

# A comprehensive blueprint

National Gas Grid, an integral part of PM Gati Shakti Master Plan, will ensure availability and accessibility of natural gas 24/7 across the country



MANOJ JAIN

The Master Plan is a step closer towards making India a USD five-trillion economy through synchronisation in implementation of various projects using the GIS base for spatial analysis and planning

Natural gas has been gaining traction as a key alternative and an ideal fuel to support the energy shift in favour of cleaner and greener energy sources. As a part of its commitments to address climate change in COP21, the Government of India has promised to reduce its carbon emissions by 45 per cent by 2030.

However, the paradox of balancing the need to meet the energy demands of a billion people while at the same time mitigating environmental pollution is no mean task. It is in this context that the government is making a push for India to transition into a gas-based economy.

A gas-based economy has been identified as crucial for *Atmanirbhar Bharat*. Infrastructure developments along with market reforms have offered great potential for natural gas uptake across sectors in India. However, there are multiple uncertainties associated with natural gas due to geopolitical issues, market dynamics and volatility of international and national gas prices, which need to be addressed.

Increasingly determined efforts, including multi-billion investments, are being put in by players across the value chain to transition towards a natural gas-based economy. The vision of the Govt. of India for a 'One Nation One Gas Grid' is a clear indication of India's commitment towards building a gas-based economy.

To improve coordination between different departments and remove logistical impediments and connectivity hurdles among major infrastructure projects, PM Gati Shakti National Master Plan for Multi-modal Connectivity has been launched. A digital platform has been initiated to bring together 16 ministries



PM Gati Shakti is spearheading India's transition towards a gas-based economy

for integrated planning and coordinated implementation of infrastructure connectivity projects. The National Gas Grid is also a key infrastructure project of the Master Plan.

For this flagship initiative of the government, GAIL has been nominated as a nodal agency for mapping of infrastructures on the BISAG-N portal. Necessary coordination with the PNGRB-authorized pipelines, infrastructure operators, PNGRB-authorized CGD entities, Indian Strategic Petroleum Reserve Limited (ISPRL), Central PSUs / bodies under the administrative control of MOPNG & PNGRB will be done for collating the relevant infrastructure details and their mapping on the BISAG-N portal. Apart from these, mapping of Compressed Bio Gas plants would also be carried out.

The National Gas Grid will integrate all the natural gas pipelines of the country into a nationwide gas grid, ensuring availability and accessibility of natural gas 24/7 across the country. With an estimated investment of over Rs one lakh crores, once completed, the gas grid will encompass a total gas pipeline network of more than 35,000 km. This will result in wider spread of natural gas networks and also ensure an out-

reach of PNG to households and commercial establishments and CNG for transportation. Expansion in the natural gas sector would lead to generation of employment opportunities for people during and after the project implementation phase, increase in commerce and industry and an overall improved quality of life for people because of clean, cost-effective and environment friendly fuel. It will also address the crucial challenge of curbing environmental pollution and mitigating climate change.

Four pipeline projects, consisting of three natural gas and one of crude oil, are part of the Gati Shakti Master Plan. The following are the three high-impact natural gas pipeline projects:

- 1. Mumbai-Nagpur-Jharsuguda Natural Gas Pipeline:** This pipeline project will pass through four states — covering twelve districts in Maharashtra, three districts in Madhya Pradesh, eleven districts in Chhattisgarh and one district in Odisha at an investment of around Rs 8,000 crores.
- 2. North-East Gas Grid (NEGG):** The North-East Gas Grid being laid by Indradhanush Gas Grid Limited — a Joint Venture Company of

ONGC, GAIL, OIL, IOCL and NRL — is another high-impact pipeline project passing through the eight Northeastern states of the region including 12 districts in Assam, seven districts in Tripura, four districts in Meghalaya, two districts each in Mizoram, Nagaland, Manipur, Sikkim and one in Arunachal Pradesh; being connected through two hill districts in West Bengal at the estimated cost of over Rs 9,000 crores.

- 3. Gurdaspur-Jammu-Srinagar Natural Gas Pipeline:** This Natural Gas Pipeline will pass through Punjab and Jammu & Kashmir at an estimated cost of Rs 6,400 crores.

There is no doubt that the aforementioned infrastructure projects will have a multiplier effect in transforming India into a gas-based economy. The rapidly progressing City Gas Distribution networks and use by industrial and commercial consumers in retail sectors will eventually ensure that there is a constant demand for natural gas, justifying the investment in the pipeline infrastructure. Today the reach of the City Gas Distribution network has started increasing manifold with different rounds of Geographical Areas (GA) authorisations by the Natural

gas regulator. A total of 294 GAs have been authorised for the development of the CGD network, spread over 630 districts and covering 98 per cent of the population and 88 per cent of the country's geographical area.

It is pertinent that India's journey towards the future is driven by progression from traditional fuels like coal and oil to greener and cleaner fuels like natural gas and renewables.

PM Gati Shakti — National Master Plan for Multi-modal Connectivity — aims to develop world-class infrastructure in India. It is also a step closer towards making India a USD five-trillion economy by synchronisation in implementation of various projects using the GIS base for spatial analysis and planning alongside evidence-based decision making. It will facilitate identifying vital interventions for enhancing and updating the Master Plan. It will act as a tool for route planning, land acquisitions, permissions and congestion reduction, and will evaluate logistics efficiency gains, by using latest satellite imagery for visual understanding. It will also have dash-board based periodic monitoring of progress of infrastructural projects besides ensuring better coordination among all the stakeholders.

PM Gati Shakti will help gas sector infrastructure in online access, document submission and processing of application forms for laying of pipelines. Besides saving time and effort, online monitoring of applications can also be done. There will be seamless integration with all departments concerned — reducing timelines for clearances and approvals.

The writer is Chairman & Managing Director, GAIL (India) Limited on PM Gati Shakti Project and National Gas Grid. Views expressed are personal