UPSC & STATE PCS CURRENT AFFAIRS · UJIYARI.COM

EDITORIAL ANALYSIS

India's Energy Insecurity — From Episodic Crisis to Systemic Vulnerability

27 March 2026

CURATED & WRITTEN BY

Bharat Choudhary

UPSC Educator & Content Creator

linkedin.com/in/epicbharat

GS3

India's Energy Insecurity — From Episodic Crisis to Systemic Vulnerability

The Hindu 27 March 2026 GS3

TH The Hindu | 3 tags ▾

INTERVIEW ANGLE

"India imports 85% of its crude oil. Is energy security India's Achilles heel in achieving strategic autonomy?"

India's Energy Insecurity — From Episodic Crisis to Systemic Vulnerability

> *The ongoing* **2026 Strait of Hormuz crisis** *— triggered by the US-Israel military operation* **"Operation Epic Fury"** *against Iran (launched February 28, 2026) and Iran's retaliatory blockade of the Strait of Hormuz — has sent* **Brent crude surging past $120 per barrel**. *On March 27, 2026, the Indian government slashed special excise duty on petrol and diesel by* **Rs 10 per litre each**, *absorbing an estimated* **Rs 1.55 lakh crore annualised fiscal hit** *to prevent retail fuel prices from spiralling. The crisis has once again exposed the structural fragility of India's energy architecture: an economy that imports nearly* **88-90% of its crude oil** *remains perpetually one geopolitical shock away from macroeconomic destabilisation.*

The Scale of Dependence — India by the Numbers

India is the **third-largest oil consumer** in the world (after the United States and China) and the **third-largest oil importer**. Yet domestic production has stagnated for decades, making the gap between consumption and production a permanent structural deficit.

PARAMETER	VALUE
Crude oil import dependence	88.6% (April-January FY2025-26)
Crude oil imports (FY2024-25)	243 million metric tonnes (MMT)
Net oil import bill (FY2024-25)	~$101-104 billion
Oil import bill (Apr-Nov 2025)	$80.9 billion (down 12% YoY due to discounted Russian crude)
Domestic crude production	~28-29 MMT/year (stagnant since 2015)
Daily consumption	~5.5 million barrels per day (bpd)
Share of oil in primary energy mix	~30%
Oil imports as share of total import bill	~25-27%

The trend is worsening, not improving. Import dependence rose from **84% in FY2014-15** to **90% in FY2024-25** — despite a decade of policy announcements on energy self-reliance.

Top Crude Oil Suppliers — The Concentration Risk

India's supplier base has shifted dramatically since 2022, with **Russia** emerging as the dominant supplier following discounted crude purchases after the Ukraine conflict.

SUPPLIER COUNTRY	SHARE OF INDIA'S CRUDE IMPORTS (FY2025-26)	APPROXIMATE VOLUME
Russia	31-36%	~1.3-1.5 million bpd
Iraq	20-23%	~1.0-1.2 million bpd
Saudi Arabia	13-18%	~0.7-1.0 million bpd
UAE	8-10%	~0.4-0.5 million bpd
United States	3.5-7%	~0.15-0.3 million bpd
Nigeria/West Africa	5-6%	~0.2-0.3 million bpd

February 2026 shift: Amid the Hormuz crisis, **Iraq overtook Russia** as India's top crude supplier. Russian imports fell ~32% to about 1 million bpd, while Iraqi imports rose to 1.18 million bpd and Saudi imports increased to approximately 998,000 bpd. The share of **Middle Eastern countries** in India's total crude imports jumped to **~59%** — precisely the region now engulfed in conflict.

This is the central paradox: India diversified toward Russia to reduce Middle East dependence, but the moment Hormuz was threatened, it swung back to the very region it sought to de-risk from.

Structural Causes of India's Oil Vulnerability

India's energy insecurity is not a cyclical problem caused by temporary price spikes. It is a **structural condition** rooted in multiple systemic failures:

1. Stagnant Domestic Production: India's crude oil production has hovered around 28-29 MMT per year for over a decade. The **Oil and Natural Gas Corporation (ONGC)** and **Oil India Limited (OIL)** — the two major national upstream companies — operate ageing fields (Bombay High, Assam fields) with declining output. The **Hydrocarbon Exploration and Licensing Policy (HELP)**, introduced in 2016 to attract private and foreign investment into exploration, has yielded limited results. India's sedimentary basins remain **under-explored** — only about 10% of the estimated sedimentary area has been moderately to well-explored.

2. Refining Overcapacity Without Feedstock Security: India has the **fourth-largest refining capacity** in the world (~254 MMTPA), with companies like **Reliance Industries** (Jamnagar), **Indian Oil Corporation (IOCL)**, and **BPCL** operating world-class facilities. But this refining muscle depends almost entirely on imported crude. India exports refined petroleum products worth $60-80 billion annually — making it a "refining hub" that processes other nations' crude rather than its own.

3. Pricing Distortions and Subsidy Burden: Retail fuel prices in India are theoretically market-linked (deregulated for petrol in 2010, diesel in 2014), but in practice, **Oil Marketing Companies (OMCs)** — IOCL, BPCL, HPCL — are informally directed to hold prices steady during politically sensitive periods. During the current crisis, OMCs are absorbing estimated losses of **Rs 24 per litre on petrol** and **Rs 30 per litre on diesel**, even after the Rs 10 excise duty cut. This hidden subsidy erodes OMC balance sheets and discourages investment in upstream exploration.

4. Fiscal Dependence on Oil Revenue: The Central and State governments collectively earn **Rs 8-10 lakh crore annually** from petroleum taxes (excise duty, VAT, cess). This creates a perverse incentive: the government is financially dependent on the very commodity whose import bill it seeks to reduce.

Strategic Petroleum Reserve — A 9.5-Day Buffer

India's **Strategic Petroleum Reserve (SPR)** programme, managed by the **Indian Strategic Petroleum Reserves Limited (ISPRL)** — a subsidiary of the **Oil Industry Development Board (OIDB)** — provides emergency crude storage in underground rock caverns.

Phase I (Operational):

LOCATION	STATE	CAPACITY (MMT)
Visakhapatnam	Andhra Pradesh	1.33
Mangaluru	Karnataka	1.50
Padur	Karnataka	2.50
Total		**5.33 MMT**

At full capacity, this provides approximately **9.5 days of crude oil supply** — far below the **International Energy Agency (IEA)** recommendation of **90 days of net import cover**. As of March 2026, the reserves are only **~64% filled** (3.37 MMT of 5.33 MMT capacity), meaning effective cover is closer to **6 days**.

Phase II (Approved, Under Implementation):

LOCATION	STATE	CAPACITY (MMT)	MODE
Chandikhol	Odisha	4.00	Public-Private Partnership (PPP)
Padur (Expansion)	Karnataka	2.50	PPP
Total		**6.50 MMT**	

Phase II was approved in **July 2021** and will add 6.5 MMT, bringing total SPR capacity to **11.83 MMT** — still only about **22 days of supply** when fully operational and filled. This remains vastly inadequate. For comparison: the United States SPR holds **~700 million barrels (~95 MMT)**, China holds **~500 million barrels**, and Japan maintains **~150 days of petroleum stockpiles** (government + mandatory commercial reserves).

The lesson from the current crisis: India's SPR is too small to serve as a genuine strategic deterrent or buffer. It can absorb a minor supply disruption of a few days, but not a sustained blockade of the Strait of Hormuz — through which roughly **half of India's crude imports** transit.

The Hormuz Chokepoint — India's Geographic Vulnerability

The **Strait of Hormuz** — a narrow waterway between Iran and Oman, approximately **33 km wide** (with navigable shipping lanes of just **3 km in each direction**) — is the single most critical chokepoint in global energy infrastructure.

Key data:

- **~20 million barrels of crude oil** pass through Hormuz daily (~20% of global traded oil)
- **~25% of global LNG trade** transits through the strait
- **~50% of India's crude oil imports** pass through or originate from the Persian Gulf region
- **~9 million Indians** live and work in the Gulf states, sending home **~$40 billion in annual remittances**

The current crisis has demonstrated exactly what analysts warned for decades: Iran's ability to **disrupt Hormuz traffic** is not theoretical but operational. The **Islamic Revolutionary Guard Corps (IRGC)** attacked vessels, deployed mines, and threatened commercial shipping, leading to a near-total halt in traffic in early March 2026. Brent crude surged from ~$70 to **$120+ per barrel** — a 70% spike in under a month.

For India, the Hormuz crisis is not merely about oil prices. It threatens:

- **Remittance flows** from the Gulf (critical for states like Kerala, UP, Bihar)

- **LNG imports** for power generation and fertiliser production
- **Trade routes** to the Gulf, India's largest trading partner region
- **Safety of Indian nationals** — echoing past evacuations like **Operation Rahat** (Yemen, 2015: 4,640 Indians + 960 foreigners evacuated) and **Operation Vande Bharat** (COVID, 2020)

Diversification Efforts — Too Slow, Too Late

India has pursued multiple supply-diversification strategies, but none has fundamentally altered the structural dependence:

1. Russian Crude (Post-2022 Pivot): India dramatically increased Russian crude imports after Western sanctions on Russia following the Ukraine invasion. Russian oil went from under 2% of India's imports (pre-2022) to over 35% (2024-25). While this reduced per-barrel costs and shifted some supply away from the Gulf, it created a **new form of dependence** — on a supplier subject to evolving Western sanctions and secondary sanctions risk.

2. Long-Term Contracts and Equity Oil: ONGC Videsh Limited (OVL) holds equity oil stakes in Russia (Sakhalin-1), Mozambique, Vietnam, Sudan, and other countries. But equity oil contributes less than **5-6% of India's total crude imports** — a negligible buffer.

3. Chabahar Port (Iran): India's investment in **Chabahar Port** — intended as a gateway to Afghanistan and Central Asia bypassing Pakistan — is now complicated by the direct military conflict with Iran. The 10-year operation agreement signed in May 2024 faces an uncertain future.

4. IMEC (India-Middle East-Europe Corridor): Announced at the **G20 New Delhi Summit (September 2023)**, IMEC envisioned a rail-and-shipping corridor linking India to Europe via the UAE, Saudi Arabia, Jordan, and Israel. The 2026 Iran war has effectively frozen this project, as the corridor route passes through an active conflict zone.

Renewable Energy — The Long-Term Solution, Not the Short-Term Answer

India's renewable energy programme is among the most ambitious globally, but it addresses electricity generation, not transport fuel — which is where oil dependence is concentrated.

Renewable energy achievements (as of February 2026):

- **Total installed power capacity:** 520.5 GW
- **Renewable energy capacity:** ~266.7 GW (solar: 127.3 GW, wind: 53.1 GW)
- **COP26 target of 500 GW non-fossil capacity:** Achieved **five years ahead** of the 2030 deadline
- **Renewable share of new capacity addition (FY2025-26):** 75% (39,657 MW added)
- **Record solar addition (FY2025-26):** 34,955 MW

Ethanol Blending Programme (EBP):

- Blending ratio: 1.5% (2013) to **19.7% (2025)** — near the E20 target
- Forex savings: **Rs 1.26 lakh crore** since inception
- Payments to distillers/farmers: **Rs 1.79 lakh crore**
- Next target: **E30 (30% blending)** expected between 2028-2030
- Challenge: **Feedstock availability** (sugarcane, maize, rice) competes with food security

National Green Hydrogen Mission (launched January 2023):

- Target: **5 MMT green hydrogen production** by 2030
- Requires **125 GW of additional renewable energy capacity**
- **Rs 19,744 crore** allocated for the Mission
- Progress: 8.62 lakh tonnes tendered; IOCL awarded a **10 KTPA plant at Panipat**
- Potential: Green hydrogen can replace fossil fuels in **fertiliser production** (currently consumes ~15 MMT of natural gas), **steel manufacturing**, **refining**, and **heavy transport**

The structural gap: Even with aggressive renewable deployment, India's transport sector — **90% dependent on petroleum fuels** — cannot be decarbonised quickly. Electric vehicles constituted only about **6-7% of new two-wheeler sales** and **2-3% of car sales** in 2025. Trucks and aviation remain almost entirely fossil-fuel dependent. Oil demand is projected to keep rising until at least **2030-2035** before any meaningful plateau.

The March 2026 Excise Duty Cut — Emergency Fiscal Surgery

On **March 27, 2026**, the Government of India announced a reduction in **Special Additional Excise Duty (SAED)** on petrol and diesel by **Rs 10 per litre each**:

PARAMETER	PETROL	DIESEL
SAED before cut	~Rs 13/litre	~Rs 10/litre
SAED after cut	~Rs 3/litre	Rs 0/litre
Total excise (post-cut)	~Rs 19.90/litre	~Rs 15.80/litre
OMC under-recovery (estimated)	~Rs 24/litre	~Rs 30/litre

Key implications:

- Retail pump prices are **not expected to fall** despite the excise cut — the reduction merely absorbs part of the OMC losses rather than being passed to consumers
- **Estimated annual fiscal cost:** Rs 1.55 lakh crore (Emkay Global estimate)

- The government simultaneously **raised export duties** on diesel (to Rs 21.5/litre) and ATF (to Rs 29.5/litre) to ensure domestic availability
- This is the **third major excise adjustment since 2020** — following the Rs 13 increase during COVID (when oil crashed) and the Rs 8 cut before the 2022 state elections

The pattern reveals a deeper dysfunction: the excise duty acts as a **fiscal shock absorber**, expanding when prices are low (to build revenue) and contracting when prices spike (to cushion consumers). This prevents price signals from reaching consumers and discourages demand-side adjustments — such as shifting to public transport, fuel-efficient vehicles, or alternative fuels.

Policy Recommendations — Moving Beyond Crisis Management

1. Scale SPR to 90 Days: India must urgently build SPR capacity to at least **45-60 days** in the medium term (by 2032) and **90 days** by 2040, in line with IEA standards. The current 9.5-day cover (at best) is dangerously inadequate. Phase II must be fast-tracked; Phase III should be planned immediately with locations in eastern India (closer to refineries in Paradip, Haldia).

2. Accelerate Domestic Exploration: The **Open Acreage Licensing Policy (OALP)** must be paired with stronger fiscal incentives — including royalty holidays, reduced cess, and guaranteed offtake — to attract global majors into India's under-explored sedimentary basins (especially the Krishna-Godavari, Cauvery, and Rajasthan basins).

3. Build a National Gas Grid: Natural gas (currently ~6% of India's energy mix vs. the global average of ~24%) can partially substitute for oil in transport (CNG), power generation, and industry. The **National Gas Grid** of 34,000+ km of pipelines must be completed, and city gas distribution networks expanded to all districts.

4. Fast-Track EV Adoption: Transport is the primary driver of oil demand. The **FAME III** scheme and state-level EV policies must be scaled up with manufacturing incentives, charging infrastructure mandates, and scrappage-linked subsidies for commercial vehicles.

5. Diversify Import Routes: India must reduce Hormuz dependence by developing alternative oil supply routes — including pipelines from Russia (via Central Asia or Myanmar), expanded use of the **Cape of Good Hope** route for African crude, and deepening ties with Guyana, Brazil, and Canada as non-OPEC suppliers.

6. Create a National Energy Security Fund: A dedicated fiscal buffer — similar to Norway's sovereign wealth fund or Saudi Arabia's Public Investment Fund — should be built during periods of low oil prices, funded by a small cess on petroleum products. This fund would finance SPR purchases, renewable energy investments, and emergency price stabilisation without ad hoc excise duty adjustments.

UPSC RELEVANCE

Strategic Petroleum Reserve locations and capacity; Strait of Hormuz dimensions and significance; ethanol blending targets; National Green Hydrogen Mission; HELP and OALP policies; India's crude oil import dependence percentage; IEA 90-day recommendation; Operation Epic Fury; IMEC corridor.

MAINS GS-3:

Energy security — challenges of oil import dependence; infrastructure (SPR, gas grid, refining capacity); economic impact of oil price volatility on CAD, fiscal deficit, and inflation; renewable energy transition; diversification of energy sources and suppliers.

MAINS GS-2:

India's foreign policy dimensions of energy security — relations with Russia, Gulf states, Iran; multilateral energy governance (IEA, OPEC); diaspora welfare during conflict.

ESSAY:

"Energy independence is the foundation of strategic autonomy" — discuss with reference to India's oil import dependence and its geopolitical implications.

📌 FACTS CORNER — KNOWLEDGEPEDIA

INDIA'S OIL IMPORT PROFILE:

Crude oil import dependence: 88.6% (April-January FY2025-26); up from 84% in FY2014-15

Crude oil imports volume: 243 MMT in FY2024-25

Net oil import bill: ~$101-104 billion (FY2024-25)

Every $10/barrel rise in crude adds ~$12-13 billion to import bill; widens CAD by 0.3% of GDP

India is 3rd-largest oil consumer and 3rd-largest oil importer globally

Domestic crude production: ~28-29 MMT/year (stagnant for a decade)

TOP CRUDE OIL SUPPLIERS (FY2025-26):

Russia: 31-36% (largest supplier since 2023)

Iraq: 20-23% (overtook Russia in February 2026 during Hormuz crisis)

Saudi Arabia: 13-18%

UAE: 8-10%

United States: 3.5-7%

STRATEGIC PETROLEUM RESERVE (SPR):

Phase I capacity: 5.33 MMT (Visakhapatnam 1.33, Mangaluru 1.5, Padur 2.5)

Current fill level: ~64% (3.37 MMT as of March 2026)

Cover at full capacity: ~9.5 days of crude supply

Phase II approved (July 2021): 6.5 MMT at Chandikhol (Odisha, 4 MMT) + Padur expansion (2.5 MMT) via PPP

Combined Phase I + II: 11.83 MMT (~22 days cover)

IEA recommendation: 90 days of net import cover

Managed by: Indian Strategic Petroleum Reserves Limited (ISPRL), subsidiary of OIDB

STRAIT OF HORMUZ:

Width: ~33 km; navigable lane: 3 km each way

Daily crude oil transit: ~20 million barrels (~20% of global traded oil)

~25% of global LNG trade transits through Hormuz

~50% of India's crude imports pass through or originate from the Gulf region

Indians in Gulf states: ~9 million; annual remittances: ~$40 billion

2026 HORMUZ CRISIS:

Trigger: Operation Epic Fury (US-Israel strikes on Iran, February 28, 2026)

Iran blockaded Hormuz on March 2, 2026 (IRGC attacks on vessels)

Brent crude surge: ~$70 to $120+ per barrel (~70% spike)

India's excise duty cut (March 27): Rs 10/litre on petrol and diesel

Estimated annual fiscal cost of excise cut: Rs 1.55 lakh crore

OMC under-recovery: ~Rs 24/litre (petrol), ~Rs 30/litre (diesel)

ETHANOL BLENDING PROGRAMME:

Blending ratio: 1.5% (2013) to 19.7% (2025)

Forex savings: Rs 1.26 lakh crore since inception

Payments to farmers/distillers: Rs 1.79 lakh crore

Next target: E30 (30% blending) by 2028-2030

NATIONAL GREEN HYDROGEN MISSION:

Launched: January 2023

Target: 5 MMT green hydrogen by 2030

Additional renewable capacity needed: 125 GW

Allocation: Rs 19,744 crore

Progress: 8.62 lakh tonnes tendered; IOCL 10 KTPA plant at Panipat

RENEWABLE ENERGY (AS OF FEBRUARY 2026):

Total installed power capacity: 520.5 GW

Renewable energy capacity: ~266.7 GW (solar: 127.3 GW, wind: 53.1 GW)

COP26 500 GW non-fossil target achieved five years early

RE share of new capacity added in FY2025-26: 75%

OTHER RELEVANT FACTS:

India's refining capacity: ~254 MMTPA (4th-largest globally)

IMEC (India-Middle East-Europe Corridor): Announced at G20 New Delhi Summit, September 2023

Operation Rahat (2015, Yemen): Evacuated 4,640 Indians + 960 foreigners

> Chabahar Port: India's gateway to Afghanistan/Central Asia via Iran; 10-year operation agreement signed May 2024
>
> HELP (Hydrocarbon Exploration and Licensing Policy): Introduced 2016
>
> OALP (Open Acreage Licensing Policy): Allows companies to select exploration blocks year-round
>
> Natural gas share in India's energy mix: ~6% (global average: ~24%)
>
> National Gas Grid target: 34,000+ km of pipelines
>
> CAATSA: US law that can sanction countries buying Russian weapons/energy (risk for India-Russia oil trade)

Sources: The Hindu , Business Standard , PPAC , PIB , Down to Earth , BusinessToday , India Briefing , CNBC

CURATED & WRITTEN BY

Bharat Choudhary

UPSC Educator & Content Creator

linkedin.com/in/epicbharat

📖 Read Full Article on Ujiyari →

https://ujiyari.com/editorials/2026/03/india-energy-insecurity-oil-dependence-systemic-risk/