas, end-use gas allocation clarity, and regulatory reforms to de-risk private investments and ensure institutional coordination.
- **Demand-Supply Gap and Infrastructure Bottlenecks:** Despite ambitious national targets, actual gas usage may fall short due to lack of industrial demand, slow city gas distribution (CGD) network expansion, and fragmented infrastructure. Structural bottlenecks and state-level disparities continue to impede growth.
- **Mission-Mode Expansion with End-User Focus:** The dialogue called for a mission-driven strategy to rapidly scale up natural gas adoption, drawing lessons from successful national schemes. Emphasis was placed on improving last-mile connectivity, addressing logistical and investment challenges, and ensuring coordinated action across government, industry, and local stakeholders to deliver reliable, affordable access to end users.
- **Market and Pricing Reforms:** Greater pricing flexibility, development of domestic pricing benchmarks, and support for trading platforms were identified as essential for enhancing market liquidity, boosting domestic production, and attracting investment across the gas value chain.
- **Securing Domestic Gas Supply:** The dialogue emphasised the urgency of bolstering domestic gas production as a foundation for India's energy security and clean energy transition. Expanding exploration activities, accelerating development of unconventional sources like coal bed methane (CBM) and compressed biogas (CBG), and incentivising private investments are critical to reduce import dependency. Strengthening domestic supply will help stabilise prices, mitigate exposure to global volatility, and ensure a reliable fuel base for achieving Viksit Bharat by 2047 and Net Zero by 2070.

## Background

India has committed to achieving net-zero emissions by 2070. A crucial component of this transition is the strategic use of gas as a bridge fuel, enabling a phased shift from carbon-heavy fuels like coal to a low-carbon future. With relatively lower carbon and particulate emissions, gas has been recognized and used globally as a fossil fuel that can securely bridge energy transition. Although, green hydrogen, compressed biogas and coal-bed methane are emerging, India remains largely dependent on LNG as the primary mean to grow the share of gas in its energy mix.

The share of gas in India's primary energy mix is 6.4%; well below the 15% target set for 2030. Recent analysis, including from the IEA's India Gas Market Report, suggests that under business-as-usual conditions, India may only achieve 8–9% share by 2030. To significantly expand the gas consumption and mark even a 10% share in the energy mix, India must address critical challenges. These include:

- **Underutilised LNG infrastructure:** Over half of India's LNG import and regasification capacity remains idle.
- **Infrastructure gaps:** Barriers in pipeline and CGD expansion restrict demand uptake.
- **Policy and market misalignment:** Current policies and practices on LNG imports, domestic pricing, end-use and allocation frameworks, and institutional mechanisms hinder growth in consumption and wider scale use of gas.
- **Heavy reliance on imports:** Despite emerging domestic options, such as coal-bed methane and biogas, LNG remains critical to growing share of gas in the primary energy mix.

With this background, Chintan Research Foundation (CRF), in association with FSR Global, hosted a high-level policy dialogue to deliberate on strategic interventions essential for strengthening India's natural gas ecosystem. This convening aimed at fostering discourse among key stakeholders on the following critical issues:

- Given the scale of energy demand growth under Viksit Bharat 2047, what is a realistic timeline and roadmap to achieve a 15% (or desirably an even higher) share of gas in India's energy mix?
- Beyond pricing and affordability, what are the core policy and institutional hurdles preventing effective scale-up of natural gas, especially LNG?
- What measures are needed to address the underutilisation of existing LN infrastructure and accelerate domestic gas deployment?
- How can India create an enabling policy and market ecosystem to support investment in gas infrastructure and alternatives such as green hydrogen, biogas and coal bed methane.
- What global best practices in gas sector governance and market design can be adapted to India's context?

The dialogue aimed to identify strategic policy actions and infrastructure solutions to support the Government of India's aim of significantly increasing the share of natural gas in the energy mix by 2030.

The detailed agenda of the workshop is provided as Annexure to this report.

## Policy Dialogue Proceedings

The Policy Dialogue on India's Gas Vision: Mapping the Demand Trajectory was hosted at The Claridges New Delhi, on July 24, 2025, from 10:00 AM to 1:30 PM. The Policy dialogue witnessed 96 participants from across the gas value chain, including government agencies, industry leaders, research institutions, academia, international organizations, and the media.

From the government side, key representations were from the Petroleum Planning and Analysis Cell (PPAC), NITI Aayog, the Petroleum and Natural Gas Regulatory Board (PNGRB), the Central Electricity Regulatory Commission, the India Gas Exchange (IGX), NTPC, and the Power Foundation of India. The industry was well-represented by leading players such as the Adani Group, the Association of CGD Entities, the Association of Power Producers of India, and Maruti Suzuki India Ltd., and TotalEnergies. Research and analytical insights were brought forth by reputed think tanks and institutions, including TERI, IEEFA, CPI-India, the CEEW, ICRIER, Climate Trends, India Infrastructure Publishing and Invest India. Prominent consulting firms such as ICF, PwC, LFA Consulting, S&P, and WEFT Research LLP also participated in this dialogue. The academic community had strong representation, with participants from Jawaharlal Nehru University, University, Jamia Millia Islamia, TERI School of Advanced Studies, Ashoka University, NTPC School of Business, and the Energy Policy Institute at the University of Chicago.

Adding an international perspective, the International Energy Agency (IEA) and the Embassy of Indonesia also took part in the dialogue. The event's proceedings were actively covered by leading media houses, including ANI, IANS, and NDTV, ensuring that the discussions reached a wider audience. This diverse participation underscored the collective commitment of all stakeholders to shape a robust

and forward-looking natural gas vision for India. The Policy Dialogue brought together several eminent dignitaries and expert panellists who enriched the discussions with their perspectives. The keynote address was delivered by Mr. Rajiv Gauba, Member, NITI Aayog, who also launched the policy brief on *Natural Gas as a Transition Fuel: Mapping the Demand Trajectory for 2030* developed by Chintan Research Foundation. The special addresses were delivered by Mr. Praveen Mal Khanooja, Additional Secretary, Ministry of Petroleum and Natural Gas (MoPNG), and Mr. A.K. Tiwari, Member, Petroleum and Natural Gas Regulatory Board (PNGRB).

Thereafter the two thematic panel sessions explored critical aspects of India's natural gas sector. The first session, titled "Policy Initiatives for Accelerating Natural Gas Adoption in India", was moderated by Mr. Gurpreet Chugh, Vice President, Green Transitions, and Leader, South Asia, ICF. This session featured insights from leading experts - Mr. Suresh P. Manglani, ED & CEO, Adani Total Gas Ltd.; Mr. Rajesh K. Mediratta, Managing Director, India Gas Exchange (IGX); Dr. Dennis Hesseling, Head of Gas, Coal, and Power Markets Division, International Energy Agency (IEA). The second session, "Infrastructure Matters – Strengthening Natural Gas Infrastructure for India's Energy Transition", was moderated by Ms. Swetha Ravi Kumar, Executive Director, FSR Global. Distinguished panellists for this session included Mr. Subhash Kumar, Director General, Association of CGD Entities (ACE); Mr. Rohit Jain, Vice President – Business Development, Corporate Strategy & Gas Sourcing, Indraprastha Gas Ltd.; Mr. Abhilesh Gupta, Managing Director and CEO, THINK Gas. and Mr. Rajeev Kumar, Chief General Manager – Marketing, O&M & HSSE (Gas), Bharat Petroleum Corporation Limited. Through these two engaging discussions, the policy dialogue addressed both the policy and infrastructure dimensions necessary to accelerate natural gas adoption and facilitate India's energy transition.

## Opening Address



**MR. SHISHIR PRIYADARSHI**

President,  
Chintan Research  
Foundation

Mr. Shishir Priyadarshi, President of CRF, inaugurated the workshop with a warm welcome to the distinguished speakers: Mr. Rajiv Gauba, Member, NITI Aayog; Mr. Praveen Mal Khanooja, Additional Secretary, MoPNG; and Mr. A. K. Tiwari, Member, PNGRB. He also extended his greetings to the panellists of the two discussion sessions and all participants attending this important Policy Dialogue. In his opening address, Mr. Priyadarshi emphasised the urgency of deliberating on natural gas and the need to accelerate its adoption in India. He underscored that the nation stands at a pivotal point in its energy journey- striving to become a developed nation, Viksit Bharat, by 2047 while committing to net-zero by 2070. In this context, natural gas emerges as a cleaner, flexible, and strategically vital alternative to liquid fossils, capable of driving a just and orderly energy transition. He added, the Government of India aims to increase the share of natural gas in the energy mix to 15% by 2030, from a little above 6% at present, and stressed upon the significant gap between ambition and current progress.

In the context of gas infrastructure, Mr. Priyadarshi highlighted major gaps such as underutilised LNG imports, slow expansion of CGD networks, and state-wise tax disparities, and stressed upon the need for better policy alignment to unlock domestic potential and strengthen India's energy transition. He also stressed upon the government's role in de-risking private sector investments, ensuring a level playing field, and creating a climate-aligned framework that positions natural gas as a viable bridge for a just energy transition. He emphasised the need for an approach that is institutionally aligned, economically viable, and politically feasible, and concluded by calling for a platform not only to deliberate but to co-create a sustainable future.

***“Globally, natural gas has been recognized as a bridge fuel enabling economies to transition towards cleaner energy sources without sacrificing their developmental aspirations or growth targets, exactly the path India wants to pursue.”***



## Keynote Address



**MR. RAJIV GAUBA**  
Member,  
NITI Aayog

Mr. Gauba complimented Chintan for organizing the policy dialogue on natural gas and stressed upon the significance of this issue area in Indian context. Mr. Gauba highlighted that India's gas vision is intricately linked to two broader national objectives: the Viksit Bharat Vision 2047 and the Net Zero Ambition 2070. He noted that while India's economy is projected to grow eight to nine times, energy consumption is expected to rise only about 2.5 times, reaching nearly 2000 MTOE<sup>1</sup> by 2047, owing to a sharp decline in energy intensity. He emphasized that this projected reduction in energy intensity is not a theoretical assumption, but a continuation of the trend India has been following. He underscored that the challenge lies in meeting this increased energy demand while simultaneously ensuring energy security, stability, and alignment with clean energy aspirations and environmental objectives, not merely to honor global commitments but to safeguard the health and environment of India's own people. He further stressed that it is in this context that natural gas will serve as a linchpin in India's energy strategy, enabling the country to meet the requirements of industry, transport, and households in a much cleaner way.

He described natural gas as a bridge fuel that can substitute coal and oil while supporting economic growth and emissions reduction. He stated that the government aims to double the share of natural gas in the primary energy mix from the current 7% to 15% by 2030, which implies a substantial increase in annual consumption from 70 BCM to 180 BCM. This aligns well with India's clean energy aspirations, given gas's relatively lower carbon emissions and its capacity to facilitate a smoother transition toward the Net Zero goal by 2070.

Mr. Gauba drew attention to the major policy reforms and infrastructure investments that have been undertaken in recent years to support this vision. He mentioned the expansion of the national gas grid, the growth of the CGD network, the addition of LNG terminals, and the increase in domestic exploration activities. He pointed out that the unified tariff regulations, the overhaul of the hydrocarbon licensing framework, and the opening up of previously restricted offshore areas for exploration are all intended to stimulate private sector investment and enhance supply security.

At the same time, he cautioned that India still faces significant challenges, including high import dependence, under-utilisation of existing infrastructure, and exposure to price volatility. He outlined a



three-pronged approach to address these issues: aggressively boosting domestic production through exploration and unconventional sources, securing long-term and affordable LNG imports, and creating demand through policy incentives and regulatory measures. He also highlighted the importance of improving utilisation of existing LNG terminals and gas-fired power plants, which currently remain largely idle due to high costs.

In conclusion, Mr. Gauba stressed that achieving the gas vision would require close collaboration across sectors and with state governments, as many projects are implemented at the state and city levels. He urged that urban planning must integrate piped gas into new townships and industries so that investor confidence be maintained. He reiterated that by aligning infrastructure, investments, and innovation, India can transform its gas vision into reality and simultaneously advance its economic, environmental, and energy security objectives.

The transcribed speech is provided as annexure to this report.

***“Our gas strategy therefore has to have a three-pronged approach; ramping up domestic supply, through exploration, price reforms and tapping unconventional gas like CBM, demand creation and simultaneously expanding LNG import capacity to plug the inevitable gap.”***

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<sup>1</sup>million tons of oil equivalent

## Special Address



**MR. PRAVEEN M.  
KHANOOJA**

Additional Secretary,  
MoPNG

Mr. Khanooja began by greeting the dignitaries and delegates. He underscored the critical role natural gas must play in shaping India's energy future. He framed his remarks around two core themes: role of natural gas as a bridge fuel, and the policy enablers provided by the government to strengthen the gas sector.

He drew attention to the stark contrast between India's current energy mix and that of the world. Globally, natural gas accounts for nearly a quarter of primary energy consumption, whereas in India, it contributes only about 6%, far below its previous peak of around 10%. Coal continues to dominate India's energy profile, while renewables and hydro make up about 10%. Mr. Khanooja added, yet, Gujarat offers a striking example of what is possible—its gas share has reached 25%, a feat achieved through early adoption, robust infrastructure, and a strong LNG ecosystem. This, he said, provides a template for other states to emulate. At present, most of the India's gas consumption is concentrated in fertilizers, CGD, power, and refineries. The Prime Minister's clarion call of increasing the gas share to 15% by 2030, he noted, is ambitious but achievable with concerted efforts.

Mr. Khanooja referred to the International Energy Agency's projections that India's gas demand will grow nearly 60% by 2030, reaching around 103 BCM, with LNG imports rising to 65 BCM. Despite this strong growth, the target of a 15% share remains challenging, given the scale of India's energy needs. To meet this challenge, he elaborated, the government has been steadily laying the groundwork. Over the last decade, the gas trunk pipeline network has expanded to 25,000 km, with plans to extend it to 35,000 km. Strategic projects, such as the Northeast gas grid, are fast-tracked with viability gap funding (VGF), and project monitoring mechanisms under the Prime Minister's oversight have ensured timely progress. Simultaneously, reforms have modernised the sector: domestic gas prices have been linked to the Indian crude basket, producers enjoy greater pricing flexibility, and the market is evolving toward a more competitive framework.

Mr. Khanooja highlighted that infrastructure development has also been a priority. LNG regasification capacity has reached 53 MMT, with plans to expand to 84 MMT by 2030, complemented by efforts to promote compressed biogas, and coalbed methane through targeted schemes. These initiatives, he stressed, reinforce natural gas's role in advancing three national priorities—enhancing grid reliability as renewable



energy scales up, enabling cleaner fuels for transport and households, and supporting industrial decarbonization. While gas-fired power plants emit substantially less CO<sub>2</sub> than coal, their low plant load factors, driven by cost competitiveness, remain a concern. He pointed out that hard-to-abate sectors like steel, chemicals, ceramics, and glass stand to gain significantly from fuel switching to gas, which not only reduces emissions but also improves air quality.

In conclusion, Mr. Khanooja said that natural gas will remain a pivotal component of India's energy mix for the next two to three decades. Although the overall share of fossil fuels may decline with the rise of renewables, he does not foresee gas demand peaking before 2040–45. He added, Gas will not only help India meet its growing energy requirements but also serve as an enabler of its net-zero and low-carbon aspirations. By strengthening LNG and CNG usage in transportation, expanding piped natural gas (PNG) access to households, and supporting industrial and fertilizer sectors, gas will continue to underpin India's energy transition. With regulatory reforms, infrastructure expansion, and new initiatives such as the Gas Index of India (GIXI), he expressed confidence that the country is on the right path.

He closed his address by wishing the policy dialogue success and looked forward to the ideas and outcomes that would emerge from the deliberations.

The transcribed speech is provided as annexure to this report.

***“Gas would become an extremely important component of our primary energy mix, so the use of gas as an energy component is another area which would remain critical for next 2-3 decades.”***

## Special Address



MR. A. K.  
TIWARI  
Member,  
PNGRB

Mr. Tiwari opened his remark while emphasising that natural gas should not be viewed merely as a transition fuel but as a “fuel of choice”, and PNGRB is aligning its regulatory reforms to support this shift. He explained that PNGRB’s regulatory reforms are being designed to strengthen this vision by making gas a preferred option across sectors. Highlighting the country’s heavy reliance on energy imports—85% for crude oil, 50% for LNG, and 60% for LPG—he stressed the urgent need to expand domestic production and integrate more compressed biogas (CBG) into the energy mix. This, he noted, would not only bolster energy security but also help reduce the growing import bill.

He highlighted that while India claims to have a 35,000 km gas pipeline network, it is not a true national gas grid because of significant gaps between trunk pipelines. Achieving greater gas consumption will require developing a “spider net” of interconnected pipelines, reforming bidding criteria, and enabling mutually agreed tariffs between pipeline operators and CGD companies. On CGD, Mr. Tiwari pointed out that only about a quarter of charge areas are currently covered, despite ambitious targets. PNGRB is actively working with state authorities to streamline permissions and rationalise VAT, with several states already lowering rates to support CGD expansion. He stressed that achieving PNG connection targets will require continued regulatory and state-level support. Addressing LNG terminal utilisation, which stands at only 40–50%, he said future expansions will be subject to stricter due diligence, including mandatory pipeline connectivity and downstream tie-ups. PNGRB is also promoting LNG trading and capacity booking on the India Gas Exchange (IGX) platform, developing policies for gas storage to enhance energy security, and enabling market rules that improve sector efficiency. He concluded while assuring that PNGRB is preparing Vision 2047 for gas consumption, incorporating stakeholder feedback to shape future regulations. He added, the focus is on building a stronger gas infrastructure, boosting consumption, and ensuring ease of doing business through dynamic and evolving regulations.

The transcribed speech is provided as annexure to this report.

***“The vision of having more gas consumption is not possible to be attained unless there is spiral net of pipelines and for that, some regulatory reforms in terms of bidding criteria, and mutually agreed tariffs are the need of the hour.”***



## Context Setting Presentation



**DR. POOJA SEHBAG**  
Research Associate,  
Chintan Research  
Foundation

India's energy demand is increasing exponentially majorly due to industrialisation, urbanisation, and population growth. India commits to reduce its carbon emissions by 45% by 2030 as per its updated Nationally Determined Contributions (NDCs). To secure energy demand while meeting the climate target, there is a need for strategic intervention in energy ecosystem. Natural gas becomes a befitting middle-ground solution given its significantly lower carbon emissions as compared to the conventional fossil-based energy resources. Government of India targets to achieve 15% gas share in India's energy mix by 2030, from the current 6% share of gas. In terms of gas quantity, it translates as 182 BCM per year gas demand by 2030.

In terms of gas production, imports and consumption, India is producing 35.6 BCM, importing 36.7 BCM of LNG and consuming 72.3 BCM of gas as of 2024. India happens to be the fourth largest gas importer, and in recent years the share of imports and domestically produced gas is approximately equally divided i.e., 50% each. In terms of sectoral consumption, fertilizer sector has the largest share of gas consumption, 29%, followed by the CGD sector, 21%, and power sector 13%. The fertilizer sector majorly utilises gas for non-energy usage as a feedstock, the CGD sector is the largest gas consuming sector for energy utilisation. The gas consumption projections in key studies conducted by IEA, PNGRB, and NITI Aayog projects that gas demand for 2030 is significantly lower than 182 BCM. IEA has projected approximately 120 BCM gas demand by 2030 in a policy catalysed scenario.

The broader objective of the assessment conducted by CRF was to analyse the feasibility of achieving the government's 2030 target, assess how policy reforms can drive natural gas demand growth, and evaluate the associated potential and challenges for expanding gas demand in India. For this assessment three-layer methodology was followed—study of literature, stakeholders' consultation, and econometric time-series regression. For the econometric regression three scenarios were developed to project the demand growth by 2030: business as usual (BAU), fiscal reform driven growth, and fiscal reform and sectoral policy push driven growth. Through this evaluation study findings indicated approximately 115 BCM gas demand in BAU scenario, approx. 127 BCM in fiscal reforms driven growth scenario, and approx. 136 BCM gas demand in Fiscal reform and sectoral policy push scenario; the sectoral policy push projections included CGD and industrial sectors only. Together these findings indicate yet significant gap in achieving



182 BCM target by 2030. To realise the government's 2030 target motion-mode policy support is required to accelerate the gas demand and consumption.

The significant challenges and potential that emerged through the stakeholders' consultations include limited domestic gas availability, infrastructure bottlenecks and unequal market access. Through this assessment CRF recommended seven policy levers for supporting the expansion of gas demand in line with government's target.

- Bringing Natural Gas Under GST
- Accelerating CGD Infrastructure Execution
- Boosting Industrial Gas Use Through Sectoral Incentives
- Encouraging Fuel Switching in Hard-to-Abate Sectors
- Diversifying End-Use Applications of Gas
- Scaling Up Domestic Gas Supply
- Rationalising Pricing and Market Access

The detailed presentation is provided as annexure to this report.

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## SESSION 1: POLICY INITIATIVES FOR ACCELERATING NATURAL GAS ADOPTION IN INDIA

### MODERATOR



**MR. GURPREET CHUGH**

Vice President, Green Transitions,  
and Leader, South Asia, ICF

### PANELISTS



**MR. SURESH P MANGLANI**

Executive Director & Chief Executive  
Officer, Adani Total Gas Ltd



**MR. RAJESH K MEDIRATTA**

Managing Director,  
IGX



**MR. DENNIS HESSELING**

Head of Gas, Coal, and Power  
Markets Division, IEA

*(Participated Virtually)*





Speakers highlighted that India's natural gas demand is rising while domestic production is insufficient, and legacy fields are declining. Experts identified pricing freedom as crucial to incentivising new exploration and production. They called for a shift from affordability-centric policies to frameworks that attract investments and expand supply options.

Speakers pointed out challenges in meeting the 15% gas share target by 2030, citing low PNG penetration and inconsistent policy support. They urged policy backing for initiatives like *Har Ghar PNG* and Consumption Linked Incentives for MSMEs. Experts underscored that LNG for transport and non-conventional uses can significantly boost consumption.

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*"More transparency for not only the LNG terminal utilisation but also for access conditions and tariffs, to make it easier to compare, the more India could move towards the regulated third party access system with transparent and non-discriminatory access conditions...the more you enable the competition among players, the more put pressure on prices."* - Mr. Dennis Hesselting, Head of Gas, Coal, and Power Markets Division, IEA

Experts emphasised the strategic importance of GST inclusion for natural gas, noting it as a potential game changer. They highlighted that current tax structures disincentivise cleaner fuels. Speakers called for comprehensive reforms to unify the market and strengthen India's bargaining power by developing its own gas benchmark (GIXI).

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*"The game changing reforms has been waiting for a long....GST will make India as one single market, we don't have to contractually transport gas from one place to another, it is a very inefficient system today we are working."* - Mr. Suresh P Manglani, ED & CEO, Adani Total Gas Ltd

Speakers flagged the need for infrastructure investments, transparent access conditions, and a unified CGD Act. Experts identified that policies from different ministries often work in silos. They called for interlinked policies, citizen awareness, and research-backed advocacy to enhance sectoral synergy.



*“Creating awareness not just of gas industry but at much wider level is important...different ministries coming up with different policies, are they interlocking with each other. Do they work in sink or is one policy contradicting another policy, so there is need to bring comprehensive fuel policy or energy policy.” - Mr. Gurpreet Chugh, Vice President, Green Transitions, and Leader, South Asia, ICF*

Speakers underscored that a unified energy policy, enhanced pricing flexibility, and deepened LNG market liquidity can be transformative. They noted that gas futures, diversification of supply sources, and a cohesive regulatory framework could act as game changers in securing India's energy transition.

*“India should become Atmanirbhar in our benchmark.....so that we are able to negotiate on our own terms with the suppliers.” - Mr. Rajesh K Mediratta, Managing Director, IGX*

### Key Takeaways:

- **GST Inclusion as a Game Changer:** Bringing natural gas under GST would remove tax inefficiencies, encourage cleaner fuel use, and enhance India's market competitiveness.
- **Policy Support for Demand Expansion:** Initiatives like *Har Ghar PNG*, Consumption Linked Incentives for MSMEs, and promotion of LNG for transport can significantly accelerate gas adoption.
- **Need for Unified Infrastructure and Policies:** Investments in CGD infrastructure, transparent access to terminals, and a unified CGD Act are crucial, along with better coordination across Ministries.
- **National Fuel Policy:** Creating fuel categories (such as green, clean, and others) based upon the merits like emission, pollution, import dependency, among others, and extending similar policy benefits including taxation to all fuels in the same category.
- **Balancing Gas Pricing with Consumer Affordability:** Greater pricing flexibility is essential to incentivise exploration, boost domestic production, and attract investments in the natural gas sector, while ensuring affordability safeguards for end consumers.
- **Development of Domestic Gas Benchmark (GIXI):** Creating India's own gas pricing benchmark and promoting gas futures can strengthen price negotiations and reduce dependence on international indices.

## SESSION 2: INFRASTRUCTURE MATTERS - STRENGTHENING NATURAL GAS INFRASTRUCTURE FOR INDIA'S ENERGY TRANSITION

### MODERATOR



**MS. SWETHA RAVI KUMAR**

Executive Director,  
FSR Global

### PANELISTS



**MR. ABHILESH GUPTA**

Managing Director and CEO,  
THINK Gas



**MR. SUBHASH KUMAR**

Director General, Association of CGD  
Entities (ACE)



**MR. ROHIT JAIN**

Additional General Manager,  
Indraprastha Gas Ltd.



**MR. RAJEEV KUMAR**

Chief General Manager, Marketing,  
O&M & HSSE (Gas), Bharat Petroleum  
Corporation Limited

Speakers highlighted that natural gas, though relatively new in India's energy mix, holds immense potential in the transition phase. Experts identified LNG trucking, last-mile connectivity, and pricing reforms as key enablers to unlock this opportunity. They called for policies that credit gas for its cleaner attributes and expand LNG fueling infrastructure.

*"On access to pipeline infrastructure, there was a committee formed by the PNGRB in 2012, in 2014 they stated that by 2017 you have to segregate the marketing entities to the transportation entities, somehow.....that has been deferred for such a long time.....unless or until these policies are not implemented, fair access to market, pipeline, and LNG terminals... will be very difficult to develop the market."* - Mr. Abhilesh Gupta, Managing Director and CEO, THINK Gas

Experts underscored that reliance solely on LNG imports is risky; domestic gas sources like CBM must be part of the portfolio. Speakers flagged the absence of a national gas grid and stressed the long-pending need to separate marketing from transportation entities to ensure fair access.

*"Upcoming fuel CBG...is gaining lot of traction these days, good part is tax on this is GST, which is 5%, landed price of CBG is lesser than domestic gas these days so with advancement in technology, people have started investing in it."* - Mr. Rohit Jain, Additional General Manager, Indraprastha Gas Ltd.

Speakers called for CGD infrastructure development in mission mode, citing low consumer uptake despite availability of end-use facilities. Experts identified the need for policies similar to Ujjwala for PNG adoption, alongside coherent government strategies to avoid investor confusion created by overlapping promotion of EVs and CBG.

*"Gas has to play a critical role in energy transition, gas is not going to disappear.....it has brightest prospects in India, if we go with that conviction, probably India is the best market as far as gas is concerned."* - Mr. Subhash Kumar, Director General, Association of CGD Entities (ACE)





Experts underscored that affordable gas access and competitive taxation are essential for consumer adoption. They identified inconsistent policy implementation—such as the delayed PNGRB directive on market access—as a barrier to growth. Speakers called for sustained policy execution to develop a fair and competitive market.

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*“Natural gas has a lot of competition both within and outside the sector and coordinated efforts are needed among all stakeholders.”* - Ms. Swetha Ravi Kumar, Executive Director, FSR Global

Speakers noted that upcoming fuels like CBG, supported by favourable GST rates, are gaining traction and could complement the gas market. Experts stressed that advancing technology, clear regulatory pathways, and coordinated policy actions can be game changers in accelerating India's clean energy transition.

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*“Uninterrupted supply challenges are crucial from the customer's point of view, which requires attention.”* - Mr. Rajeev Kumar, Chief General Manager, Marketing, O&M & HSSE (Gas), Bharat Petroleum Corporation Limited

## Key Takeaways:

- **LNG Trucking and Infrastructure Expansion:** Developing LNG fueling stations and enhancing last-mile connectivity are crucial to tap the potential of LNG in transport and broaden gas usage.
- **Diversified Gas Supply Portfolio:** Reducing overdependence on LNG imports by integrating domestic sources like CBM is essential for long-term energy security.
- **Mission-Mode CGD Development:** Accelerating CGD infrastructure rollout and adopting policies similar to Ujjwala for PNG can drive household and commercial gas adoption.
- **Clear and Consistent Policy Framework:** Removing policy overlaps, ensuring fair access to pipelines, and implementing long-delayed reforms (like separating marketing from transportation entities) are vital for market growth.
- **Emerging Fuels and Technology as Enablers:** Fuels like CBG, supported by favorable taxation, along with technological advancements and coordinated regulations, can significantly boost India's clean energy transition.

## Concluding Remark

The concluding remark was delivered by Dr. Debajit Palit, Centre Head, Centre for Climate Change and Energy Transition, Chintan Research Foundation. Dr. Palit emphasised that policy clarity, inter-ministerial coordination, and robust infrastructure development are critical to unlocking the full potential of natural gas in India. He noted that the discussions reaffirmed gas as a pivotal component of the country's clean energy transition. Highlighting CRF's commitment, he stated that the foundation seeks to play a bridging role between the industry and policymakers through research and development initiatives. Dr. Palit concluded by expressing gratitude to all distinguished experts, panel speakers, and participants for their valuable contributions to the policy dialogue.



### Way Forward:

The actionable policy recommendations that emerged from the High-level Policy Dialogue are as below:

- **Ensure Policy Coherence and Coordinated Governance:** Develop an integrated energy policy aligning central and state policies, streamline overlapping regulations, and enhance institutional coordination to provide clarity and investor confidence.
- **Launch Demand-Creation Policies with End-User Focus:** Roll out targeted schemes like *Har Ghar PNG* for PNG adoption, promote LNG for long-haul transport, and introduce sector-specific fiscal incentives for MSMEs and hard-to-abate industries.
- **Accelerate Infrastructure Development in Mission Mode:** Fast-track the completion of LNG terminals, CGD networks, and a true national gas grid with spider-net connectivity. Mandate pipeline linkage for all new terminals and ensure streamlined state-level permissions.
- **Implement Comprehensive Market and Pricing Reforms:** Enhance pricing freedom for producers, deepen gas trading through IGX, promote development of India's gas benchmark (GIXI), and introduce gas futures to strengthen market liquidity and negotiation power.
- **Boost Domestic Production and Diversify Supply Sources:** Expand exploration through open acreage licensing, accelerate development of CBM and CBG, and incentivise private investments to reduce import dependence and mitigate price volatility.
- **Integrate Natural Gas into GST Framework:** Bringing natural gas under GST will create a unified market, remove tax inefficiencies, and incentivise industries to switch to cleaner fuels by allowing input tax credits.





## Annexures

### PROGRAM AGENDA

Time	Agenda
09:30 - 10:00 hrs	Registration
10:00 - 10:10 hrs	<b>Opening Address:</b> Mr. Shishir Priyadarshi, President, CRF
10:10 - 10:30 hrs	<b>Keynote Address:</b> Mr. Rajiv Gauba, Member, NITI Aayog
10:30 - 10:45 hrs	Tea/Coffee & Networking
10:45 - 11:15 hrs	<b>Special Addresses</b> <ul style="list-style-type: none"> <li>Mr. Praveen Mal Khanooja, Additional Secretary, Ministry of Petroleum and Natural Gas (MoPNG), Govt. of India</li> <li>Mr. A K Tiwari, Member (Comm. &amp; Tech.), Petroleum and Natural Gas Regulatory Board (PNGRB), Govt. of India</li> </ul> <b>Chair:</b> Mr. Shishir Priyadarshi, President, CRF
11:15 - 11:30 hrs	Presentation – Setting the Context
11:30 - 12:30 hrs	<b>Session 1: Policy Initiatives for Accelerating Natural Gas Adoption in India</b> <i>The session will focus on exploring key policy interventions to accelerate the adoption &amp; increasing the share of natural gas in India's energy mix.</i> <p><b>Panellists</b></p> <ul style="list-style-type: none"> <li>Mr. Suresh P Manglani, ED &amp; CEO, Adani Total Gas Ltd</li> <li>Mr. Rajesh K Mediratta, Managing Director, IGX</li> <li>Mr. Dennis Hesseling, Head of Gas, Coal, and Power Markets Division, IEA</li> </ul> <b>Moderator:</b> Mr. Gurpreet Chugh, Vice President, Green Transitions, and Leader, South Asia, ICF
12:30 - 13:30 hrs	<b>Session 2: Infrastructure Matters – Strengthening Natural Gas Infrastructure for India's Energy Transition</b> <i>This session will deliberate on strengthening natural gas supply infrastructure while identifying the key challenges.</i> <p><b>Panellists</b></p> <ul style="list-style-type: none"> <li>Mr. Abhilesh Gupta, Managing Director and CEO, THINK Gas</li> <li>Mr. Subhash Kumar, Director General, Association of CGD Entities (ACE)</li> <li>Mr. Rohit Jain, VP, Business Development and Gas Sourcing, IGL</li> <li>Mr. Rajeev Kumar, Chief General Manager, Marketing, O&amp;M &amp; HSSE (Gas), Bharat Petroleum Corporation Limited</li> </ul> <b>Moderator:</b> Ms. Swetha Ravi Kumar, Executive Director, FSR Global
13:30 - 13:40 hrs	Concluding Remarks/Vote of Thanks
13:40 hrs	Lunch & Networking



## Keynote Address by Mr. Rajiv Gauba, Member, NITI Aayog: Transcribed Speech

Good morning to all of you,

*I must compliment Chintan for organising this policy dialogue on very important, very germane topic. I think, India's gas vision as Shishir also eluded to in his remarks...is explicably linked to two grand national visions, one, the Viksit Bharat Vision, and the other [is] Net Zero Ambition. As we all know, India today stands at the threshold of a great transformation. Prime Minister has articulated his vision of India as a developed country- Viksit Bharat- by 2047. This call and the exhortation to all countrymen, not just the Government, to work to realise this vision during next 25 years i.e., the Amritkaal, it was not the spur of the movement statement, Prime Minister's call was on the back of deep and wide ranging reforms- policy reforms, regulatory reforms, institutional redesign, and massive scaling up of infrastructure, both in quality and scale, and targeted and saturation approach to delivery of benefits, resulting in around 25 Crore people being lifted out of poverty. So, a strong foundation has thus been laid, and we have reached an inflection point, so to speak, from where [our] country could dream big and make a giant leap. There is a lot going for India today....we have been the fastest growing major economy for several years running now, world is looking to invest in India.*

*States have joined this endeavor, in the Governing Council meeting of NITI Aayog this year on 24th May one chief minister after the other spoke at length about how states are preparing their own blueprints for making their states developed by 2047. Their action plans, in-sink with the Viksit Bharat Vision, six states and three UTs have already released their vision documents. This is something transformational, because states were not attuned to thinking in*

*these terms, they were more in a passive mode, more focused only on implementing Government of India schemes and getting their share etc. but not having their own vision for per capita income, GDP reforms etc. I have recently been to two states, UP and Odisha, to participate in their exercise for preparing their blueprint for Viksit Odisha and Viksit UP, I was happy to see that these exercise in states are in full swing. So, the country is primed up to work towards this vision. Now, this entails that the economy would grow from about 4 trillion USD at present to about 30-35 trillion USD by 2047, that is 8-9 [fold] increase, but does that mean our energy consumption also should increase by same pattern? No. We are now most populous country in the world, still growing, and we are likely to stabilise by 2060 at around 1.7 billion, Our per capita energy consumption, I think is about 18 GJ per person it is much-much lower, not what to speak of the advanced countries but even the global average which is 105 [GJ per person], much below than USA: 277[GJ per person], Canada: 368 [GJ per person] and so on. So, we do want to be a developed country, but we do not aspire to achieve those levels of energy consumption. So, our primary energy demand, currently at 885 million tons of oil equivalent (MTOE), is projected to increase- various projections, including NITI Aayog- by about 2.5 times while economy grows 8-9 times, to about 2000 MTOE by 2047, because energy intensity is projected to decrease from 0.25 MJ per rupee now to 0.1 [MJ per rupee by 2047] which is a huge decrease, and it is not something which has just been conjured up, it is the path which we have been following.*

*Even, this is a huge increase in energy supply and consumption. So, we have to meet this increased demand, while ensuring energy security and stability and at the same time it must meet our clean energy aspirations, our environmental objectives, not just for the sake of*



global commitment but for the sake of human health and environment of our own people. So, it is in this context [that] natural gas will be a linchpin of our strategy. So that we can meet the requirements of industry, transport, and households in a cleaner way. Today, natural gas comprises only about 7% of our primary energy as against 25% global average. As Shishir mentioned, we have set ourselves a target of 15%, that is to double it by 2030; 47% we get from coal and 29% from oil. So, our share of natural gas is much lower than the global average. And, as Shishir mentioned, we have set our targets of 15% that is to double it by 2030 that is the huge task, this will mean our annual gas consumption increasing roughly 2.5 times, from 70 billion cubic meters (BCM) today to 180 BCM in 2030. Now, this fits well with our energy transition strategy, natural gas is cleaner fuel than coal or oil with roughly half the carbon emissions of coal and much lower particulate emissions, so it can be a bridge fuel, it will help bridge our economy from the current fossil heavy mix towards the Net Zero goal by 2070, by substituting the dirtier fuels in power industry and transport while our renewable sector scales up sufficiently, which has been growing very rapidly. Our installed RE capacity

has grown from 76 GW in 2014 to 235 GW in 2025, which is an increase of 300% and with 50% installed electricity capacity coming from non-fossil sources. We have surpassed the target that we have set for ourselves five years ahead of the schedule.

Now, past trends, they underline both the promise and the urgency of the focus on natural gas. From 2006 to 2023 our primary energy supply grew at about 5% per year, but natural gas increased at a much slower pace- 3%-consequently, the share of natural gas in our primary energy supply has in fact decreased from 9% to 7%. So we have to reverse this, today our gas supply, which is another challenge, is split almost equally between domestic production and imports. We are the 4th largest importer of natural gas in the world, and this share has also grown, because our domestic production has plateaued against rising demand. This kind of import dependence exposes us inevitably to price volatility and other geopolitical risks, we all know how natural gas was weaponised during Russia-Ukraine conflict. So, that underscores the need to ramp up our domestic output as much as we can but that will not be enough, given our projections of demand and consumption, we

will have to import also parallelly we will have to work on securing long term supplies from reliable sources at affordable rates and build up our infrastructure to consume what we import in terms of terminals and cryogenic tanks and regasification plants and pipelines for transport and so on. Today, the fertilizer sector is the largest consumer of gas in the country, accounting for about 28% of total gas consumption. Most of the imported LNG goes into the fertilizer sector; CGD is at 21% and most of the domestic gas goes to CGD sector. These two sectors together account for 50% of our total gas demand. Power generation consumed about 12%, oil refineries 8% and industry and other non-energy use make up the balance. So, our gas strategy has to have a three-pronged approach: ramping up domestic supply through exploration, price reforms, tapping unconventional gases like CBM. Demand creation and simultaneously expanding our LNG import capacity to plug the gap which will remain between demand and domestic production.

The good news is that these key enablers of gas adoption are now converging. We have in recent years expanded our pipelines very significantly, LNG terminals, CGD network, there are complimentary programs like SATAT for boosting CNG, and the national green hydrogen mission, these are gathering momentum. There have been subsidy reforms, pricing reforms, unified tariff rules, these have been put in place to make gas more affordable and available. In sum, we have now the policy architecture and capital investments, which have taken place, and which are in the pipeline to power the dual goals of Viksit Bharat and net zero economy. The future demand for drivers will be CGD for residential and transport; our PNG connections grew nearly six-fold between 2014 and 2025. City gas has expanded massively; the share of gas consumed for public and private transport has the potential to increase from 13% at present to 32% by 2047.

Which implies massive expansion of pipe gas into residential homes, and for transportation. Power sector also holds huge latent demand. We have about 24 GW of gas fired capacity currently installed, but it remains mostly idle, the capacity utilisation is only about 15%, the rest is stranded because of high levelised cost of electricity, if they have to run on imported LNG. Utilising this capacity by securing domestic or competitively priced LNG can raise gas demand significantly and free up the coal fired units and reduce overall emissions from the grid. There are other industrial segments which can potentially switch to gas, for example gas can replace coal and oil in the boilers and industrial processors in the small and medium factories. Likewise, there is huge potential for natural gas in heavy duty road transport.

So, our gas vision has to rely on broadening the footprint of this fuel across the economy. Government is introducing market and regulatory reforms to encourage gas use like Unified Gas Tariff Regulations, and it aims to rationalise pipeline transportation costs across. Of course, there is a lot of work to be done, with states also to reduce uncertainties and variations, which Shishir mentioned in his remarks, the central government and states have to work. There has been rapid build out of gas infrastructure, the operational natural gas pipelines increased from about 15000 Km to 25000 Km in last 10 years including some major new pipelines like the Jagdishpur-Haldia-Bokaro-Damra pipeline. There were issues of land, environmental, and forestry [approvals], which government has re-worked to overcome these challenges. The PNGRB has approved 33,000 Km of pipelines for the One Nation One Gas Grid. And when all these projects are completed, we expect 35,000 Km high pressure pipeline by 2030. So, this enhanced pipeline backbone means more regions can be connected to the national gas grid than ever before. But here again, only

some of the pipelines currently have a good capacity utilisation of about 60% above, rest have much lower, many of them below 30%, so improving the utilisation capacity of the pipeline networks will help reduce transportation tariff to consumers, effort is underway to digitalise and interconnect the national gas grid. We have added 4 LNG terminals in the past decade bringing the number to 8 now, with a combined regasification capacity of about 65 BCM per year. 6 more terminals are under construction, which would increase this capacity to 115 BCM. Utilisation of these terminals is also currently much below, which is about 50%. Only one terminal Dahej has 100% utilisation. And many are operating below 30% because they are yet to be connected to transmission network. So, all these have to converge. This infrastructure built in public and private sectors, will allow us to absorb vastly more gas. Overall, we expect an investment of \$67 billion or about Rs 5-6 lakh crore in the next 5-6 years. Policy reforms have been undertaken to support these investments. Upstream, hydrocarbon licensing framework has been overhauled. The Hydrocarbon Exploration and Licensing Policy regime, Open Acreage Licensing Policy and Discovered Small Fields policy now allow companies the freedom to market production and offer revenue-sharing models. Under the OALP rounds (Open Acreage Licensing Policy), over 172 blocks have been auctioned recently. And domestic production has increased from 27 BCM in 2022 to 35 BCM 2025. Actually, in this we had our own self-imposed constraints because we had large areas in our exclusive economic zone, they would be treated as no go zones till 2022 because of the requirements of space, DRDO (Defence Research and Development Organisation), defense etc. But then we had a close look at all this, studied the practices and very far-reaching reforms [has been made], no-go areas have been drastically reduced, opening up 99% of 2.36 million sq. km of our EEZ (Exclusive Economic Zone) now to

exploration. As an immediate follow-up, large size blocks are now being offered for exploration and global majors which have deep pockets have now shown interest, these reforms are widely appreciated and commented upon at global forums. We are also aggressively pursuing Coal Bed Methane (CBM). These supply-side reforms, along with market-linked pricing for new fields, are expected to stimulate private exploration investment.

Going forward, we must complete the infrastructure build-out. All planned LNG terminals and pipelines must be finished on schedule. Regulators and companies should ensure each new terminal is linked to markets. I think we have to work with the states that urban planning should mandate piped gas and new townships and industries. Likewise, urban planning should include, or mandate piped gas in all new townships and industries. Second, we must boost domestic production aggressively. This means accelerating open acreage rounds, quickly tendering untapped basins, and giving clear, market-determined price signals. Third, the demand creation policies must continue. Industry should see incentives to switch fuels. And the adoption of CNG in public transport should continue to be pushed. Fourth, the pricing and regulation, they must reinforce each other. Unified tariffs must be implemented smoothly. The Indian Gas Exchange should be deepened so that market-linked pricing can eventually percolate into wholesale LNG sales. And above all, a clear long-term vision should be maintained, investors have assurance, I think the ministry is working in that direction to remove uncertainties, which deter investments. Lastly, achieving this vision will require collaboration across sectors and with states. While the Centre can set targets and policies, all the projects, whether they are pipelines, CNG stations, CGD networks, they are implemented in the state and cities. So, the state governments



and municipal corporations have to align their planning to include natural gas. Environmental clearances and land acquisition, they also need to be streamlined. Natural gas can deliver energy security, environmental benefits, and economic benefits. By aligning infrastructure, investment and innovation, we can turn our gas vision into reality.

Once again, I compliment Chintan for organising this Policy Dialogue, a very timely Dialogue, we will be happy to get the benefit of deliberations here in the form of recommendations. NITI Aayog has the advantage that it is a think tank of the government; it works in more open fashion. Ministries are more constrained for time, so we bring the ministries, states, think tanks, other experts together and based on the advice and recommendations we get we will try further strengthen this reform agenda.

Thank you!

### **Special Address by Mr. Praveen Mal Khanooja, Additional Secretary, MoPNG: Transcribed Speech**

After spending six years in petroleum and natural gas, including DG PPAC, half of the delegates I could recognise immediately. So, there is no new faces here, most of them I know; few at the back are new for me. Shri Shishir Pridadarshi ji, President, CRF; Shri A K Tiwari ji, Member, PNGRB, senior delegates and participants to this very important Policy Dialogue on India's Gas Vision, a very good morning to all of you!

Now, I always start my talk, generally being in the Ministry, I have been avoiding coming on these kind of Dialogues, because, many of the things which we say, people start reading something between the lines. So, this is the first disclaimer, many of the ideas and thoughts

they are coming from my own understanding of the gas sector and they do not reflect current or future policies of the government. I have not gone into the issues of externalities, now these are few disclaimers I am starting with.

Carbon Pricing and assistance needed by some of the hard-to-abate sectors as far as gas economy is concerned whether steel, power. So, this further can be some other policy forum. I just heard the Member, NITI Aayog, Shri Rajiv Gauba Sir and he has already given excellent details of the upstream and no-go areas and OALP rounds, HELP Policy (Hydrocarbon Exploration and Licensing Policy), revenue sharing contracts, so I will not go into the policies or policy interventions of the government to the upstream side. So, these are the few disclaimers. The last disclaimer would be that I have not used any AI tool or Chat GPT, so many of the [observations] are my own.

Now I will speak on two elements of today's policy discussion. One is the role of natural gas as bridge fuel and second one is the key enablers government is providing and the role government is playing to facilitate gas as bridge fuel. I would like to deliberate first on the energy mix, so we have been looking at the primary energy mix, overall when we got the world, oil share is 32%; natural gas is 23%; coal is 26%; renewables and hydro constitute 12%; and nuclear is 4%. So, this is the primary energy mix of the world. When we come to India, Oil is 27%, natural gas is about 6.2%, so it actually peaked about 5-7 years back at about 10%, or may be even earlier. Coal is currently about 26%, renewables and hydro are about 10% in the primary energy mix. Now, this is 2024 calendar year data from EI Statistical Review you can have a look at that on the website. Coming to the natural gas basically being today's policy discussion, we consume about 60 MTOE this is again EI Stats data for calendar year 2024-



25. Now this, when we compare to 260 mtoe of oil and 550 MTOE of coal in 2024 so gas carries a very small percentage in the overall primary energy mix, it is actually one-fourth of the World's share. Now gas share, if you see across the states in the country, now Gujarat gas share in primary energy mix is 25%, now that is because Gujarat was an early adopter of the natural gas in India. It is a coastal state, there is an extensive gas infrastructure, legacy gas fields and it has three LNG terminals, 17.5 MMT running, more than 95% at Dahej terminal, and will be expended to 22 MMT very soon. So, it has a huge gas infrastructure, there are many state PSUs (Public Sector Undertakings) which are into gas pipelines, so 25% of gas in their primary energy mix. It is a great template for all the states to follow, and to understand how they achieved 26%. So, if you remove 26% of Gujarat's consumption, the overall mix in other states would actually be very low; one-fourth of the gas consumption in India is actually Gujarat's consumption.

Where do we use this gas, we use this gas in fertilizer sector that is 29% this is again 2024 data, 21% in CGD sector, Power as 12.5% and refinery about 8%. So these are the major

consumers of the gas. Overall, given the fact that gas is the only 6% and there is clarion called by honorable Prime Minister who has desired it should go to 15% in the primary energy mix. That again, because Gujarat is already at 25%, so we need to and we are giving all the enablers to make it reach 15% by 2030. I think Mr. Hesselings was supposed to, I can't see him. So, we had advised or requested International Energy Agency to prepare a gas outlook report 2030 for us, which was released this year in the India Energy Week in February 2025. From the IEA's report, they have estimated that India's gas consumption is projected to grow about nearly 60%. This is again less than our target of reaching 15% because our energy demand is growing hugely, we are the biggest energy demand growth factor across the world, given our economic growth rate and huge economy now what we have become. Power generation and LNG for transportation would put another 15 BCM, so they expect that gas consumption would reach about 103 BCM. In the gas, I have been making lots of presentations to the standing committee and other parliamentary committees, about 30% of the time discussions are on the MMSCM, MMSCMD, BCM, MTOE, so there are about 50 units, you can go to PPAC

website and see how to actually convert it. Somewhere I have used BCM and somewhere MTOE conversion factors you have to see from some of the websites. Now, India's LNG demand is projected to grow steadily reaching almost 65 BCM by 2030. So, even with IEA's conservative estimates it has estimated about 60% growth by 2030. Now, this growth and the further growth which we are looking for 15% gas economy, what have we done, what are the foundations the government has already enabled. We [have grown] gas trunk pipeline during the last decade to 25,000 Km, now if you have to have an infrastructure for gas LNG terminals and the gas grid, these are the most important elements. Now, we are targeting 35,200 km, PNGRB has already authorised about 35,000 km grid pipelines. Two major projects are being supported by the government through VGF (Viability Gap Funding); North-east gas grid has been supported through 60% VGF, this one is on the verge of completion which is about 550 km, phases 2 and 3 are also going at a very fast pace. They will connect all the northeastern states and capital cities rather. Now execution of these projects is monitored at various levels, the ministry and there is a PMG Portal (Project Monitoring Group) and Pragati meeting which is chaired by Prime Minister. So, most of the issues are being resolved. So, gas grid which is expanded dramatically during the last 10 years is because of these monitoring mechanisms. We are using PM Gati Shakti Portal, which actually helps us in project planning, especially for the alignment of the gas pipelines.

We are allocating low cost APM (Administered Pricing Mechanism) domestic gas, the allocation, because of the higher CGD consumption has actually the percentage wise slightly lower. The Government has supported CGD as a primary consuming sector for the gas so the nomination fields and new well gas from these nomination fields by the ONGC and OIL are also being

allocated to the CGD sector and other priority sectors: fertilizer, power, and the petrochemical sector. We have also introduced pricing reforms from April 2023 and before that the APM gas price was based on the four international hub prices from April 2023 we have pegged it our own Indian crude basket price which is at 10% and the new intervention of well production gives about 12% of basket price to ONGC and OIL. Most of the gas now has pricing and marketing freedom HTHP is higher as compared to APM prices and it is based on the four alternate fuel prices. So the price formation as well as the giving marketing and pricing freedom is going now for the gas sector also. For crude oil as you all are already aware it is already market determined.

The LNG regasification terminals, as the member NITI Aayog has mentioned, we have reached about 53 MMT and our plans are 84 by 2030. 49 stations for heavy duty trucking, and few corridors we have already identified for the LNG stations. For the compressed biogas, there are many schemes which are now on, they are all available of the website of Ministry of Petroleum now the nodal ministry for all the biogas plants, Coal gasification is another area which we are looking at issues and then resolving them. CBM is also an important area for production, for the CBM we have SATAT scheme (Sustainable Alternative Towards Affordable Transportation), biomass segregation scheme, pipeline connectivity scheme which we are now shifting to cluster base, that is also in the process, and you can go to the website to have further details. For the bridge fuel, these are the enablers government has provided.

I have got some data, in India natural gas supports basically three key national priorities: Grid flexibility and reliability as we scale towards 500 GW by 2030; cleaner transport and households fuels via the CGD and CNG

ecosystem; and Industrial decarbonisation. If we touch upon two or three sectors India's power sector consumes about 75% of our national coal, contributing about 300-320 MMT of CO<sub>2</sub> every quarter. Gas fired powers they have about 50-55% of lower CO<sub>2</sub> emissions but our 25 GW of LNG plants are running at a PLF of 15%. Now this is because of the merit order dispatch, their threshold is 6-7 USD per MMBTU of gas. As I just mentioned in my earlier remarks I will not go into the details of the support the sectors would need but still the power sector consumes about 12% of gas but some other sectors, the industrial sectors would need some support. What are the policy interventions which would come or the long-term arrangements for LNG for the power sector or for other sectors could be looked into by the industry itself and with some support of the government.

Now gas as an intermittent [fuel], because if we go into renewables there are issues about intermittency in the electricity generation. The whole of the world, actually when we talk about bridge fuel they have used gas as a conversion of coal-fired or thermal power plants into gas power plants. We are already using 55% of coal in our energy mix and the threshold issue the merit order dispatch, we have some difficulties in converting or going towards that path. We have the path of transportation when we use the gas in the CGD sector. Fertilizer, when we use in terms of feedstock and energy supply, so may be our path would be different. We talk about round the clock intermittency for the gas-based power plants. So, we have to have a look at these policy interventions which are needed. Our path for gas as a bridge fuel may be different and may be this kind of policy dialogues can tell us our own path. Because if you see CNG was started, I remember President Obama had considered CNG in the transportation about 15 years back. Now LNG trucking is coming in China so every country has to have its own path

for gas. [The] world is already using 25% of gas we need to understand where we can use gas. We have hard-to-abate iron and steel sector, there could be an issue of carbon pricing or some kind of externalities if we shift from coal based the natural gas-based route. Scaling gas in steel is vital for green steel and domestic and export market post 2030. For industrial fuels switching it has about 15-30% lower carbon intensity and it also eliminates Sulphur and Particulate matter emissions. Ceramics, chemicals, glass [fuel switching in these industries] gas offers immediate air quality and emissions benefits. So, there is no denying that gas actually gives you carbon emissions abatement. Hard-to-abate sector where you can't have electricity like iron and steel so you can actually use gas. So the path is obvious; many of the countries have actually gone ahead, we have to develop our own path, we have to understand. What I feel, I will close with this gas would become an extremely important component of our primary energy mix, So, the use of gas as an energy component is another area which would remain critical for next 2-3 decades. For fossil fuels-oil and gas especially- percentage may come down because of the thrust of the government on the renewable energy but peak I don't see till 2040-45 or even 2050. While meeting our energy demand it would help us in achieving our net zero target, sustainable energy and low-carbon pathways. While doing so it would go hand in hand with new and renewable energy helping the country in transitioning to cleaner energy while being a critical energy for transportation. This I just mentioned India could be one of the few countries where LNG and CNG are important components of our mobility. Households again PNG could have more than 1.5 crore connections. Member PNGRB may mention about 12 Crore target set in three bidding rounds for the CGD entities. Power I just mentioned, then hard to abate and industrial sector and as a feedstock and energy source for



the fertilizer sectors. The government and the regulator, PNGRB, have already placed the right set of enablers for the gas economy, the pricing reforms I just explained, infrastructure creation in terms of LNG capacity, national gas grid, gas exchange, I could see CEO IGX is here, so, they are working towards providing the Indian gas prices, they released GIXI (Gas Index of India). Ecosystem and CGD penetration across the country.

With these remarks I would wish this policy dialogue a huge success and will look forward to the deliberations and outcome of the discussions.

Thank you very much!

### **Special Address by Mr. A. K. Tiwari, Member, PNGRB: Transcribed Speech**

Very good morning to all of you, Khanooja ji, Priyadarshi ji, and many colleagues I happen to see from Industry, ladies and gentlemen.

Per say, I don't have any disclaimer, I am not the regulator, I am the facilitator, these type of dialogues gives me many inputs to frame the regulation, to loosen or tighten many policies of the government giving shape of the regulations so I always interact with you in many forums personally I feel that I get many inputs to frame the regulations.

You have listened Mr. Gauba's Dialogue and Khanooja ji has also talked about these things, I have nothing to say new, nothing. You know all but I am going to discuss with you whether the policies of the government which are there have been implemented are in the right place, right speed, whether the regulatory framework which are there are supporting or not, whether further regulatory reforms are required or not.

These are the things I am going to talk about, what we have done and further with disclaimer I will disclose something what is in our mind so that further we can take actions in the regulatory changes, so that gas-based economy could be better and better shaped.

So, friends, all energy are parallelly running, coal, renewable, natural gas hydrogen, CBG, there is a race, every energy is running, and we are having the dialogue today, and I was just wondering, this is the high-level policy dialogue, what is the high-level in it? So, I was not able to find, through my dialogue, let me elaborate the meaning of high-level dialogue here. So, every energy is running here, you know all the story of every energy which is there, and natural gas is finding its place and for that concerted efforts by government of India, and also by PNGRB as a regulator, this natural gas is not the transition fuel but fuel for the choice. So, we are going to make fuel for the choice not as transition fuel, you have no option than to choose this, that policy and regulatory reforms we are bringing.

Second point I would like to share, we are importing crude oil to the extent of around 85%, LNG to the extent of 50% when the consumption will increase and the domestic production parallelly may not increase to that extent, our import will further increase and also LPG we are importing to the extent of 60%. So, policy to reduce the import bill and having more CBG into the gas, these are the areas where we are looking after and for that regulations which are required to be there we are in the process of changing [those] regulations.

The history of energy sector- ups and downs- you know all, and particularly, the LNG terminals which are there, utilisation is around 40-50%, and barring few LNG terminals which are there, we are going to have some policy some regulations so that these LNG terminals which



will come up in future expansion will be there. They will be properly having the... due diligence including having the pipelines, because many of the LNG terminals we found that either gas supply agreement is not there or pipeline is not there or downstream customer tie up is not there. So, these are the nut-and-bolts we are trying to tighten through our regulatory framework. Now, all the pillars of the natural gas value chain which are there- domestic production, LNG terminals, trunk pipeline, CGD, IGX- PNGRB is working hard to have their gaps identified and also put regulatory reforms into that.

I would like to share, though we say that the national gas grid 35,000 km of the pipeline are there, it is not the national gas grid. Because we find the gap which are there between one trunk pipeline to the another trunk pipeline, which may be to the extent of 200-400 km and we have given CGD authorisation to the extent of 312 geographical areas (GAs). Now these GAs having more than 5000 charge areas which are there hardly at present only 1200-1300 charge areas are covered. So, the vision of having [this] gas consumption more and more its to possible to attain unless there is a spider net of the pipelines. Some of the geographical areas we have given,

one state one geographical area, you can imagine how the gas will flow there. So spider net of the pipelines are essential for that some regulatory reforms in terms of the bidding criteria, in terms of the having mutually agreed tariffs between the pipeline operators and CGD companies are the need of the hour. And we are trying to work on that though we have requested some of our industry people to come out with some papers so that we can frame the regulations. We want to give freedom to the players to have their tariffs mutually agreed but how can it be done this is a question. Unless these are done, and unless spider net of pipelines are done the vision of having more and more consumption in different part of the country may not [be] achieved. This is my thought.

Now, pricing, yes, Government of India has done pricing reforms to that extent and it is a good initiative for having the domestic APM Gas to the CGD sector- having [the] floor and cap- and further when there will be more and more consumption I think CGD companies needs to have their strategy for sourcing of gas, this is the need of the hour. How you can aggregate it or something- some policy, some framework- could be there so that smart sourcing of the gas could

be there. This is the need of the hour. Because, [with] the domestic production [reduction, in] APM allocation there will be some reduction in that, if we [are] to have more and more consumption, this is to be done.

We have given very good, very high target of minimum work programme, particularly for the PNG connections, which are there. It is a very high target quoted by all good companies. Now, how do we achieve [them], it is easy to say you go and have the PNG connections. But [at] PNGRB we realise that this is the areas where possibly we need to support the CGD players and for which PNGRB has interacted with state authorities, [made] them comfortable in terms of their permissions, in terms of their permission charges, to some extent I should say as well as reduction of the VAT. So, around 10 of the states have reduced or rationalised the VAT rate, which is the area where PNGRB has proactively supported CGD companies.

If you talk about the LNG regasification terminals which are there, which are scattered mostly around 35 MMT are on the Western Part, utilisation of these LNG terminals is 40-50% barring few, so we are going to have some support, market rule changes through IGX; how the LNG trading could be there, capacity booking could be there, on the IGX platform. SAS-LNG we have already done, very small quantities are being traded. But this is the need of the hour, where capacity could be booked or more and more LNG trading could be done on the IGX platform. So, this one are we are also trying to enable. Gas storage is also one of the area, we are also in consultation with the Ministry; trying to have how this gas storage for energy security, price stability, how this can come up. So, this area we are also trying to enable, while consulting with the Ministry.

Various data, I think, Khanooja Sahab has shared, Gauba Sahab has shared, usage of natural gas in various sectors, so I am not going to repeat that,

but CGD is the growth sector and I have told about the pain point in the CGD sector. So, unless we do that, it will be very difficult to achieve. Now, besides the policy, we thought, how the consumers will be more and more benefitted, so we have introduced the unified tariff, last two and half years have passed and benefit of unified tariff has achieved but we realise that we can do further. So, last month we have come up with some regulations, and I would like to share in the forum, further we have reduced the [tariff from] three zones to two zones, and for CNG and PNG customers, one tariff- that is zone one tariff. So, this is another reforms we have done.

Besides the customers, we are also looking at how pipeline operators could be incentivised. So, what we have done, those pipeline operators who are having their actual gas flow above 75%, so we have given them incentives. Above 75% it was to be passed to the customers, earlier as per the earlier reform, so what we have done [now is] 50-50 sharing; 50% to be passed to the customers, and 50% to be kept as a reserve fund for pipeline development. So, this reform we have brought, this has given more transparency, incentive to the pipeline operators, to infuse the fund for infrastructure development. This regulation already has been announced.

If you see the total pipeline which is there about 26,000 Km of the pipeline, if the gas has to flow from western part to the eastern part, compressors are being used, you know that, for pushing the compressor gas consumption is there, in order to have least-cost consumption of gas to be booked in their system, we have come up with procurement efficiency policy regulations that one should have long term planning of procurement. If in their kitty least cost gas is available, they can also allocate there. So that the overall tariff of pipeline operators could be reduced and in turn it will have an effect on the unified tariff which will benefit to the customers. We have recently announced and we are working

for its implementation. Further, our aim is to have a one-tariff pan-India basis, may be sector wise, [this is] the wish-list we have. Many analyses we are doing, how we can through our tariff boost various sectors which are consuming gas. We have realised that the CGD companies, which are there, and most of the them [present] here [as well], unless the end of exclusivity is not there, level playing field will not be there, so we are working for that are we are taking inputs from [stakeholders]. We are not going to be harsh, but we [will take their feedback] and change the regulation in the interests of the company and in the interest of the consumer.

We have identified around 4,000 Km of the pipeline, in order to condense the national gas grid, that is on the bidding stage. One more thing I would like to share is that among the pillars of domestic production, CGD, natural gas pipeline, policies which are there, IGX will also play a very important role in that. We had a stakeholders consultation, we got many inputs on how trading [can be extended further]. So, we have changed some market rule for the ease to customers and for trader also but further we are in dialogue with the IGX for more and more trading which are in the interest of traders. We have understood the pain points of the traders also and customers also, so we are going to have change in the regulations to that extent. So that trading could be done more and more.

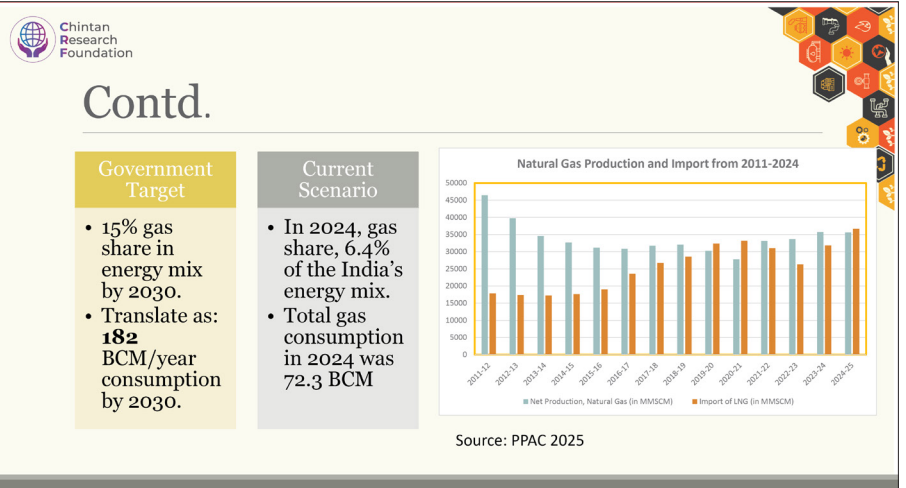
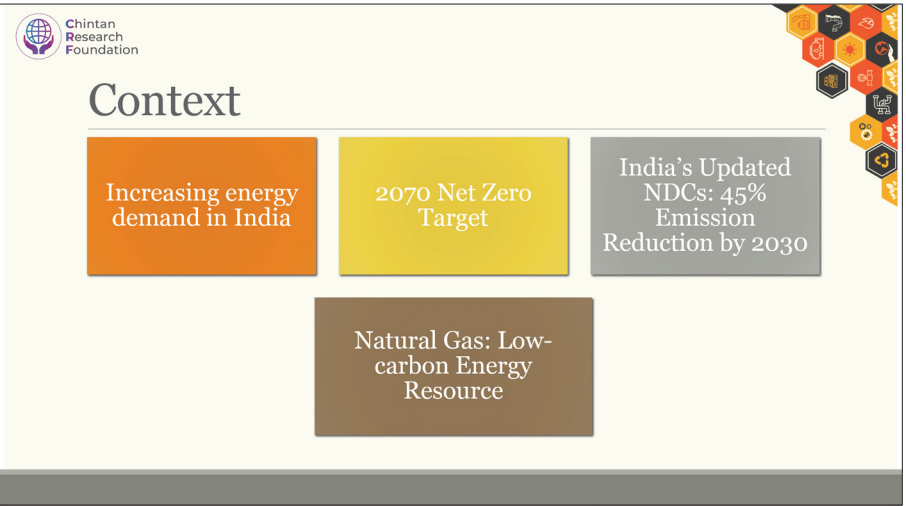
In order to understand, various aspects for implementation of this pain point so we have some committees we have formed, in order to have understanding of the safety. So, there was pain points were there [with regards to safety aspect] so, we have for recommendation and we are going to change regulations for that. For customers and consumers, we have a committee, and we are going to do regulatory changes in the interest of the customers also.

What could be the realistic vision of 2040 for gas consumption in the country, understanding all pain points, we are going to announce the Vision 2040, some of the committee members are here also. We will surely give some vision 2047 for gas consumption in the country and some enablers for that. So these are the areas, where PNGRB is working; engagement with central government and state government I have already told, and we are also going to change the access code which are there so that more and more trading could be there.

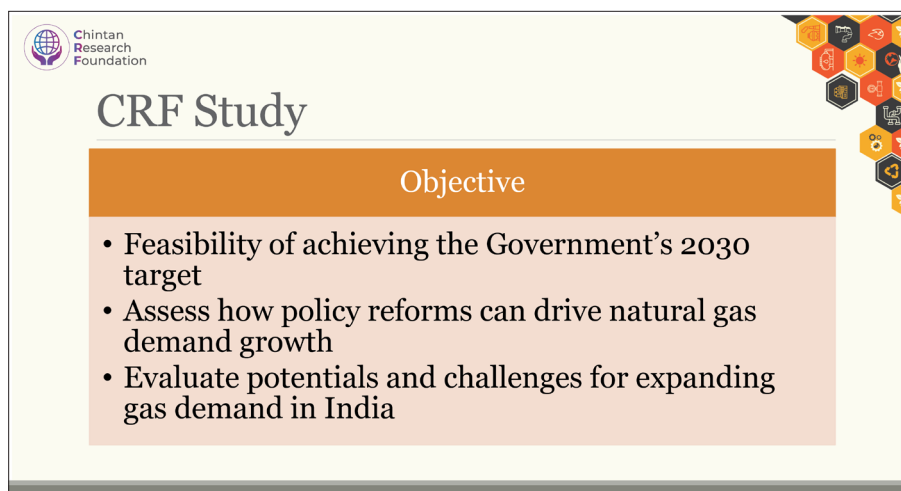
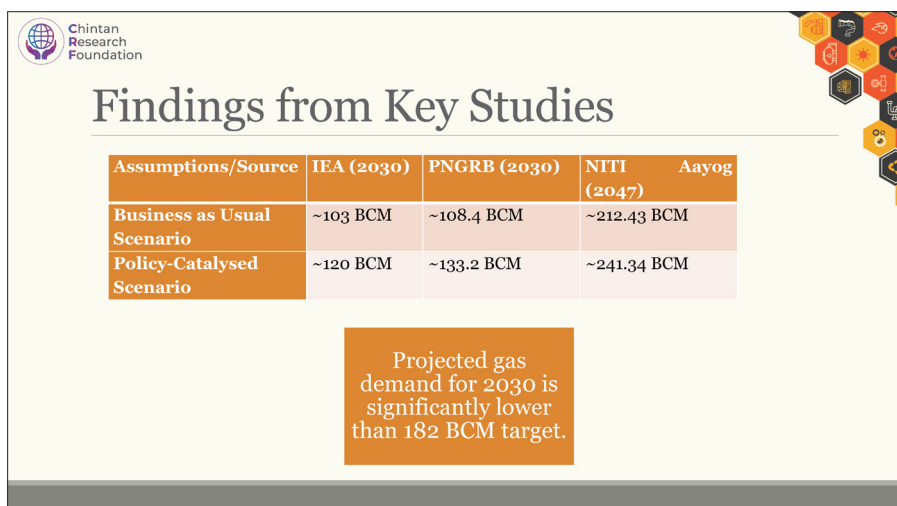
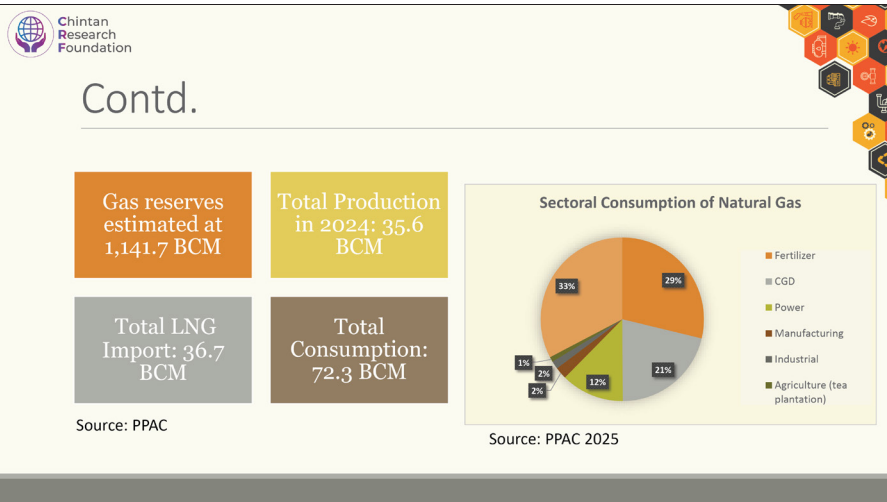
So, friends, dialogue has no end, thank you very much, in nutshell what I am going to give comfort to this audience is that PNGRB through various policies of the government which are there. We are trying to have regulatory changes which are in the interest of the pipeline operators, interest of industry, in the interest of consumers. For growth of the sector and PNGRB's regulations [are] not static, [they are] dynamic. With these types of forums, we get inputs from you, and we change the regulations so that more and more consumption of gas, and ease of doing business in this sector could be there.

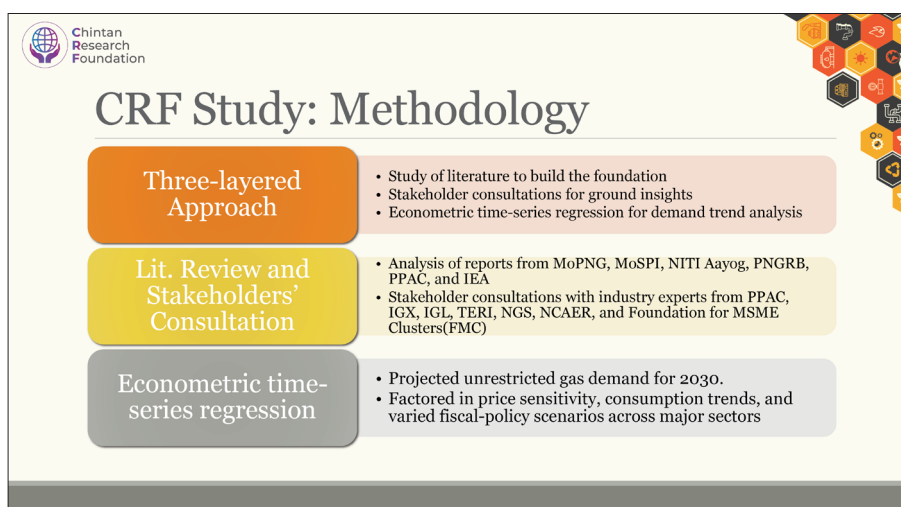
Thank you very much!

# Context Setting Presentation



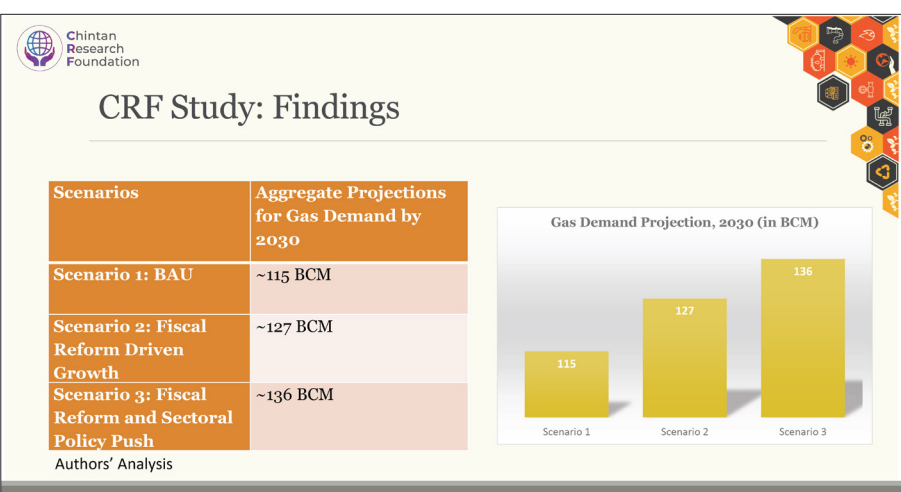







**CRF Study: Scenario Framework**


Scenarios	Assumptions	Sectors	CAGR
<b>Scenario 1: Business as usual Scenario</b>	Sectoral growth aligned with IEA CAGR assumptions; no policy reforms.	Agriculture	10.00%
<b>Scenario 2: Fiscal Reform Driven Growth</b>	Fiscal Reform Driven Growth: Scenario 1 + 12% delivered price reduction via VAT removal and 5% GST implementation.	City Gas Distribution (CGD)	8.00%
<b>Scenario 3: Fiscal Reform and Sectoral Policy Push Scenario</b>	Accelerated Sectoral Growth: Scenario 2 + accelerated sectoral growth — CGD at 12% CAGR and Industry at 15% CAGR, based on regulatory targets and stakeholder input.	Fertilizer	1.00%
		Industry	10.00%
		Manufacturing	10.00%
		Power	8.00%





**Stakeholders' Perspective: On-Ground Challenges and Possible Solutions**

<b>Limited Gas Availability</b>	<ul style="list-style-type: none"><li>• Tap CBG Potential</li><li>• Can mitigate India's LNG import dependence.</li></ul>
<b>Infrastructure Bottlenecks</b>	<ul style="list-style-type: none"><li>• Coordinated infrastructure development</li><li>• Policy support to fast-track state agencies' approvals</li></ul>
<b>Unequal Access to Market</b>	<ul style="list-style-type: none"><li>• GST Ambit</li><li>• Enable pricing reforms and equitable gas market access through policy support</li></ul>



**Policy Levers to Boost Natural Gas in India's Energy Mix**

1. Bringing Natural Gas Under GST
2. Accelerating CGD Infrastructure Execution
3. Boosting Industrial Gas Use Through Sectoral Incentives
4. Encouraging Fuel Switching in Hard-to-Abate Sectors
5. Diversifying End-Use Applications of Gas
6. Scaling Up Domestic Gas Supply
7. Rationalising Pricing and Market Access

**Thank you!**

## Media Coverage

