

India's Strategic Petroleum Reserves

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Why in News?

- In a bid to have a large gas stockpile that can be utilised in emergencies and supply disruptions, India is exploring building strategic natural gas storage facilities in the country on the lines of strategic crude oil

reserves.

India's Strategic Petroleum Reserves

Image Caption: India's SPR Locations

- A strategic reserve is the reserve of a **commodity or items that is held back from normal use by governments, in pursuance of a particular strategy or to cope with unexpected events.**
- Countries keep strategic reserves of crude oil to meet the immediate demand in times of crisis or unexpected events.
- India, the world's third-largest consumer of crude, depends on imports for more than 85% of its requirement.
- Government of India through **Indian Strategic Petroleum Reserve Ltd. (ISPRL)** under Phase-1 has setup Strategic Petroleum Reserves (SPR) at three locations with a capacity of **5.33 MMT (million metric ton)** -
 - **Vishakhapatnam** (1.33 MMT),
 - **Mangaluru** (1.50 MMT) and
 - **Padur** (2.5 MMT)
- Taking advantage of low crude oil prices in April-May 2020, the government completely filled these reserves, leading to estimated savings of around Rs 5,000 crore.
- These three SPRs can meet **approximately 9.5 days of national demand.**
 - Apart from SPRs, India's oil marketing companies (OMCs) have storage facilities for crude oil and petroleum products for 64.5 days — which means **there is sufficient storage to meet around 74 days of the country's petroleum demand.**
- **Comparison with other Countries -**
 - The top three countries in terms of such reserves for crude oil are the **US, China and Japan.**
 - Between them, they have 1500 million barrels. At an average daily global consumption of 95 million barrels a day, that's **roughly 20-odd days of oil.**

Phase-2 of SPR Programme

- Under **Phase-2** of the programme, government has given in-principle approval for construction of additional SPR facilities at two locations (**Chandikhol** (4 MMT) and **Padur** (2.5 MMT)).
- In the second phase of the programme, the **government wants to develop strategic reserves through public-private partnerships** so as to reduce government spending and exploit the commercial potential of the reserves.
- India has also decided to commercialize its SPRs. As part of this, **Abu Dhabi National Oil Company (ADNOC)** stored about **0.8 million tonnes of crude oil in the Mangaluru strategic reserve.**

News Summary

- In a bid to have a large gas stockpile that can be utilised in emergencies and supply disruptions, India is exploring building strategic natural gas storage facilities in the country on the lines of strategic crude oil reserves.
- According to Petroleum Secretary Pankaj Jain, the idea is at a preliminary stage and a few global players specialising in gas storage have been approached to develop the proposal.

India's Need for a Strategic Gas Reserve

- India, currently, has no strategic natural gas storage facilities even as its gas consumption is expected to grow significantly over the next few years.
- **India is a net importer of natural gas** and depends on imports to meet around half of its requirement.
- India has set a target to increase the share of natural gas in its primary energy mix to 15 per cent by 2030 from a little over 6 per cent at present.
- As one of the major importers of liquefied natural gas (LNG), **India was adversely impacted by the tightening global supply and surging gas prices last year in the aftermath of Russia's invasion of Ukraine.**
- Fearing a major energy crisis in the winter of 2022 due to the war in Ukraine, the **EU member countries stocked up natural gas, filling their gas storage facilities to 90 per cent capacity on average by October 2022.**

How Can Natural Gas be Stored?

- Natural gas can be stored underground in depleted reservoirs in oil and gas fields, and in natural aquifers and salt caverns.
- It can also be stored in the gaseous state as well as in the form of LNG in large over-ground tanks.
- In the United States, most existing natural gas storages are in depleted oil and gas fields that are close to gas consumption centres.
- Apart from the US, various European countries, Canada, and China, among others, have gas storage facilities.
- As per information available on the European Council website, most European Union (EU) member states have gas storage facilities on their territory.

Q1) Which state produces the largest natural gas in India?

Assam is the largest gas-producing state in India. It produces about 8.3 MMSMCD. About 13% of gas reserves are found in Assam.

Q2) How long does it take for fossil fuels to regenerate?

Fossil fuels are non-renewable energy sources. As it takes millions of years for them to form and the supply is not never-ending, this means they are not a reliable, renewable source of energy to be used across the world.

Source: [India explores developing strategic gas stockpile as hedge against volatility](https://vajiramandravi.com/current-affairs/india-explores-developing-strategic-gas-stockpile-as-hedge-against-volatility/)

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