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The Big Picture: Natural Gas Economy

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Why in News?

Recently, the Government of India has allowed complete marketing freedom for natural gas produced from non-regulated fields. The Union Cabinet has approved a standard e-bidding procedure to discover the price of gas.

- The policy aims to provide **standard procedure for sale of natural gas** in a transparent and competitive manner to discover market price by issuing guidelines for sale by contractor through e-bidding.
- This will bring **uniformity in the bidding process** across the various contractual regimes and policies to avoid ambiguity and contribute towards ease of doing business.

Key Points

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- **Ease of Doing Business:** The whole ecosystem of policies (production, infrastructure and marketing of natural gas) has been made more transparent with a focus on **Ease of Doing Business**.
 - **Encourage investments:** Fulfilling the notion of **Atmanirbhar Bharat**, these reforms encourage investments in the domestic production of natural gas and **reduce import dependence**.
 - Though the producers will continue to be barred from participating in such auctions, the affiliates would still be allowed to bid.
 - The domestic gas production will have complete marketing and pricing freedom.
However, the existing pricing mechanism for gas produced by state-owned Oil and Natural Gas Corporation (ONGC) and Oil India Ltd from fields given to them on a nomination basis would continue.
 - The reforms will also help India in shifting towards a **gas based economy**.
 - The increased gas production consumption will help in the **improvement of the environment**.
 - More **employment opportunities** will be there in the gas consuming sectors including **MSMEs**.

Oil and Natural Gas Corporation

- Oil and Natural Gas Corporation (ONGC) is a Maharatna Public Sector Undertaking (PSU) of the Government of India.
- It was set up in 1995 and is under the Ministry of Petroleum and Natural Gas.
- It is the largest crude oil and natural gas company in India, contributing around 70% to Indian domestic production.

Natural Gas

- Natural gas is found with petroleum deposits and is released when crude oil is brought to the surface. It can be used as a domestic and industrial fuel.
- In India, Jaisalmer, Krishna Godavari delta, Tripura and some areas offshore in Mumbai have natural gas resources.

Why Natural Gas?

- **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.

- **Share of Natural Gas:** While the world average share of natural gas in the energy basket is 23%, it is only 6% for India.
 - However, the government of India has set the target to make it 15% by 2030.
 - Our consumption has been 1/3rd of world average. That would increase in future.

Associated Challenges

- **ONGC under APM:** In India, 80% of natural gas produced by ONGC and Oil India Limited falls under **Administered Price Mechanism (APM)** which means the government controls its price.
- **Reform related challenge:** Currently, the reform impacts only 20% of gas production, while the nominated fields account for 80% India's gas production.
 - The policy does not include existing producers.
 - These fields will be out of the benefit zone of the new policy.
- **The fertilizer Industry:** The impediment is most of the gas coming from the nominated fields is going to fertilizers which is highly subsidised, hence the sector does not have its control over marketing and setting prices.
- **Limited Reserves:** Resources of natural gas are limited in India; 55% of natural gas is imported in the form of **Liquefied Natural Gas (LNG)** (which is even costlier).
India's reserves for natural gas are **located in deep or ultradeep water** which requires specific technology and higher cost and extraction is difficult.
- **Varied Prices:** In India, natural gas is sold at varied prices- the gas under administered price regime at \$1.79 per mBtu and other domestic gas in the range of \$4.5 to \$5.5 per mBtu.

Note:

- The **unit MBtu** is a measure unit of energy, defined as one thousand the British thermal unit (symbol: Btu). The "M" stands for one thousand, distinguishing with the SI mega (M) prefix, which stands for one million.
- **Liquefied natural gas (LNG)** is natural gas that has been cooled to a liquid state (liquefied), at about -260° Fahrenheit, for shipping and storage.
The volume of natural gas in its liquid state is about 600 times smaller than its volume in its gaseous state in a natural gas pipeline.

Way Forward

- **Realising the Opportunity:** At present, when the prices are low for importing natural gas, India should take the advantage and enter into contracts with the countries rich in natural gas resources such as Iran, Turkmenistan and Myanmar to bring gas to India through pipelines.
- **More Reforms:** More aggressive and dynamic reforms is what is needed in the field.
To go ahead, we need to reform our whole structure (subsidies) to improve the production.

- **Putting the producers and buyers in charge:** Government should allow the producers and buyers more control of the price. ONGC shall undergo reforms in terms of its marketing and pricing freedom, E-bidding etc.
- **Alternative:** No doubt natural gas is a cleaner fuel but **cannot be called a green fuel**, that's why more inclination should be there towards electricity; more dependence on electricity should be there as compared to natural gas or any other fuel.
- **Government as a facilitator:** The government should act as a facilitator and improve quality and quantity of the resources available.
- **Self reliance:** Infrastructure and facilities should be provided within the country. The import dependence of 55% should be taken on a serious note and should be brought down.
- **Subsidy in fertilizers:** The government should take action accordingly so that fertiliser subsidy goes directly into farmers account and fertiliser industry doesn't get subsidised so that they too could have their freedom in marketing and pricing.
- **Extend to the entire gas sector:** The policy should be extended to the entire gas sector, the government should move away from administrative price mechanism (APM).

Conclusion

- There is Immense potential as far as gas consumption in India is concerned. The need is to scale up in a big way as natural gas is a far more cleaner fuel than any of the fossil fuel.
- Natural Gas is going to be a very important part of the country's economy, at least for the next 3 decades, therefore, a holistic approach is needed to find the best suited source of energy from an economic as well as environmental point of view.