



Natural Gas: A Stepping Stone

This article is based on [“India’s road to clean energy goes via natural gas”](#) which was published in The Indian Express on 02/05/2021. It talks about the option of natural gas, as a suitable energy transition option.

Recently, many think tanks, climate negotiators, corporates and environmental NGOs in India are currently contemplating on the concept of “net zero carbon emissions” and the appropriate target year for achieving it.

In the effort to secure a global consensus around this target, India must first “green” its fossil fuel energy basket. This can be done by increasing the share of natural gas.

However, the natural gas economy requires policy reforms cutting across all segments of the natural gas value chain from production (domestic and international) to transportation (pipeline and LNG) to markets (current and emergent) to commercial (pricing, taxation) and regulatory issues.

Natural gas: A Suitable Transition Option

- **Versatility & Abundance:** Natural gas has multiple uses and it is the “greenest” of all fossil fuels. Also, it is abundantly available in and within the Indian subcontinent.
- **Easy Transition Energy Option:** Natural gas is a feasible prospect because it will not generate the headwinds due to shutting down of coal mines.
 - Further, it will not require industries to invest heavily in retrofitting their systems.
 - Moreover, it will allow the government to meet its objective of providing secure and affordable energy to everyone without degrading the environment.
- **Excess Usage of Fossil Fuels:** The average global share of fossil fuels in the energy basket is 84% which is even more for India.
 - According to the [International Energy Agency \(IEA\)](#), India is the world's third largest consumer of oil.
 - Dependence on coal and oil needs to be reduced and natural gas has to be replaced as much as possible.

Challenges Associated With the Natural Gas Sector

- **Pricing Distortions:** The pricing of natural gas is based on multiple price formulae.
 - There is differential pricing for gas produced from domestic fields by the public sector companies and private companies.
 - Similarly, differential pricing for production from deep waters offshore under high temperature etc.
 - This creates problems in coming up with competitive pricing.
- **Regressive Taxation System:** It is a cascading structure so that the tax rates increase as the

gas flows from one zone to another.

- This means that customers located at a distance from the source of gas pay a higher price than those closer to the source.
- The result is the dampening of demand.
- Moreover, gas is not under GST.
- **Conflict-of-interest Situation:** The Gas Authority of India Ltd (GAIL) is currently engaged in the production, transportation and marketing of gas.
 - This allows GAIL to leverage its ownership of the bulk of the gas pipelines to deny its competitors access to the market.
 - Most countries have tackled this conflict-of-interest situation by separating the upstream (production/import) and downstream (marketing) interests from transportation.
- **Centre-States Issue:** Completion of a national pipeline grid gets affected due to clashes between Centre and state over issues like land acquisition, pipeline routing; and royalty payments.
 - Centre-state differences have also delayed the construction of import facilities and the creation of gas markets.

Way Forward

- **Deregulation of Pricing:** A key aspect of ensuring market reforms to boost gas economy, would be deregulation of pricing for domestically produced gas.
 - It will allow freedom to price and market domestic gas and in turn boost domestic production, making it more viable for players to invest.
 - Moreover, market-determined and affordable pricing would also boost industrial growth and economic competitiveness.
- **Boosting Infrastructure:** These markets have greatly benefited from factors such as open access to infrastructure, system operator, unbundled marketing and transport functions and market-friendly transport access and tariff besides strong pipeline infrastructure.
 - Also, the institutional mechanism should be created to enable better coordination between the central and state governments.
- **Freeing Gas Markets:** Through ensuring price benchmarks, it will drive competition across the value chain and stimulate investments in exploration and production along with downstream infrastructure.
 - Moreover, factors such as inclusion under GST and an overarching regulatory framework will also play an important role in boosting the overall gas markets

Conclusion

India stands a better chance of reaching the destination of a predominantly clean system if it moves forward incrementally. That is, if it makes natural gas the “next stop” in its energy journey.

Drishti Mains Question

In the effort to secure a global consensus around this target, India must first “green” its fossil fuel energy basket. This can be done by increasing the share of natural gas. Discuss.