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STRATEGIC PETROLEUM RESERVES

What are the Strategic Petroleum Reserves?

To ensure energy security for the country, India is making strategic petroleum reserves to store crude oil under the ground. These rocky caves are man-made. India has already underground caves of 5.33 MMT storage in three places. These include Visakhapatnam (1.33 MMT), Mangalore (1.5 MMT) and Padur (2.5 MMT). Indian Strategic Petroleum Reserve Limited (ISPRL), a Government of India Special Purpose Vehicle is responsible for establishing Strategic Petroleum Reserves (SPR) facilities.

What is the current level of the Strategic Petroleum Reserves and proposed reserves?

1. As per the consumption pattern of 2017-18, the total capacity is estimated to provide for about 9.5 days of crude oil requirement. Oil Marketing Companies (OMCs) currently have stock for 64.5 days. Hence, total capacity storage of petroleum products is 74 days.
2. Government has given 'in principle' approval for establishing two additional SPR facilities with a total storage capacity of 6.5 MMT at two locations namely (i) Chandikhol in Odisha (4 MMT) and (ii) Padur in Karnataka (2.5 MMT). As per the consumption pattern of 2017-18, 6.5 MMT SPR capacity is estimated to provide for about additional 11.57 days of India's crude oil requirement.
3. Government has also given 'in principle' approval for exploring a public-private partnership model for Phase II.

When did the concept of petroleum reserves start in India?

Due to the first Gulf War in the year 1990, crude oil prices in the international market had been very high, due to which India's Foreign Exchange Reserves have declined and India had foreign currency reserve just ($ 1.2 billion) to pay import bill of only three weeks. Indian government learnt a new lesson from this incident. In order to get a long-term solution to this problem, the Atal Bihari Vajpayee Government had given the idea to construct oil reserves in India in 1998.

Why Does India Need Strategic Petroleum Reserves?

1. India still needs to import 83% crude oil of its requirement which increase import bill of India which further widens the Current Account Deficit (CAD) of the country.
2. The fluctuations in the price of crude oil in the international market create an atmosphere of uncertainty in the country. So in this way, the economic condition of

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the country is dependent on the oil-importing countries i.e. Gulf countries which does not suit a sovereign country like India.

3. It is known that there is always a political upheaval in the Gulf countries, which can create some kind of conditions in our country. So to avoid any unprecedented development in the country; the government of India is building Strategic Petroleum Reserves in the country.
4. It is known that the current petroleum reserves of India are sufficient to fulfil just 13 days oil requirement of the country. But this is not sufficient to tackle any unpredicted event occurs in the international crude market.
5. So India want to have petroleum reserves of 90 days. In order to ensure energy security for 90 days, India needs to build up additional petroleum reserves of 13.32 metric ton.

As a summary, it can be said that the construction of strategic petroleum reserves by India is a great way to secure the country's energy security. These reserves would act as a piggy bank for India in the event of a war-like situation in the Gulf countries or other oil importers of India.

What are the other measures required for securing energy security?

1. Diversify import sources from conflict-ridden Middle East to other countries across the globe
2. Shift to solar and wind energy where India has huge potential
3. Promote rooftop solar generation
4. Fast track India's three-stage Nuclear power generation
5. Promote energy efficiency
6. Tap unconventional sources like Coal bed methane, Gas hydrates, Tidal energy etc.
7. Promote R&D in disruptive technologies like Fuel cell
8. Promote R&D in Fusion reactor on the lines of Chinese artificial sun.

What is India's energy security Trilemma?

India is ranked 109th on WEC'S (World Energy Council) Energy Trilemma Index. Index assesses countries on their ability to provide sustainable energy through 3 dimensions:

1. energy security,
2. energy equity (accessibility and affordability),
3. environmental sustainability.

Weak Links:

1. Though India scores high on energy security, the index has dipped almost every year since 2000. Reasons: Reduction in energy storage, and diversity of primary energy supply as well as an increase in import dependency.
2. Equity and Sustainability low but improving each year due to reduction in energy prices and more efficiency.

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What is going right for India according to Index:

1. **Energy security and environmental sustainability**
   a. Ongoing hydrocarbon exploration licensing policy (HELP) to boost domestic production and national policy on biofuels.
   b. Policies promoting electric vehicles with a focus on shared and public transport.
   c. A time-bound pan-India strategy to tackle air pollution.
   d. Energy efficiency measures include demand-side management through the speedy implementation of the Smart Meter Programme and industrial energy efficiency through Perform, Achieve and Trade (PAT) scheme.

2. Energy access

   a. Electricity access provided to almost 100% households, target to realise 24x7 power for all.
   b. Plan for solarisation of irrigation pump sets
   c. Use of barren land for solar plants by farmers
   d. Continued expansion of LPG connections and subsidies for LPG delivered via DBT

3. Energy diversity

   a. 175 GW renewable energy capacity targeted by 2022; ultimately 500 GW by 2030
   b. At the same time, increasing gas share in the energy mix (Steps include gas grid, city gas distribution, plans for LNG trading hub)
   c. Encouraging implementation of energy storage for large solar plants, domestic PV manufacturing and RE hybrid systems

What India needs to do According to report:

1. Improve fiscal performance of State electricity Boards
2. Mitigate import dependence on oil and gas
3. Enhance domestic manufacturing
4. Integrate large variable renewable energy capacity and optimum flexible operation of conventional generation