Why India's energy security goal is an unfinished journey

Plans to cut import dependence have faltered, as is evident from the cooking gas crisis caused by the Iran war

SUDHEER PAL SINGH
New Delhi, 23 March

It was March 2015, and Prime Minister Narendra Modi was speaking at the Urja Sangam, India's biggest hydrocarbon event at the time, in Delhi. What the PM said that day, amid an urgent need to boost domestic production and cut foreign imports of oil and gas, amazed the industry. He urged energy sector stakeholders to increase domestic oil and gas production and reduce import dependence from 77 per cent then to 67 per cent by 2022 and further to 50 per cent by 2030.

That national target remained a hot topic for the next few years – it remains a vision statement worth recalling today, in the context of the West Asia crisis and its energy shock. However, in the 11 years since that speech, India's dependence on imported crude oil and natural gas has only increased — from 80.6 per cent to 88.6 per cent for crude and 40.7 per cent to 50.1 per cent for gas, according to data sourced from the Ministry of Petroleum and Natural Gas.

This rising import dependence, partly the outcome of stagnant domestic energy output, is now reflected in the national gas crisis, with many consumers having to waiting in queues for hours and days for cooking gas cylinders, as officials across ministries struggle to free tankers stuck in the Strait of Hormuz, the narrow nerve centre of the ongoing Iran war.

The crisis has raised questions about when and how India slipped on its energy security ambitions, and whether the country could have moved more resolutely key aspects, including exploration and production (E&P) efforts, investor-friendly policies, diversification of imports, and an energy basket with renewables to gradually wean it off fossil fuels.

Local production flat

Domestic oil and gas exploration and production have remained stagnant over the years —as has output— and industry stakeholders and experts say the main reason for this is the age of India's hydrocarbon assets. India's total production of oil and oil equivalent gas dropped 1.5 per cent to 64.8 million tonnes of oil equivalent (mtoe) last financial year (2024-25). In the current financial year (April to February) too production dropped 3 per cent to 57.5 mtoe.

As a result, the country's combined oil and gas import dependence rose 1 percentage point to 80.6 per cent in the first 11 months of 2025-26. At Oil and Natural Gas Corporation (ONGC), the state-owned E&P major, crude production remained nearly flat at 13.907 million tonnes (mt) in the first nine months of the current financial year, compared with 13.858 mt produced in the year-ago period.

One thing is for sure. The problem with domestic production does not lie in policy. For the sheer number of policy changes introduced in the past ten years to make the oil and gas sector more investor-friendly is mind-boggling.

> INDIA'S TOTAL PRODUCTION OF OIL AND OIL EQUIVALENT GAS DROPPED 1.5 PER CENT TO 64.8 MTOE IN FY25. IN FY26 (APRIL TO FEBRUARY) TOO, PRODUCTION DROPPED 3 PER CENT TO 57.5 MTOE

Policy proliferation

Starting off with the policy under Production Sharing Contract (PSC) for early monetization of hydrocarbon discoveries in 2014, the government moved in quick succession to the Discovered Small Field Policy in 2015, Hydrocarbon Exploration and Licensing Policy (the acronym is HELP), 2016, policy for extension of PSCs in 2016 and 2017, policy for early monetization of coal bed methane, 2017, setting up of the National Data Repository in 2017, appraisal of unappraised areas in sedimentary basins under the National Seismic Programme in 2017, policy for 'discovered fields and exploration blocks' under the pre-new exploration licensing policy (Pre-NELP) in 2016 and 2017, and the policy to promote and incentivize enhanced recovery methods for oil and gas in 2018.

More recently, the government last year freed up 1 million sq km of 'no-go' areas offshore for exploration after blocking them for decades. The long list finally ends with the enactment of the Oilfields (Regulation and Development) Amendment Act, 2025, which aims to foster an investor-friendly environment and enhance ease of doing business.

If you are wondering how to make sense of this barrage of policies carried out over years in the backdrop of the current energy crisis, here is some perspective.

"For hydrocarbons, the lesson is straightforward. Import dependence will persist in the medium term, but domestic exploration must play a larger stabilising role. India's sedimentary basins remain underexplored, not because of lack of geology, but because exploration is inherently a high-risk business that responds sharply to policy signals," said Deepak Mahurkar, leader, oil and gas at accounting and consultancy firm PwC India.

The global exploration industry offers a simple rule-of- the-thumb often repeated by investors: The tighter and more unpredictable the regime, the faster capital flees to other jurisdictions.

Mahurkar asserted that exploration capital is mobile and, therefore, countries that simplify fiscal terms, allow pricing freedom, reduce retrospective interventions and shorten approval cycles tend to attract sustained risk capital, even when geology is uncertain.

Conversely, frequent contractual reinterpretation or layered clearances raise the risk premium. "India's policy challenge, therefore, is not subsidy but confidence. Stable contracts, faster acreage award cycles, genuine operational autonomy and clear exit options matter far more than headline incentives. A steady revival of domestic oil and gas production, even if modest in scale, acts as strategic insurance by reducing exposure at the margin during global disruptions," he said.

According to Anil Agarwal, chairman of Vedanta, India's largest private oil and gas exploration and production company, the solution lies in declaring the oil and gas sector a national priority, cutting cumbersome processes and facilitating rapid increase in domestic production.

"Government should exempt the sector from time-consuming regulations, including public hearing (for minerals). The latter (exemption) has already been done for critical minerals but needs to be done across the board for all processes and minerals. Environment clearances need to be on self-certification basis. Once a company commits to the government's rulebook, there should be no further process, only audit at a later time," he said in a recent social media post asserting that India imports 90 per cent of its oil used for public transport, 66 percent of liquefied petroleum gas (LPG) used for cooking, and 50 per cent of liquefied natural gas (LNG), which goes into low-emission public transport vehicles. No wonder oil and gas is the biggest item in the country's import bill, at around $176 billion per year.

Imports, energy basket - the more the better

India has expanded its crude sourcing from 27 countries a decade ago to more than 40 today. The expansion of the import basket has helped the country better manage oil supply.

However, this is not so for gas supplies. The current crisis in LPG availability is rooted in three factors – huge consumption volumes, with India being the second-largest LPG consumer, high import dependence, (65 per cent of demand is met through imports), and over-dependence on a single region. As much as 90 per cent of LPG imports come from West Asia the Strait of Hormuz.

For the government, the current crisis has come as a lesson learned the hard way. Reports indicate a drop in weekly LPG imports from West Asia, a pipeline that is being increasingly replaced by the US and other regions.

When it comes to diversification of the domestic energy basket, it is a relatively simple story. Electric mobility, with the potential to usurp oil and gas volumes in the transport sector, has expanded over the years but not enough. Similarly, ethanol blending in petrol has increased but it is still inadequate.

The government launched the Faster Adoption and Manufacturing of (Hybrid &) EVs in India (FAME I) scheme in 2015. In its first phase, 278,000 electric vehicles (EVs) were added, resulting in a savings of about 59 million litres of fuel. The second phase, launched in 2019, subsidised the purchase of 1.6 million EVs and the construction of charging infrastructure, saving 42.9 million litres of fuel. The number of EVs registered in India in 2023-24 increased by 9.7 times compared with 2019-20. The EV market surged in 2025, reaching 2.3 million in sales and an 8 per cent share of new vehicle registrations.

Similarly, ethanol blending in petrol has risen from 1.5 per cent in 2014 to 20 per cent in 2025, a 13-fold increase over 11 years. Ethanol production surged from 380 million litres to 6.61 billion litres in this period, and the 20 per cent ethanol blending programme now saves 44 million barrels of crude oil annually. Yet, these measures have been unable to stave off the current crisis.

Asked what specific steps and policy interventions India could have taken to mitigate the energy shock it is experiencing now, Kirit Parikh, former member of the Planning Commission, and the principal architect of the Integrated Energy Policy (IEP) 2005 told *Business Standard*: "With perfect 20-20 hindsight, we could not have pushed electrification faster, as the technology was not fully evolved. However, a much greater emphasis on public transport and shifting freight movement from road to railways was possible and suggested in the IEP 2005 report."

He said the ongoing West Asia crisis has highlighted the urgent need for India to cut the import dependence on crude oil. "We had recognized the need for self-reliance and solar as our ultimate energy source in the IEP report. The solar mission was started in 2010. The present government has boosted its targets supported by steep a fall in the price of Photo Voltaic cells in the international market. However, further development requires a coordinated policy of RE generation and electricity storage," he said.

A balanced path sought

So, what is the way forward? As Parikh, who heads Integrated Research for Action and Development (IRADe), a research institute, puts it: "Push electric mobility faster, have a coordinated development of RE (renewable energy) generation and storage, and push public transport, especially in smaller cities and towns. Public transport can be attractive if the cost and time are comparable to private vehicle transport."

PwC's Mahurkar is of the same view. He argues that the recent turbulence in West Asia is best viewed not as a failure of India's energy policy, but as a reminder of the scale and complexity of the transition still underway. "Energy self-sufficiency for an economy of India's size cannot be achieved through a single lever. It requires parallel progress across hydrocarbons, renewables and efficiency, each with its own policy logic and constraints," he said.

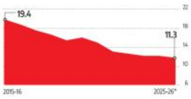
Mahurkar asserts that India's energy journey is neither delayed nor misdirected — it is simply unfinished. He says that the lesson from global disruptions is not to abandon markets, but to deepen resilience. Exploration needs confidence, renewables need execution ease, and efficiency needs institutional muscle. Progress across all three, pursued simultaneously, is what ultimately converts ambition into energy security.

> FOR THE GOVERNMENT, THE CURRENT CRISIS HAS COME AS A LESSON LEARNED THE HARD WAY

Refining strength

Figures in %

Self-sufficiency in petroleum products



*Apr-Feb
Source: Petroleum Planning and Analysis Cell, Ministry of Petroleum & Natural Gas

Growing reliance

Figures in %

Year	Import dependence on crude oil	Import dependence on natural gas
2015-16	80.6	40.7
2016-17	81.7	44.5
2017-18	82.9	45.3
2018-19	83.8	47.3
2019-20	85.0	52.8
2020-21	84.4	54.4
2021-22	85.5	48.4
2022-23	87.4	43.9
2023-24	87.8	47.1
2024-25	88.3	50.1
2025-26*	88.6	50.1

*Apr-Jan; Source: Petroleum Planning and Analysis Cell, Ministry of Petroleum and Natural Gas

IMAGING: AJAYA KUMAR MOHANTY