FIPI

Federation of Indian Petroleum Industry

2025 POLICY & ECONOMIC REPORT

OIL & GAS MARKET

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Executive Summary

The Policy and Economic Report – Oil & Gas Market (February 2025) presents a detailed analysis of the global and Indian energy sectors, covering crude oil, natural gas, macroeconomic trends, and significant policy developments. The report provides insights into key energy market dynamics, demand-supply patterns, pricing trends, and government initiatives that shape the sector.

Global Economic Overview

The global economy is projected to grow at 2.8% in 2025 and 2.9% in 2026, with inflation expected to decline further. Global headline inflation is forecast to reach 4.2% in 2025, supported by easing commodity prices and monetary policy adjustments by major economies. However, ongoing geopolitical tensions, trade restrictions, and climate risks remain key challenges to sustained economic recovery. The crude oil market continues to be impacted by fluctuating demand, production cuts by OPEC+, and volatility in global trade routes.

India's Economic Performance

India's economy continues to exhibit resilience, with GDP growth at 6.2% in Q3 FY25, supported by robust domestic consumption and government-led infrastructure investments. The fiscal deficit remains at 5.9% of GDP, while exports grew by 6%, driven by an 11.6% increase in services exports. India's foreign exchange reserves stood at $640.3 billion, covering 10.9 months of imports. The banking sector has shown stability, with non-performing assets (NPAs) declining to 2.6%, the lowest in over a decade. Credit expansion has remained strong, further supporting industrial and economic growth.

Global Crude Oil Market

Crude oil prices witnessed fluctuations in January due to supply chain disruptions and geopolitical uncertainties. Brent crude averaged $77.84 per barrel, while WTI crude stood at $75.20 per barrel. The global oil demand is expected to grow by 1.4 million barrels per day (mb/d) in 2025, largely driven by non-OECD economies, particularly in Asia. Production from non-OPEC+ (Non-DoC) countries is forecast to rise by 1.0 mb/d in 2025, with the U.S., Brazil, Canada, and Norway leading supply growth. OPEC+ continued its production adjustments to stabilize prices, while refinery margins improved due to strong global demand for petroleum products.

Indian Oil & Gas Market

India's crude oil production in January 2025 was 2.5 million metric tonnes (MMT), reflecting a 1.2% decline year-on-year (YoY). However, crude oil processing increased by 5.2% YoY to 23.7 MMT, indicating higher refinery activity. Petroleum product consumption remained robust, with diesel demand rising 4.2% YoY (7.74 MMT), petrol up 6.7% YoY (3.31 MMT), and LPG demand growing 5.4% YoY (2.84 MMT). India continues to expand its refining capacity and has increased crude oil imports from diverse sources to enhance energy security.

The natural gas sector faced mixed trends, with gross production in January 2025 at 3,066 million standard cubic meters (MMSCM), down 2.3% YoY. However, LNG imports increased by 25.1% YoY, reflecting a growing reliance on imported gas. Sectoral consumption patterns indicate that fertilizers (30%), city gas distribution (21%), and power generation (9%) remain the primary consumers of natural gas in India.

Key Policy Developments in India's Energy Sector

The India Energy Week (IEW'25) emerged as a landmark event, highlighting India's commitment to global energy transition efforts. The event witnessed record participation from key global stakeholders, including industry leaders, policymakers, and investors. A significant policy milestone was the launch of a Clean Cooking Ministerial Conference, emphasizing India's leadership in clean energy solutions. The conference showcased India's success in implementing the Pradhan Mantri Ujjwala Yojana (PMUY) and aimed to foster global collaboration in providing clean, affordable, and accessible cooking energy.

Additionally, renewable energy investments in India continued to gain momentum. The power sector is expected to require ₹6.4 lakh crore in investments until FY35, focusing on solar and wind energy projects. The push for electrified transport and energy storage solutions is evident, with estimates projecting EV charging demand to reach 38 terawatt-hours (TWh) by 2032, necessitating the deployment of 47 gigawatts (GW) of battery storage.

Conclusion

India's energy sector remains dynamic, with strong government initiatives supporting infrastructure development, clean energy transition, and domestic energy security. The global oil and gas markets continue to face volatility, but India's strategic focus on diversification, energy efficiency, and renewable expansion is expected to enhance long-term sustainability. Economic indicators remain positive, and with continued policy support, India is well-positioned to navigate global energy challenges and drive future growth in the sector.

Economy in Focus

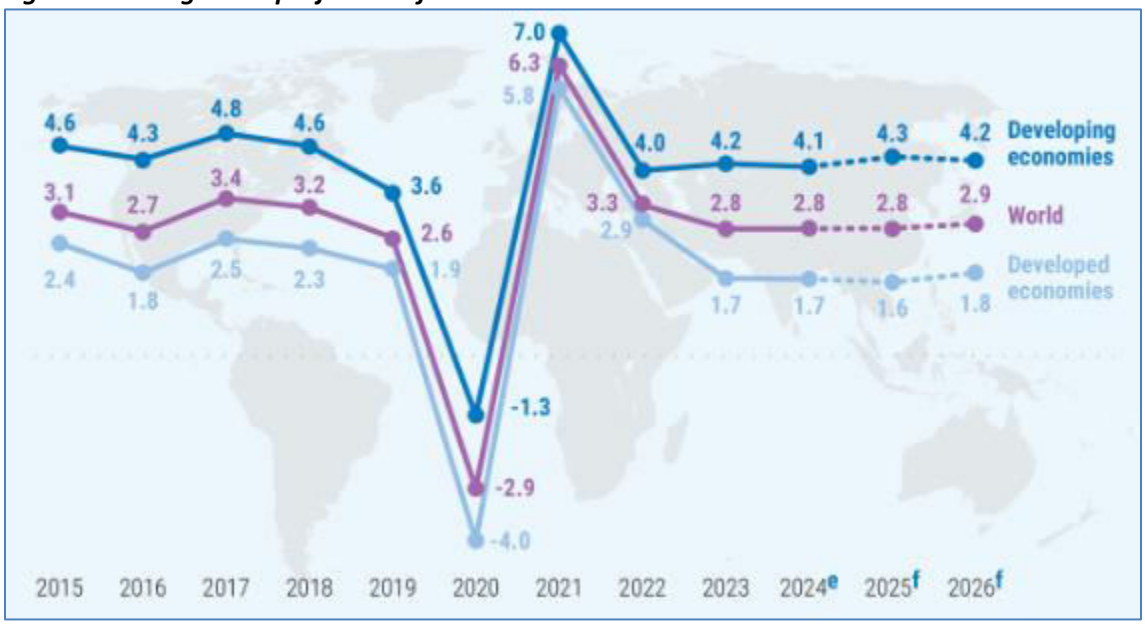
1. A snapshot of the global economy

Global economic growth

According to World Bank, the world economy has shown remarkable resilience, with global growth projected at 2.8 per cent in 2025, the same as in 2024, and 2.9 per cent in 2026. This stability has been underpinned by continued disinflation, softening commodity prices, and monetary easing in many countries.

However, ongoing conflicts, geopolitical tensions, and potential trade restrictions, as well as climate risks pose significant challenges going forward. The global economy is set to grow at a slower pace than the pre-pandemic average of 3.2 per cent recorded between 2010 and 2019, reflecting ongoing structural challenges such as weak investment, slow productivity growth, high levels of debt, and demographic pressures.

Figure 1: GDP growth projections for 2025



Source- World Bank

- Economic growth in the United States is projected to moderate from a robust 2.8 per cent in 2024 to 1.9 per cent in 2025, amid weaker labor market performance and looming public spending cuts.

- Economic growth in China is expected to remain just below 5 per cent in the coming years, constrained by subdued consumption growth, ongoing weakness in the property sector, and the challenges posed by a shrinking population and rising trade tensions.

- Japan and Europe are forecast to experience modest economic recovery in 2025 and 2026, following weaker-than-expected growth in 2024.

Regional Growth Dynamics

- *Advanced economies:* In the *United States*, underlying demand remains robust, reflecting strong wealth effects, a less restrictive monetary policy stance, and supportive financial conditions. Growth is projected to be at 2.7% in 2025. This is 0.5% point higher than the October forecast, in part reflecting carryover from 2024 as well as robust labor markets and accelerating investment, among other signs of strength. Growth is expected to taper to potential in 2026.

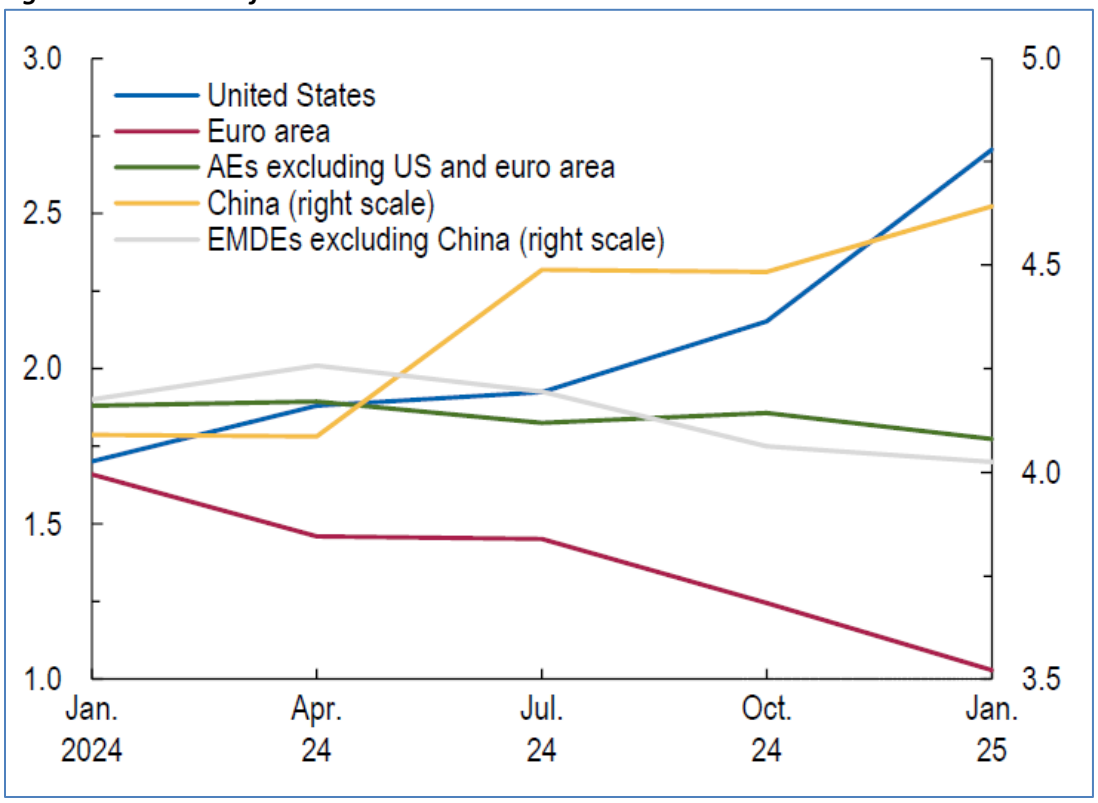
- In the *euro area*, growth is expected to pick up but at a more gradual pace than anticipated in October, with geopolitical tensions continuing to weigh on sentiment. Weaker-than-expected momentum at the end of 2024, especially in manufacturing, and heightened political and policy uncertainty explain a downward revision of 0.2 percentage point to 1.0 percent in 2025. In 2026, growth is set to rise to 1.4 percent, helped by stronger domestic demand, as financial conditions loosen, confidence improves, and uncertainty recedes somewhat.

- In *other advanced economies*, two offsetting forces keep growth forecasts relatively stable. On the one hand, recovering real incomes are expected to support the cyclical recovery in consumption. On the other hand, trade headwinds—including the sharp uptick in trade policy uncertainty-are expected to keep investment subdued.

- In *emerging market and developing economies*, growth performance in 2025 and 2026 is expected to broadly match that in 2024. With respect to the projection in October, growth in 2025 for *China* is marginally revised upward by 0.1 percentage point to 4.6 percent. In *India*, growth is projected to be solid at 6.5 percent in 2025 and 2026, as projected in October and in line with potential.
- In the *Middle East and Central Asia*, growth is projected to pick up, but less than expected in October. This mainly reflects a 1.3 percentage point downward revision to 2025 growth in *Saudi Arabia*, mostly driven by the extension of OPEC+ production cuts. In *Latin America and the Caribbean*, overall growth is projected to accelerate slightly in 2025 to 2.5 percent, despite an expected slowdown in the largest economies of the region.

- Growth in *sub-Saharan Africa* is expected to pick up in 2025, while it is forecast to slow down in *emerging and developing Europe*.

Figure 2: Evolution of 2025 Growth Forecasts



Source – World Economic Outlook (IMF)

Global Inflation

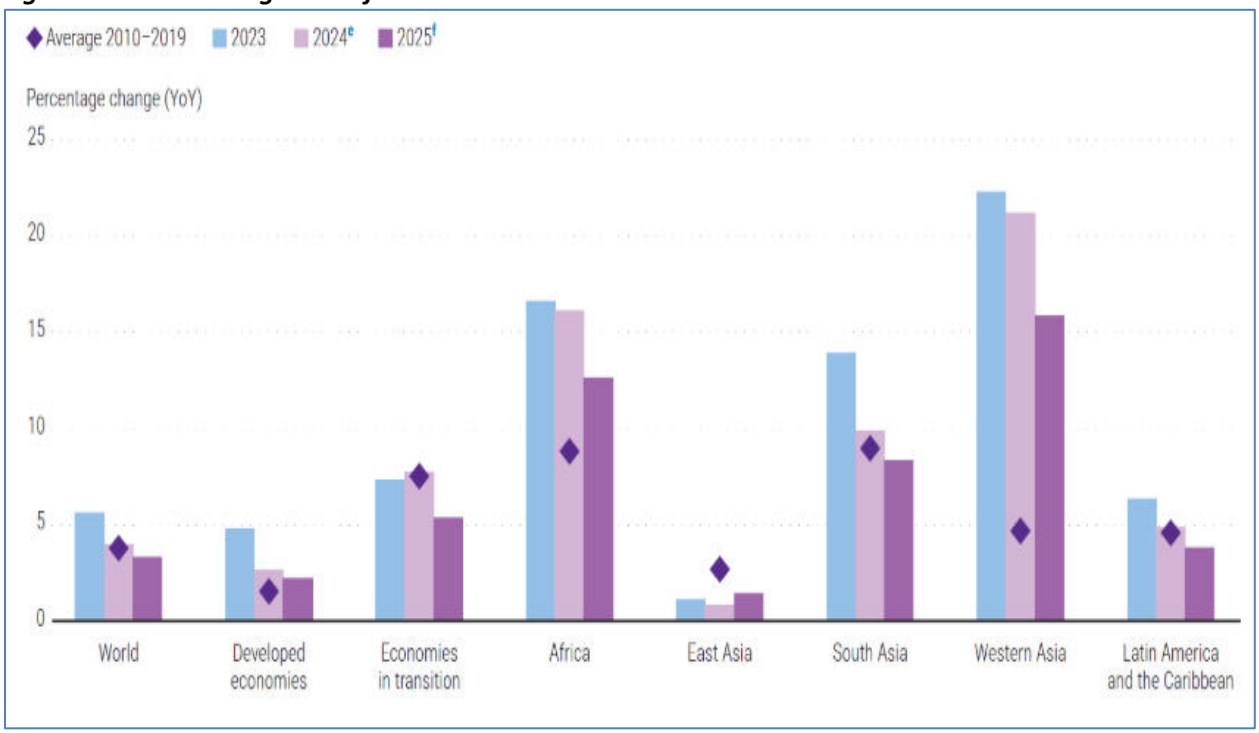
- According to World Bank, global inflation has eased, with headline inflation falling from 5.6 per cent in 2023 to an estimated 4.0 per cent in 2024. However, the pace of disinflation has slowed due to sticky prices in housing and other services sectors as well as tight labour markets in developed economies.

- Inflation is projected to decline further to 3.4 per cent in 2025, although this outcome will depend on how trade restrictions evolve.

- In developed countries, inflation is expected to stabilize around central bank targets, creating room for a further gradual easing of monetary policy.

- In developing countries, inflation is forecast to continue declining but to remain above its long-term average in regions such as Africa and Western Asia, with some countries still experiencing double-digit inflation.

Figure 2: Global & regional inflation



Source- World Bank

Most central banks shifted to monetary easing in 2024 in response to moderating inflationary pressures and concerns over high financing costs. The European Central Bank initiated this policy shift in June, followed by the Bank of England in July and the Federal Reserve in September. The People's Bank of China accelerated its easing measures, while the Bank of Japan diverged by adopting a tightening stance. By November 2024, 67 out of 108 central banks, mostly in developed and Asian economies, had eased their monetary policy stances. This global trend of monetary easing is expected to gradually reduce financing costs in many economies.

Monetary Policy Trends

Most central banks shifted to monetary easing in 2024 in response to moderating inflationary pressures and concerns over high financing costs. Key developments include:

- The European Central Bank (ECB) initiated its policy shift in June 2024, followed by the Bank of England in July and the U.S. Federal Reserve in September.
- The People's Bank of China accelerated its easing measures, while the Bank of Japan diverged by adopting a tightening stance.
- By November 2024, 67 out of 108 central banks, mostly in developed and Asian economies, had eased their monetary policy stances. This global trend of monetary easing is expected to gradually reduce financing costs in many economies.

Risks and Uncertainties

Several risks and uncertainties could impact the global economic outlook during 2025-2026:

- **Policy Uncertainty**: Potential policy changes, including trade restrictions and fiscal policies, could affect global economic stability. For instance, proposed U.S. tariffs could reduce global economic growth by 0.3 percentage points in 2025, assuming retaliatory measures from trading partners.

- **Geopolitical Tensions**: Ongoing geopolitical tensions, such as conflicts affecting commodity markets, could pose risks to global growth. These tensions may lead to increased volatility in financial and commodity markets, impacting investment and consumption decisions.

- **Structural Challenges in Developing Economies**: Developing economies, which contribute significantly to global growth, are projected to face the weakest long-term growth outlook since 2000. Challenges such as high debt levels, weak investment, and the costs associated with climate change are expected to hinder progress in these economies.

Global trade

World trade volume estimates are revised downward slightly for 2025 and 2026. The revision owes to the sharp increase in trade policy uncertainty, which is likely to hurt investment disproportionately among trade-intensive firms. That said, in the baseline, the impact of heightened uncertainty is expected to be transitory. Furthermore, the front-loading of some trade flows in view of elevated trade policy uncertainty, and in anticipation of tighter trade restrictions, provides some offset in the near term.

- Global trade rebounded in 2024, growing at 3.4%, driven by improvements in merchandise trade and a robust expansion in services trade, particularly in the travel sector.

- The growth rate for world trade is projected to moderate to 3.2% in 2025, with uncertainties remaining due to:

    - **Policy Uncertainty**: Potential policy changes, including trade restrictions and fiscal policies, could affect global economic stability. For instance, proposed U.S. tariffs could reduce global economic growth by 0.3 percentage points in 2025, assuming retaliatory measures from trading partners.

    - **Geopolitical Tensions**: Ongoing geopolitical tensions, such as conflicts affecting commodity markets, could pose risks to global growth. These tensions may lead to increased volatility in financial and commodity markets, impacting investment and consumption decisions.

    - **Structural Challenges in Developing Economies**: Developing economies, which contribute significantly to global growth, are projected to face the weakest long-term growth outlook since 2000. Challenges such as high debt levels, weak investment, and the costs associated with climate change are expected to hinder progress in these economies.

Commodity Markets

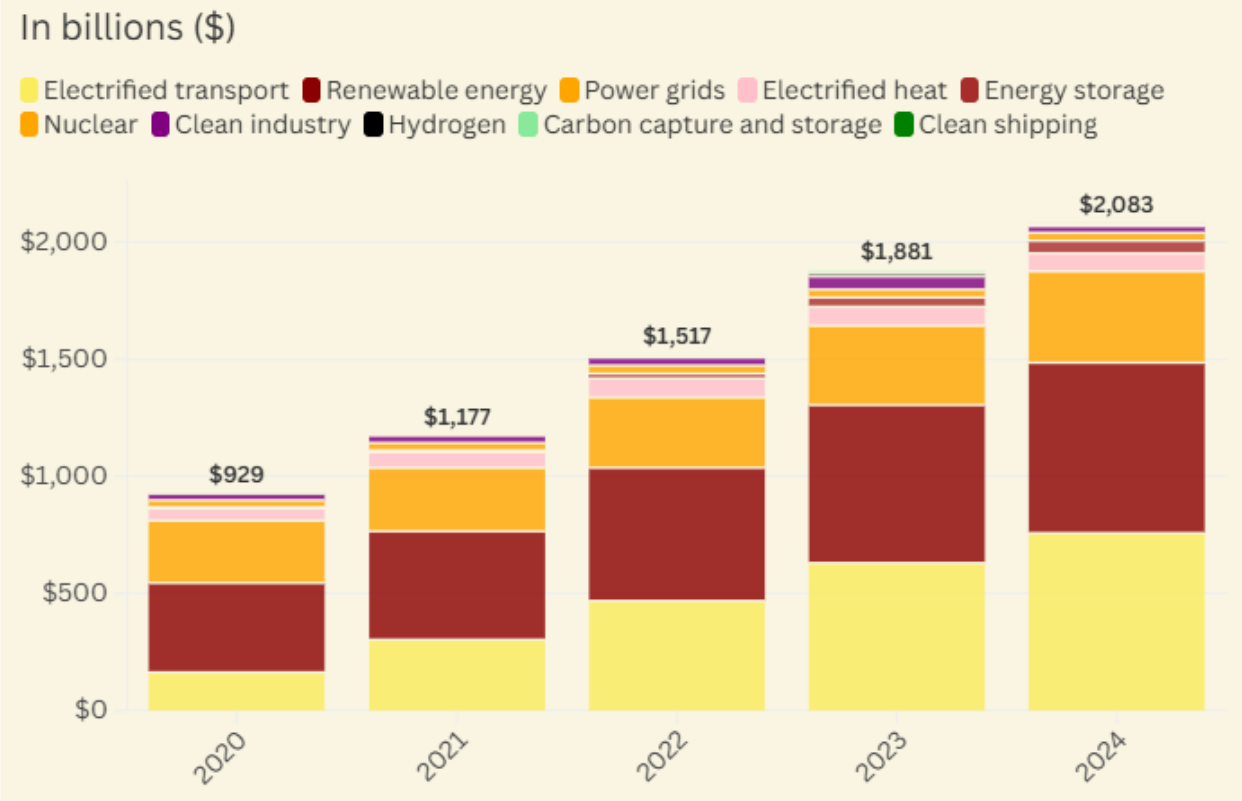
After falling by about 3% in 2024, commodity prices are forecast to decline further by 6% in 2025 and 2% in 2026, which would bring prices to their lowest level since 2020. Nevertheless, most commodity prices remain well above pre-pandemic levels, supporting economic activity in many commodity exporters. Key highlights include:

- The price of Brent crude oil averaged $80/bbl in 2024, about 3 percent lower than a year earlier but 40 percent above the 2015-19 average. This annual price decline reflected an ample global oil supply given modest consumption growth, which offset the impact of escalating geopolitical tensions.
- U.S. natural gas prices are projected to increase steeply in 2025-26 as new liquefied natural gas (LNG) terminals enhance export capacity, increasing competition for domestic supply.
- European gas prices are forecast to rise by 11 percent in 2025, reflecting strong global LNG demand and reduced supplies, before falling 8 percent in 2026 as more LNG supply comes online. Upside risks include conflict-related developments that curtail gas exports from the Middle East and uncertainty around LNG supplies from the Russian Federation to Europe, particularly given recent declines in the amount of LNG shipped to the European Union. On the downside, weaker-than-expected demand growth in fast-growing markets in East Asia and Pacific (EAP) and South Asia (SAR) could lead to lower prices.

2. Global Investment in the Energy Transition Exceeded $2 Trillion for the First Time in 2024-Bloomberg

Investment in the low-carbon energy transition worldwide grew 11% to hit a record $2.1 trillion in 2024, according to Energy Transition Investment Trends 2025, an annual report released by research provider Bloomberg NEF (BNEF). Growth was driven by electrified transport, renewable energy, and power grids, which all reached new highs last year, along with energy storage investment. While overall investment in energy transition technologies set a record, the pace of growth was slower than the previous three years, when investment jumped by 24-29% annually.

Figure 3: Global energy transition investment



Source- Bloomberg NEF

- Electrified transport remained the largest investment driver, reaching $757 billion in 2024. This figure includes spending on passenger EVs, electric two- and three-wheelers, commercial electric vehicles, public charging infrastructure and fuel cell vehicles.
- Investments in renewable energy hit $728 billion, which includes investment in wind (both on- and offshore), solar, biofuels, biomass and waste, marine, geothermal, and small hydro.
- Finally, investment in power grids totaled $390 billion, which includes investment in transmission and distribution lines, substation equipment, and the digitalization of the grid.

The report also reveals a marked difference between investment in mature and emerging sectors of the clean energy economy. Technologies that are proven, commercially scalable and have established business models, like renewables, energy storage, electric vehicles, and power grids, accounted for the vast majority of investment in 2024. These sectors drew $1.93 trillion, growing 14.7%, despite hindrance from policy decisions, higher interest rates and expected slower consumer purchasing.

In contrast, investment in emerging technologies, like electrified heat, hydrogen, carbon capture and storage (CCS), nuclear, clean industry and clean shipping, reached only $155 billion, for an overall drop of 23% year-on-year. Factors that discourage investment in these sectors include affordability, technology maturity, and commercial scalability.

The largest market for investment was mainland China, which alone accounted for $818 billion of investment, up 20% from 2023. China's investment growth was equivalent to two-thirds of the total global increase in the year, with all sectors reviewed in the report showing solid growth.

The EU, US, and UK, which drove growth in 2023, saw different results in 2024. Investment was stagnant in the US, reaching $338 billion, and down in both the EU and UK, hitting $381 billion and $65.3 billion, respectively. China's total investment last year was greater than the combined investment of the US, EU and UK. Of the large markets included in the report, India and Canada also added to overall global growth, increasing their investments by 13% and 19%, respectively.

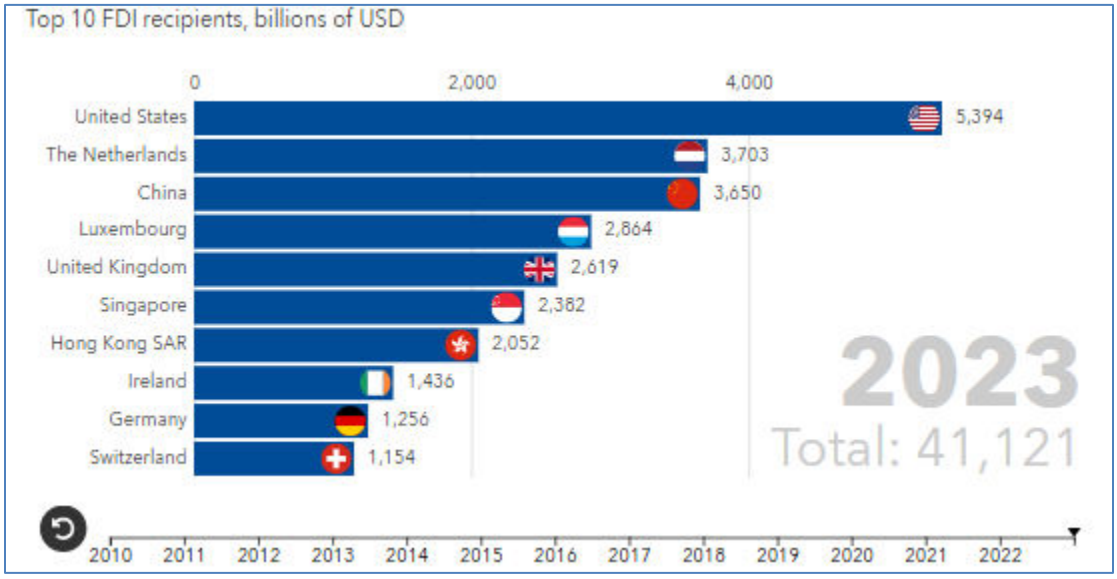
The report highlighted that global energy transition investment would need to average $5.6 trillion each year from 2025 to 2030, to get on track for global net zero by 2050, in line with the Paris Agreement. The current investment levels are only 37% of what is required to get on track. The 'investment gap' differs by geography and technology, with China closest to being on track, followed by Germany and the UK.

3. Foreign Direct Investment Increased to a Record $41 Trillion-IMF

According to IMF, global foreign direct investment grew again in 2023 after declining the previous year. Inward direct investment climbed $1.75 trillion, or 4.4 percent, reaching a record $41 trillion, according to the IMF's latest Coordinated Direct Investment Survey, which provides detailed information on direct investment positions between countries.

FDI rose in most regions, with Central and South Asia, Europe, and North and Central America contributing most. Direct investment between advanced economies grew by $880 billion, or 3.6 percent, while those from advanced economies to emerging market and developing economies rose by $538 billion, or 7.6 percent.

Figure 4: Top destination for inward FDI



Source- IMF

The United States extended its lead as the top destination for direct investment. Singapore recorded the largest gain in 2023, with its position rising $307 billion, followed by $227 billion for the United States and $164 billion for Germany. Meanwhile, the Netherlands and Luxembourg posted the steepest declines but remained in the top five, alongside the United States, China, and the United Kingdom.

Strong growth was also seen in many emerging economies. Most notably, India, Mexico, and Brazil each saw their inward direct investment positions rise by around $130 billion or about 20 percent, marking the largest increase for these three economies in total since the survey began in 2009.

4. Zero-Waste Day on March 30 to highlight need for sustainable consumption

The third International Day of Zero Waste, facilitated by the United Nations Environment Programme (UNEP) and the United Nations Human Settlements Programme (UN-Habitat), will be observed on 30 March 2025.

This year's theme, "towards zero waste in fashion and textiles," highlights the vital role of the fast-growing fashion and textiles sector in countering the waste pollution crisis gripping the planet. Humanity generates up to 2.3 billion tonnes of municipal solid waste annually, a tally that includes everything from food to electronics to textiles. Every year, 92 million tonnes of textile waste is produced globally. This is the equivalent of a garbage truck full of clothing being incinerated or sent to a landfill every second. Between 2000 and 2015, clothing production doubled while the duration of garment use decreased 36 per cent.

The fashion and textiles sector accounts for 2–8 per cent of global greenhouse gas emissions and 9 per cent of microplastic pollution reaching the oceans annually. It also consumes 215 trillion liters of water — equivalent to 86 million Olympic-sized swimming pools. An estimated 15,000 chemicals are used in the textile manufacturing process, and some of these substances accumulate in the environment for decades.

"The fashion and textile sector are fuelling mass overconsumption and waste pollution. And as the industry continues to rapidly grow, so will its environmental impact, unless a shift towards circularity and sustainable production and consumption is taken by all actors," said Jacqueline Alvarez, the Chief of UNEP's Chemicals and Health Branch. "The International Day of Zero Waste 2025 will promote a more circular sector and the recognition of textile waste as a valuable resource."

The Zero-Waste Day will be observed through events and activities held worldwide, aiming to raise awareness of national, subnational, regional, and local zero-waste initiatives and their contributions to achieving sustainable development. UNEP and UN-Habitat invite partners and stakeholders to register their events and activities using this registration link.

5. Indian Economy

India's economic growth

The Economic Survey 2024-25 presented by Smt. Nirmala Sitharaman, Minister of Finance and Minister of Corporate Affairs, in January 2025, provides a comprehensive analysis of India's economic performance and future prospects. Key highlights from the survey include:

1. **Economic Growth**

GDP Growth: India's GDP grew by 6.2% in the October-December quarter of 2024, driven by increased government and consumer spending, as well as a robust Kharif crop output and a revival in rural demand. India's real GDP growth is estimated at 6.4 per cent in FY25 (as per first advance estimates of national income). Real gross value added (GVA) is also estimated to grow by 6.4 per cent FY25. The real GDP growth in FY26 is expected to grow between 6.3 and 6.8 per cent.

2. **Inflation Trends**

Headline Inflation: Inflation eased from 5.4% in FY2024 to 4.9% in FY2025, attributed to moderating commodity prices and effective monetary policies.

3. **Foreign Exchange Reserves**

India's FOREX reserves stood at USD 640.3 billion as of the end of December 2024, sufficient to cover 10.9 months of imports and approximately 90% of the country's external debt. The reserves also provide an import cover of about 11 months, indicating robust external sector resilience. India's external debt remained stable over the past few years, with the external debt to GDP ratio standing at 19.4 per cent at the end of September 2024.

4. **Capital Expenditure (Capex)**

The government's capital expenditure grew by 8.2% between July and November 2024, focusing on infrastructure development to stimulate economic growth. For the fiscal year 2024-25, the capital expenditure target is set at ₹9.5 lakh crore, marking a 28.2% increase compared to the previous year and 2.8 times the level of FY20. Between FY20 and FY25, government capital expenditure on key infrastructure sectors grew by 38.8%, underscoring the emphasis on enhancing the nation's infrastructure.

5. **Sectoral Performance**

Agriculture: The agriculture sector demonstrated resilience, with an average growth rate of 5% between FY2017 and FY2023. The Agriculture and Allied Activities sector contributed approximately 16% of the country's GDP for FY24 (PE) at current prices.

Industry: The industrial sector showed mixed performance, with manufacturing growth remaining subdued, while infrastructure development received a boost through increased capital expenditure. The sector is expected to grow by 6.2 per cent in FY-25 (first advance estimates), driven by robust growth in electricity and construction.

Services: The services sector's contribution to Gross Value Added (GVA) increased from 50.6% in FY2014 to 55.3% in FY2025, indicating its growing significance in the economy. India accounts for seventh-largest share in global services exports, underscoring India's global competitiveness in the sector.

6. **Fiscal Health**

Fiscal Deficit: The fiscal deficit is projected to be 5.9% of GDP in FY2025, aligning with the government's fiscal consolidation roadmap.

7. **Employment and Labor Market**

Labor Market Improvement: India's labor market indicators have shown significant improvement in recent years, reflecting better employment opportunities and workforce participation. Indian labour market indicators have improved with unemployment rate declining to 3.2% in 2023-24 (July-June) from 6% in 2017-18 (July-June).

8. **Foreign Direct Investments (FDI)**

FDI Inflows: Global foreign direct investment grew by 4.4% in 2023, reaching a record $41 trillion. India, Mexico, and Brazil each saw their inward direct investment positions rise by around $130 billion or about 20%, marking the largest increase for these three economies since the survey began in 2009.

9. **Exports**

Overall Export Growth: In the first nine months of FY25, India's overall exports grew by 6%, with services exports increasing by 11.6% year-on-year. Non-Petroleum and non-Gems & Jewellery exports went up by 9.1% reflecting resilience of India's merchandise exports amid volatile global conditions.

Global Market Share: India's share in global goods exports rose to 1.8% in FY24, up from an average of 1.7% during FY16-FY20, indicating a positive trend in export competitiveness.
Challenges from International Trade Policies: India's exports are facing pressures due to stringent trade policies from major partners like the United States and the European Union. The U.S. has escalated import tariffs, and the EU's carbon tax poses additional challenges, necessitating efforts to boost export competitiveness and diversify markets.

10. **Credit and Banking**

Bank Credit Growth: Bank credit has grown at a steady rate, with credit growth converging towards deposit growth, reflecting a balanced expansion in the banking sector.
Non-Performing Assets (NPAs): The Gross Non-Performing Assets (GNPA) ratio of Scheduled Commercial Banks declined to a 12-year low of 2.6%, indicating improved asset quality and financial stability.

Resolution Under Insolvency and Bankruptcy Code (IBC): As of September 2024, ₹3.6 lakh crore has been realized through the resolution of 1,068 cases under the IBC, highlighting the effectiveness of insolvency reforms.

11. **Stock Market**

Market Capitalization: The BSE stock market capitalization to GDP ratio stood at 136%, significantly higher than that of China (65%) and Brazil (37%), reflecting a robust equity market relative to the size of the economy. The total resource mobilisation from primary markets (equity and debt) stands at ₹11.1 lakh crore from April to December 2024, five per cent more than the amount mobilised during FY24.

Recent Market Trends: Indian benchmark stock indices have experienced a downturn, with the Nifty 50 index falling about 14% from its peak in September 2024, marking the steepest consecutive monthly drop in nearly three decades. High inflation and stagnant incomes have impeded economic growth and corporate profits, leading to a notable $25 billion sell-off by foreign investors. Analysts anticipate a gradual and partial recovery in the stock market during 2025.

12. **Technological Advancements**

AI and Employment: The survey highlights the potential of India's young, tech-savvy population to harness Artificial Intelligence (AI) for enhancing productivity and job performance.

13. **Policy Recommendations**

Deregulation and Structural Reforms: Emphasis on accelerating deregulation and implementing structural reforms to foster sustainable economic growth.
Infrastructure Development: Encouragement of private sector participation in infrastructure projects to meet the nation's development goals by 2047.

Union Budget 2025-26

Union Minister for Finance and Corporate Affairs Smt. Nirmala Sitharaman presented the Union Budget for fiscal year 2025-26 on 1st February 2025. The budget focuses on stimulating economic growth, supporting the middle class, and promoting inclusive development. Key highlights include:

1. **Budget Estimates 2025-26:**

Total Expenditure: ₹50.65 lakh crore.
Total Receipts (excluding borrowings): ₹34.96 lakh crore.
Fiscal Deficit Revised Estimate for 2024-25: 4.8% of GDP.
Fiscal Deficit Budget Estimate for 2025-26: 4.4% of GDP.
Net tax receipts estimated at ₹ 28.37 lakh crore.
Gross market borrowings estimated at ₹ 14.82 lakh crore.
Capex Expenditure of ₹11.21 lakh crore (3.1% of GDP) earmarked in FY2025-26.

2. **Taxation - Direct Tax**

Personal Income Tax: The income tax exemption limit has been raised to ₹12 lakh from the previous ₹7 lakh, providing substantial relief to middle-class taxpayers. Revised tax slabs have been introduced to simplify the tax structure and increase disposable income.

Corporate Tax: Reduction in corporate tax rates to encourage investment and growth.

TDS/TCS rationalization for easing difficulties: Rationalization of Tax Deduction at Source (TDS) by reducing number of rates and thresholds above which TDS is deducted. Decriminalization for the cases of delay of payment of TCS up to the due date of filing statement.

Ease of Doing Business: Introduction of a scheme for determining arm's length price of international transaction for a block period of three years. Expansion of the scope of safe harbour rules to reduce litigation and provide certainty in international taxation.

Reducing Compliance Burden: Reduction of compliance burden for small charitable trusts/institutions by increasing their period of registration from 5 years to 10 years.

Extension of investment date for Sovereign and Pension Funds: Extension of the date of making investments in Sovereign Wealth Funds and Pension Funds by five more years, to 31st March, 2030, to promote funding from them to the infrastructure sector.

Extension for incorporation of Start-Ups: Extension of the period of incorporation by 5 years to allow the benefit available to start-ups incorporated before 1.4.2030.

Tonnage Tax Scheme for Inland Vessels: The benefits of existing tonnage tax scheme to be extended to inland vessels registered under the Indian Vessels Act, 2021 to promote inland water transport in the country.

Indirect Tax

Rationalisation of Customs Tariff Structure for Industrial Goods: Removal of seven tariff rates. This is over and above the seven tariff rates removed in 2023-24 budget. After this, there will be only eight remaining tariff rates including 'zero' rate.

Relief on import of Drugs/Medicines: 36 lifesaving drugs and medicines fully exempted from Basic Customs Duty (BCD). 6 lifesaving medicines to attract concessional customs duty of 5%.

Specified drugs and medicines under Patient Assistance Programmes run by pharmaceutical companies fully exempted from BCD; 37 more medicines added along with 13 new patient assistance programmes.

Support to Domestic Manufacturing and Value addition

Export Promotion & Trade facilitation

3. **Agriculture and Rural Development**

Prime Minister Dhan-Dhaanya Krishi Yojana: To be launched in 100 low crop productivity districts, benefiting 1.7 crore farmers by enhancing agricultural productivity and irrigation facilities.

Increased Credit: Enhanced credit support for farmers to boost agricultural output.

Building Rural Prosperity and Resilience: A comprehensive multi-sectoral programme to be launched in partnership with states to address under-employment in agriculture through skilling, investment, technology, and invigorating the rural economy.

Aatmanirbharta in Pulses: Government to launch a 6-year "Mission for Aatmanirbharta in Pulses" with focus on Tur, Urad and Masoor.

National Mission on High Yielding Seeds: A National Mission on High Yielding Seeds to be launched aiming at strengthening the research ecosystem, targeted development, and propagation of seeds with high yield, and commercial availability of more than 100 seed varieties.

Mission for Cotton Productivity: A 5-year mission announced to facilitate significant improvements in productivity and sustainability of cotton farming, and promote extra-long staple cotton varieties.

Enhanced Credit through KCC: The loan limit under the Modified Interest Subvention Scheme to be enhanced from ₹ 3 lakh to ₹ 5 lakh for loans taken through the KCC.

Urea Plant in Assam: A plant with annual capacity of 12.7 lakh metric tons to be set up at Namrup, Assam.

Fisheries: Government to bring a framework for sustainable harnessing of fisheries from Indian Exclusive Economic Zone and High Seas, with a special focus on the Andaman & Nicobar and Lakshadweep Islands.

4. **Manufacturing and Industry:**

MSME support: The investment and turnover limits for classification of all MSMEs to be enhanced to 2.5 and 2 times respectively.

National Manufacturing Mission: Covering small, medium, and large industries to further the "Make in India" initiative.

Credit Cards for Micro Enterprises: Customized Credit Cards with ₹ 5 lakh limit for micro enterprises registered on Udyam portal, 10 lakh cards to be issued in the first year.

Fund of Funds for Startups: A new Fund of Funds, with expanded scope and a fresh contribution of ₹ 10,000 crore to be set up.

Scheme for First-time Entrepreneurs: A new scheme for 5 lakh women, Scheduled Castes and Scheduled Tribes first-time entrepreneurs to provide term-loans upto ₹ 2 crore in the next 5 years announced.

Focus Product Scheme for Footwear & Leather Sectors: To enhance the productivity, quality and competitiveness of India's footwear and leather sector, a focus product scheme announced to facilitate employment for 22 lakh persons, generate turnover of ₹ 4 lakh crore and exports of over ₹ 1.1 lakh crore.

Measures for the Toy Sector: A scheme to create high-quality, unique, innovative, and sustainable toys, making India a global hub for toys announced.

Support for Food Processing: A National Institute of Food Technology, Entrepreneurship and Management to be set up in Bihar.

5. Investment

Investing in People

Saksham Anganwadi and Poshan 2.0: The cost norms for the nutritional support to be enhanced appropriately.
Atal Tinkering Labs: 50,000 Atal Tinkering Labs to be set up in Government schools in next 5 years.
Broadband Connectivity to Government Secondary Schools and PHCs: Broadband connectivity to be provided to all Government secondary schools and primary health centres in rural areas under the Bharatnet project.
Bharatiya Bhasha Pustak Scheme: Bharatiya Bhasha Pustak Scheme announced to provide digital-form Indian language books for school and higher education.
National Centres of Excellence for Skilling: 5 National Centres of Excellence for skilling to be set up with global expertise and partnerships to equip our youth with the skills required for "Make for India, Make for the World" manufacturing.
Expansion of Capacity in IITs: Additional infrastructure to be created in the 5 IITs started after 2014 to facilitate education for 6,500 more students.
Centre of Excellence in AI for Education: A Centre of Excellence in Artificial Intelligence for education to be set up with a total outlay of ₹ 500 crore.
Expansion of medical education: 10,000 additional seats to be added in medical colleges and hospitals next year, adding to 75000 seats in the next 5 years.
Day Care Cancer Centres in all District Hospitals: Government to set up Day Care Cancer Centres in all district hospitals in the next 3 years, 200 Centres in 2025-26.
Strengthening urban livelihoods: A scheme for socio-economic upliftment of urban workers to help them improve their incomes and have sustainable livelihoods announced.
PM SVANidhi: Scheme to be revamped with enhanced loans from banks, UPI linked credit cards with ₹ 30,000 limit, and capacity building support.
Social Security Scheme for Welfare of Online Platform Workers: Government to arrange for identity cards, registration on e-Shram portal and healthcare under PM Jan Arogya Yojna, for gig-workers.

Investing in the Economy

Public Private Partnership in Infrastructure: Infrastructure-related ministries to come up with a 3-year pipeline of projects in PPP mode, States also encouraged.
Support to States for Infrastructure: An outlay of ₹1.5 lakh crore proposed for the 50-year interest free loans to states for capital expenditure and incentives for reforms.
Asset Monetization Plan 2025-30: Second Plan for 2025-30 to plough back capital of ₹ 10 lakh crore in new projects announced.
Jal Jeevan Mission: Mission to be extended until 2028 with an enhanced total outlay.
Urban Challenge Fund: An Urban Challenge Fund of ₹ 1 lakh crore announced to implement the proposals for 'Cities as Growth Hubs', 'Creative Redevelopment of Cities' and 'Water and Sanitation', allocation of ₹ 10,000 crore proposed for 2025-26.

Nuclear Energy Mission for Viksit Bharat: Amendments to the Atomic Energy Act and the Civil Liability for Nuclear Damage Act to be taken up. Nuclear Energy Mission for research & development of Small Modular Reactors (SMR) with an outlay of ₹20,000 crore to be set up, 5 indigenously developed SMRs to be operational by 2033.

Shipbuilding: The Shipbuilding Financial Assistance Policy to be revamped. Large ships above a specified size to be included in the infrastructure harmonized master list (HML).

Maritime Development Fund: A Maritime Development Fund with a corpus of ₹ 25,000 crore to be set up, with up to 49 per cent contribution by the Government, and the balance from ports and private sector.

UDAN - Regional Connectivity Scheme: A modified UDAN scheme announced to enhance regional connectivity to 120 new destinations and carry 4 crore passengers in the next 10 years. Also to support helipads and smaller airports in hilly, aspirational, and North East region districts.

Greenfield Airport in Bihar: Greenfield airports announced in Bihar, in addition to the expansion of the capacity of Patna airport and a brownfield airport at Bihta.

Western Koshi Canal Project in Mithilanchal: Financial support for the Western Koshi Canal ERM Project in Bihar.

Mining Sector Reforms: A policy for recovery of critical minerals from tailings to be brought out.

SWAMIH Fund 2: A fund of ₹ 15,000 crore aimed at expeditious completion of another 1 lakh dwelling units, with contribution from the Government, banks and private investors announced.

Tourism for employment-led growth: Top 50 tourist destination sites in the country to be developed in partnership with states through a challenge mode.

Investing in Innovation

Research, Development and Innovation: ₹20,000 crore to be allocated to implement private sector driven Research, Development and Innovation initiative announced in the July Budget.

Deep Tech Fund of Funds: Deep Tech Fund of Funds to be explored to catalyze the next generation startups.

PM Research Fellowship: 10,000 fellowships for technological research in IITs and IISc with enhanced financial support.

Gene Bank for Crops Germplasm: 2nd Gene Bank with 10 lakh germplasm lines to be set up for future food and nutritional security.

National Geospatial Mission: A National Geospatial Mission announced to develop foundational geospatial infrastructure and data.

Gyan Bharatam Mission: A Gyan Bharatam Mission for survey, documentation and conservation of our manuscript heritage with academic institutions, museums, libraries and private collectors to be undertaken to cover more than 1 crore manuscripts announced.

6. Exports

Export Promotion Mission: An Export Promotion Mission, with sectoral and ministerial targets, driven jointly by the Ministries of Commerce, MSME, and Finance to be set up.

BharatTradeNet: 'BharatTradeNet' (BTN) for international trade to be set-up as a unified platform for trade documentation and financing solutions.

National Framework for GCC: A national framework to be formulated as guidance to states for promoting Global Capability Centres in emerging tier 2 cities.

7. Reforms as fuels

FDI in Insurance Sector: The FDI limit for the insurance sector to be raised from 74 to 100 per cent, for those companies which invest the entire premium in India.
Credit Enhancement Facility by NaBFID: NaBFID to set up a 'Partial Credit Enhancement Facility' for corporate bonds for infrastructure.
Grameen Credit Score: Public Sector Banks to develop 'Grameen Credit Score' framework to serve the credit needs of SHG members and people in rural areas.
Pension Sector: A forum for regulatory coordination and development of pension products to be set up.
High Level Committee for Regulatory Reforms: A High-Level Committee for Regulatory Reforms to be set up for a review of all non-financial sector regulations, certifications, licenses, and permissions.
Investment Friendliness Index of States: An Investment Friendliness Index of States to be launched in 2025 to further the spirit of competitive cooperative federalism anounced.
Jan Vishwas Bill 2.0: The Jan Vishwas Bill 2.0 to decriminalize more than 100 provisions in various laws.

Inflation in India

In January 2025, India's retail inflation, measured by the All-India Consumer Price Index (CPI), eased to a five-month low of 4.31%, down from 5.22% in December 2024. This decline was primarily driven by easing food prices, including vegetables and pulses. The reduced inflation rate has increased expectations for potential rate cuts by the Reserve Bank of India (RBI) to stimulate economic growth, which is projected to slow to its lowest pace in four years.

Specifically, the CPI for Agricultural Labourers (CPI-AL) and Rural Labourers (CPI-RL) decreased by 4 and 3 points, respectively, reaching 1316 and 1328 points in January 2025. Year-on-year inflation rates based on CPI-AL and CPI-RL were 4.61% and 4.73%, respectively, compared to 7.52% and 7.37% in January 2024.

The moderation in inflation has allowed the RBI's Monetary Policy Committee to shift focus towards supporting economic growth. With inflation trending towards the target of 4%, the committee reduced the repo rate by 25 basis points to address the slowdown in growth, which is forecasted at 6.4% for the fiscal year. Overall, the easing inflation in January 2025 provides a conducive environment for monetary policies aimed at stimulating economic growth.

Key figures are highlighted as follows:

- **Overall CPI Inflation:** Year-on-year inflation based on All India Consumer Price Index (CPI) for January 2025 stands at 4.31% (Provisional). There is a sharp decline of 91 basis points in headline inflation compared to December 2024. This is the lowest YoY inflation recorded since August 2024.

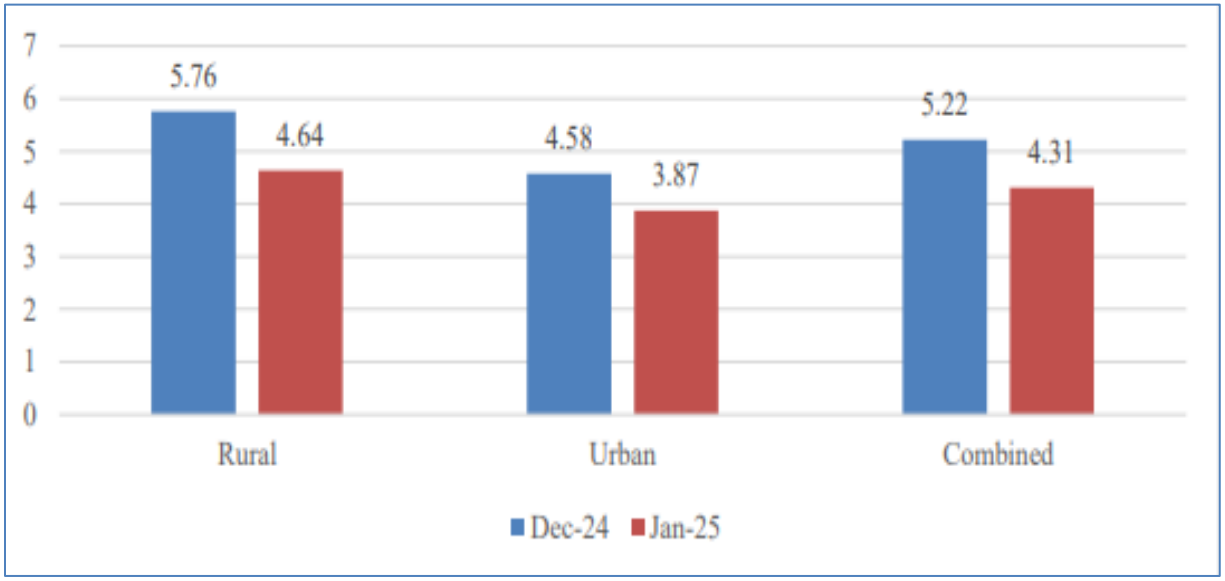
- **Food Price Inflation (CFPI):** Year-on-year inflation based on the Consumer Food Price Index (CFPI) for January 2025 is 6.02% (Provisional). Corresponding inflation for Rural and Urban are 6.31% and 5.53%, respectively.

- **Rural Inflation:** Significant decline in headline inflation in rural sector is observed in January 2025 i.e., 4.64% (provisional) in January 2025 versus 5.76% in December 2024. The CFPI in rural sector is observed as 6.31% in January 2025 versus 8.65% in December 2024.

- **Urban Inflation:** Sharp decline from 4.58% in December 2024 to 3.87% (Provisional) in January 2025 in headline inflation of urban sector. Similar decline is observed CFPI in urban sector which decreased from 7.9% in December 2024 to 5.53% in January 2025.

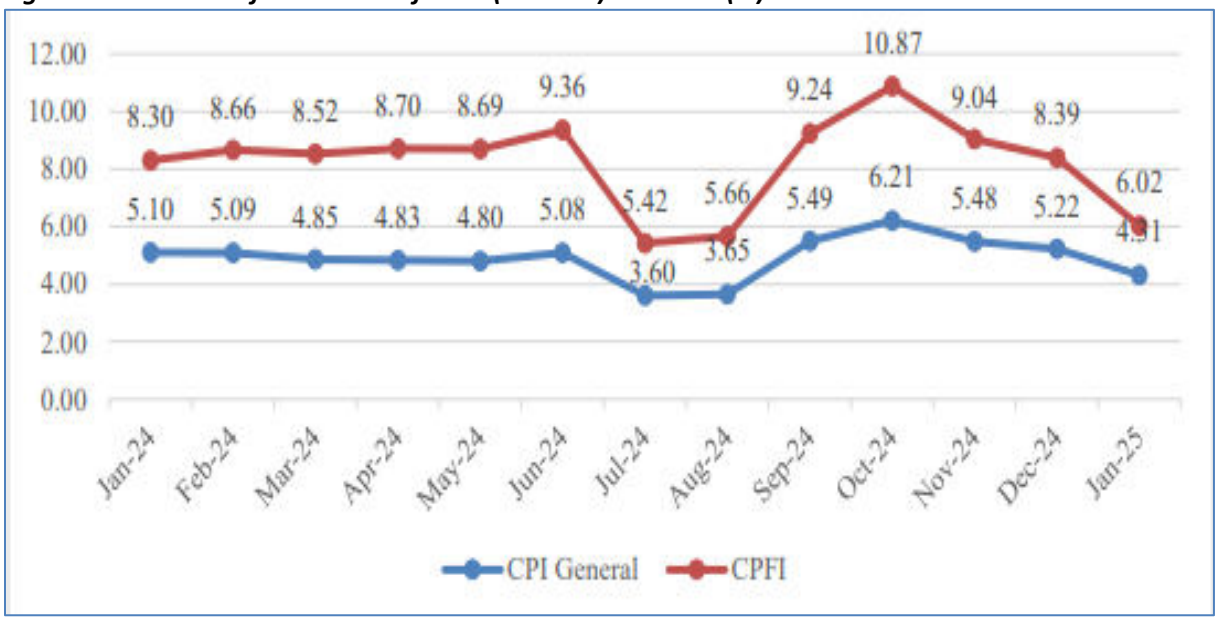
- **Housing Inflation:** Year-on-year Housing inflation forJanuary 2025 is 2.76% versus 2.71% for December 2024. Housing index is measured only for the urban sector.

Figure 5: Year-on-year inflation rate based on CPI



Source- MoSPI

Figure 6: All India Inflation Rates for CPI(General) and CFPI (%)



Source- MoSPI

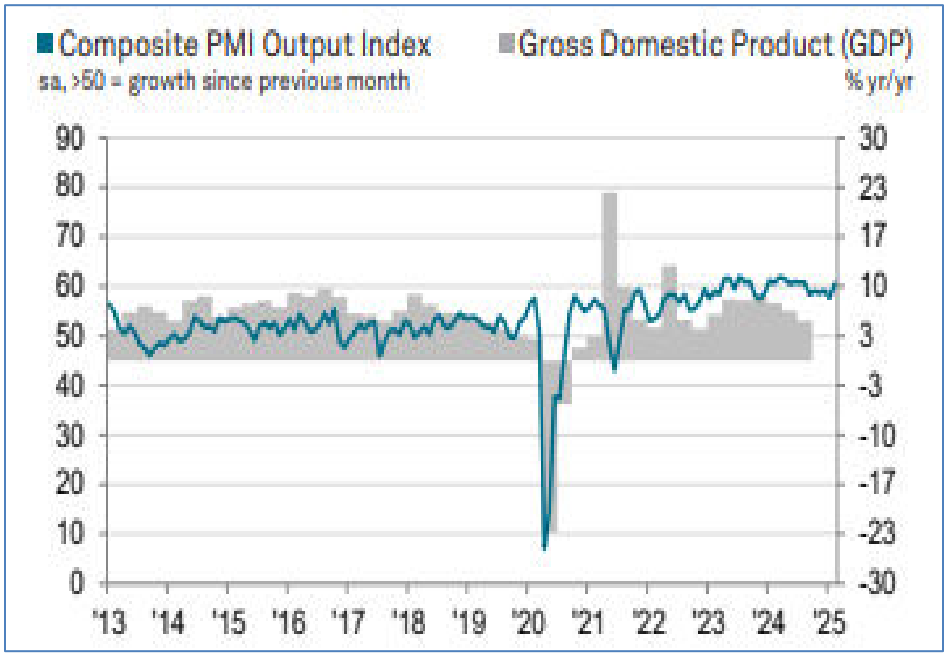
Manufacturing PMI – India

- The HSBC Flash India Composite Output Index – a seasonally adjusted index that measures the month on-month change in the combined output of India's manufacturing and service sectors registered 60.6 in February 2025. The rate of growth was well above its long-run average. Service providers noted a quicker increase than manufacturers, and that was the strongest in just under a year.

- Private sector output in India increased at the fastest pace in six months during February, amid a quicker expansion in services activity. The latest HSBC 'flash' PMI data also indicated stronger growth of aggregate sales, which exerted upward pressure on operating capacities and prompted companies to step up hiring.

- Price indices moved in opposite directions, with a slowdown in cost inflation contrasting with a faster upturn in prices charged for goods and services.

Figure 7: India PMI



Source- S&P Global

India's external position

India's external position

India's forex reserves

- India's foreign exchange reserves fell to $635.72 billion, down by $ 2.5 billion as of week ending February 14, 2025 (Reserve Bank of India (RBI) data).
- Gold Reserves increased by $1.9 billion to $74.15 billion.
- Foreign Currency Assets (FCA) fell by $4.5 billion, settling at $539.59 billion
- Special Drawing Rights (SDRs) rose by $19 million to $17.89 billion.
- India's IMF Reserve Position increased by $14 million, reaching $4.08 billion.

India's foreign trade position

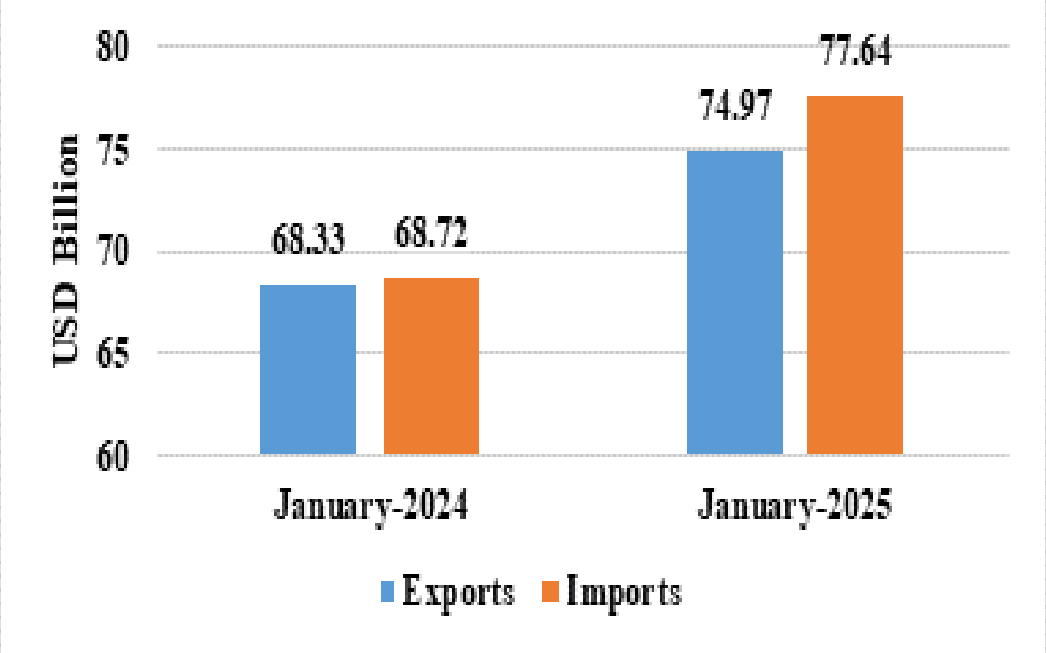
- Exports (Merchandise + Services) for January 2025 stood at $ 74.97 billion, registering a growth of 9.72% YoY growth compared to January 2024.
- Imports (Merchandise +Services) for January 2025 amounted to $ 77.64 billion, registering a growth of 12.98% YoY increase over January 2024.

Table 1: Trade during January 2025

		January 2025 (USD Billion)	January 2024(USD Billion)
Merchandise	Exports	36.43	37.32
	Imports	59.42	53.88
Services	Exports	38.55	31.01
	Imports	18.22	14.84
Overall Trade (Merchandise + Services)	Exports	74.97	68.33
	Imports	77.64	68.72
	Trade Balance	**-2.67**	**-0.39**

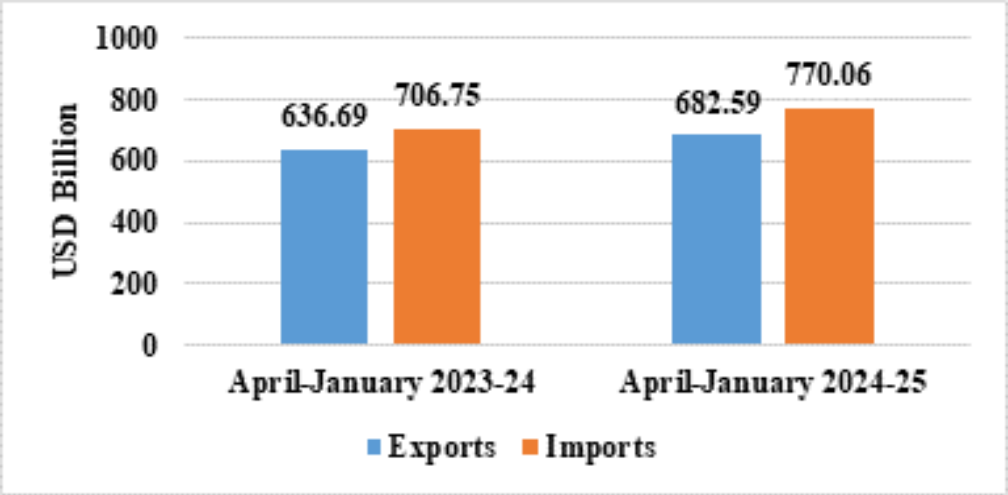
Source- Ministry of Commerce & Industry

Figure 8: Overall Trade during January 2025



Source- RBI

Figure 9: Total Trade during April- November 2024



Source- RBI

- **India's Foreign Trade – April 2024 to January 2025**

Overall Trade Performance

- Total Exports (Merchandise + Services): $682.59 billion, registering a 7.21% YoY growth.
- Total Imports (Merchandise + Services): $770.06 billion, growing by 8.96% YoY.
- Trade Deficit: Widening due to faster import growth than export growth.

Sector-wise Export Growth (January 2025 vs. January 2024)

High Growth Categories:

- Cereals: 103.2% (including Rice: 44.61%).
- Electronic Goods: 78.97%
- Tobacco: 59.18%
- Coffee: 57.07%
- Meat, Dairy & Poultry Products: 35.66%
- Gems & Jewellery: 15.95%
- Drugs & Pharmaceuticals: 21.46%
- Marine Products: 7.98%
- Engineering Goods: 7.44%
- Handicrafts & Carpets: 18.04%

Declining Import Categories:

- Project Goods: -48.14%
- Precious Stones & Pearls: -29.11%
- Coal, Coke & Briquettes: -15.22%
- Crude Petroleum & Products: -13.49%

Services Sector Growth: Estimated growth in services exports (April 2024 - January 2025): 14.49% YoY.

Top Export Destinations (Growth in Value Terms)
January 2025 vs. January 2024:

- USA: 39.02%
- Japan: 53.53%
- Bangladesh: 17.27%
- UK: 14.84%
- Nepal: 20.84%

April 2024 - January 2025 vs. April 2023 - January 2024:

- USA: 8.95%
- UAE: 6.82%
- Netherlands: 9.17%
- UK: 14.17%
- Japan: 21.12%

Top Import Sources (Growth in Value Terms)
January 2025 vs. January 2024:

- China: 17.06%
- Thailand: 136.63%
- USA: 33.46%
- Germany: 72.15%
- UK: 101.62%

April 2024 - January 2025 vs. April 2023 - January 2024:

- UAE: 35.58%
- China: 10.6%
- Russia: 7.17%
- Switzerland: 16.61%
- Thailand: 32.59%

The data highlights robust export performance, strong services growth, and rising imports from key trading partners, reflecting India's evolving trade dynamics.

6. India's social protection coverage doubles to 49%

- According to the ILO World Social Protection Report 2024-26, the proportion of India's population covered by "at least one social protection benefit (excluding health)" doubled from 24.4% in 2021 to 48.8% in 2024.

- Speaking at the 'Regional Dialogue on Social Justice' in New Delhi, Gilbert Houngbo, Director-General of the International Labour Organization (ILO) recognized this figure as a "remarkable achievement," crediting India's strong partnership with the ILO and the government's decisive actions in expanding social protection over the past few years.

- **Key Factors Driving the Expansion:**

  Government Initiatives & Policy Reforms
  - Strengthened partnership with the ILO and targeted social security programs.
  - Enhanced labor market flexibility and job creation.
  - e-Shram Portal: Over 300 million unorganized workers registered, ensuring last-mile delivery of social benefits.
  - e-Shram Mobile App: Launched to improve accessibility and convenience for workers.

  Rising Employability and Skill Development
  - With 65% of India's population under 35, skill development has been prioritized.
  - Employability of Indian graduates increased from 33.95% in 2013 to 54.81% in 2024.

These reforms highlight India's commitment to social security expansion, workforce development, and economic inclusivity.

7. Power sector will need Rs 6.4 lakh crore investment until FY35: Moody's

Investment Projections

- India's power sector will require an estimated ₹4.5-6.4 lakh crore in investment until FY35, accounting for 2% of real GDP annually over the next 10 years, according to Moody's Ratings.
- Beyond FY35, the sector will need ₹6-9 lakh crore annually from FY26-FY51, which is 1.5-2% of GDP over 25 years.
- India's projected power sector investment as a percentage of GDP is higher than China and Australia over the same period.

Key Investment Focus Areas

- Renewable energy will dominate, with solar and wind power leading capacity additions.
- Nuclear and hydropower will see comparatively smaller investments.

Funding Sources & Challenges

- Public and private sector funding along with domestic and foreign capital will drive investments.
- Conventional bank lending and non-banking financial institutions (NBFCs) will finance under-construction projects.
- Debt capital markets will be crucial for refinancing operational projects.
- Access to long-term, low-cost, and foreign capital will be critical to bridge the funding gap.

Role of the Private & Government Sectors

- The private sector will continue to play a major role in India's renewable energy expansion.
- Government-owned power companies are also expected to increase their involvement in the sector.

This highlights India's **strong commitment to clean energy transition**, requiring **robust financial strategies** to meet the growing energy demand.

8. Battery storage to play key role as EV charging demand set to reach 38 TWh by 2032

Battery Storage & Energy Demand Projections

- India will require 47 GW/237 GWh of Battery Energy Storage Systems (BESS) and 26 GW of pumped hydro storage to meet the growing EV charging demand.
- EV charging energy demand is expected to rise to 38 TWh by 2031-32, contributing to an estimated peak power demand of 366.4 GW.
- The National Electricity Plan (NEP) forecasts total electricity demand in India to reach 2,133 TWh by 2031-32, with EV charging accounting for around 3% of this demand.
- Installed power generation capacity is expected to grow from 466 GW in January 2025 to 900 GW by 2032, with 500 GW from renewable energy sources such as wind and small hydro.

EV Market Growth & Charging Patterns

- India's cumulative EV sales reached 4.1 million units in FY 2023-24.
- By 2030, over 28 million EVs are projected to be on Indian roads.
- Annual EV sales distribution projection:
    - 83% e-2 wheelers
    - 10% e-4 wheelers
    - 7% commercial vehicles (trucks, buses, three-wheelers)
- **Charging trends:**
    - 70% of e-4 wheelers and e-2 wheelers will charge after 8 PM (off-peak).
    - 60% of e-trucks will charge during the day.
    - Intercity buses will primarily charge during the day, while intra-city buses will charge overnight.
    - Peak EV charging demand will occur between 9 PM - 5 AM and 12 PM - 2 PM.

Government Initiatives & Grid Balancing Solutions

- The Ministry of Power is implementing initiatives such as the Integrated Local Energy Systems (ILES) collaboration with the EU to optimize energy integration across electricity, heating, cooling, water, and waste management.
- Vehicle-to-Grid (V2G) technology is being explored to enable EVs to supply electricity back to the grid, helping manage demand fluctuations.
- Battery storage expansion is expected to play a critical role in ensuring grid stability and reliable power supply, supporting India's EV adoption and clean energy transition goals.

India's rapid EV growth will require massive investments in battery storage, charging infrastructure, and grid modernization to support sustainable and efficient power distribution.

Lessons from Economics

Jevons Paradox

In economics, the Jevons paradox occurs when technological advancements make a resource more efficient to use (thereby reducing the amount needed for a single application); however, as the cost of using the resource drops, the overall demand increases causing total resource consumption to rise.

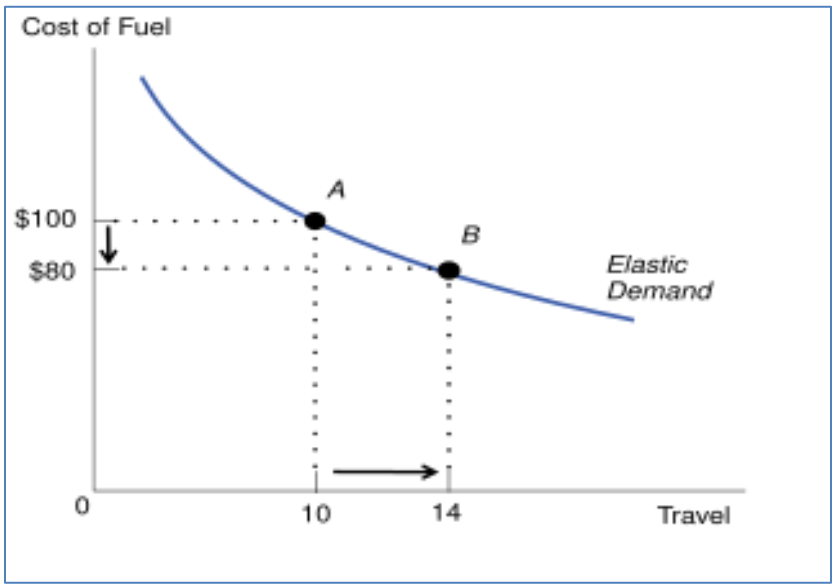
The concept was proposed by William Stanley Jevons in 1865, observing that improved coal efficiency led to higher coal consumption instead of savings.

Factors Influencing Jevons Paradox:

- **Cost Reduction:** Lower usage costs drive higher demand.
- **Increased Accessibility:** Efficiency makes resources more widespread.
- **Economic Growth:** Higher productivity spurs industrial expansion.
- **Elastic Demand:** When demand is highly responsive to price changes, consumption rises sharply.

For instance: -

Economists have observed that consumers tend to travel more when their cars are more fuel efficient, causing a 'rebound' in the demand for fuel. An increase in the efficiency with which a resource (e.g., fuel) is used causes a decrease in the cost of using that resource. A decrease in the cost (or price) of a good or service will increase the quantity demanded (the law of demand). With a lower cost for travel, consumers will travel more, increasing the demand for fuel. This increase in demand is known as the rebound effect. The Jevons paradox occurs when the rebound effect is greater than 100%, exceeding the original efficiency gains.



Jevons Paradox in today's world: -

In the case of AI, as systems become more powerful and accessible, it is likely that their use will grow significantly. This could turn AI into a commodity that is in higher demand than ever before, as more industries and individuals adopt it to perform a wider variety of tasks. While the increased efficiency of AI has many advantages, the Jevons paradox points to an interesting side effect. As AI performs more tasks and becomes more widely used, the demand for energy to power these systems could rise, potentially increasing overall consumption. This paradox suggests that making AI more accessible could unintentionally lead to higher resource use, as the tasks it performs expand alongside its availability.

Critics of Jevons Paradox

The Jevons paradox is used to argue that energy conservation efforts are futile, for example, that more efficient use of oil will lead to increased demand, and will not slow the effects of peak oil. This argument is usually presented as a reason not to enact environmental policies or pursue fuel efficiency.

Oil Market

Crude oil price – Monthly Review

Global oil markets were whipsawed in January as sharply higher prices at the start of the year gave way to myriad pressure points. Anxiety over the impact of new sanctions on Russia and Iran, with fears of potential supply disruptions, triggered an upswing in prices in early January. Market sentiment quickly shifted to renewed concerns over the world economy amid emerging trade wars and its impact on the pace of oil demand growth.

Fresh US sanctions on Russia and Iran roiled markets at the start of the year but they have yet to materially impact global oil supply. Iranian crude oil exports are only marginally lower while Russian flows, so far, continue largely unaffected. At the same time, non-OPEC+ oil supplies, led by the Americas, are set to expand by 1.4 mb/d this year, well above projected demand growth. However, improved OPEC+ compliance with agreed targets is slowly chipping away at this year's projected supply surplus. The producer alliance confirmed that it plans to start unwinding voluntary cuts from April, noting that "these additional voluntary production adjustments have ensured the stability of the oil market".

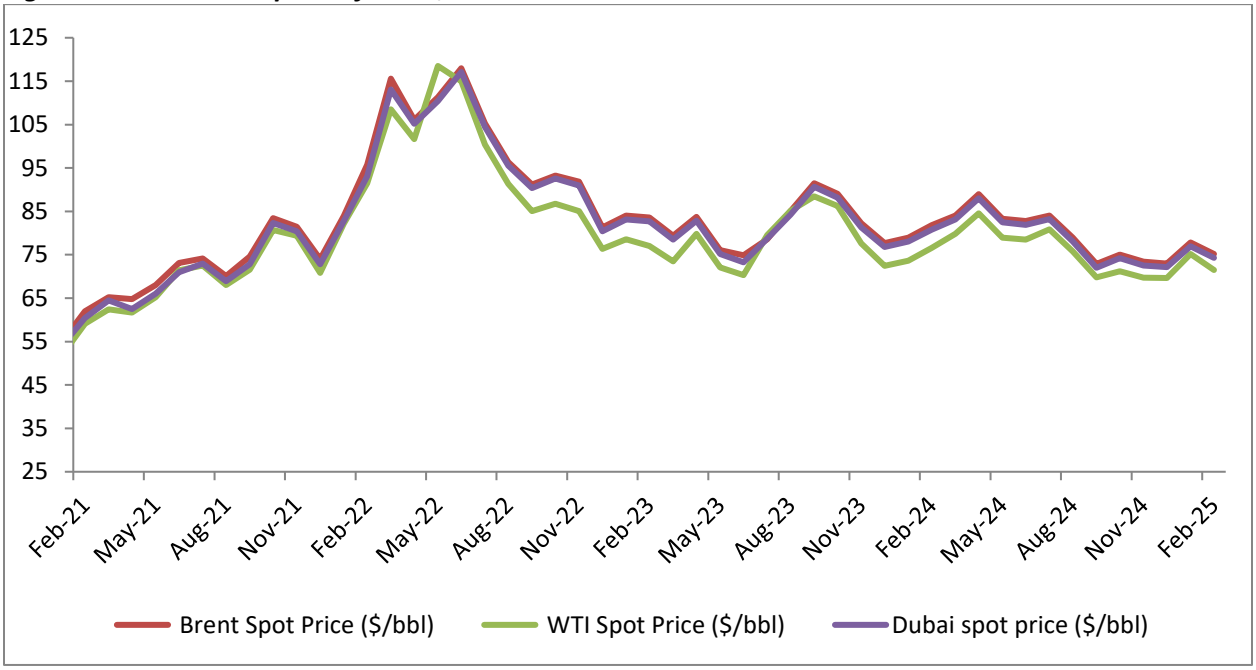
Hedge funds and other money managers sharply raised their net long positions in ICE Brent to their highest levels since April 2024. There were also substantial financial flows into ICE Brent, specifically in the first half of the month. Net long positions in ICE Brent and NYMEX WTI rose by 29.4% over January. Speculators bought the equivalent of 113 mb during the same period. The announcement of new US sanctions that could disrupt crude supply prompted speculators to raise bullish wagers, which, in turn, fuelled oil price momentum. However, in the last week of January, speculators showed mixed movements as WTI-related net long positions fell amid uncertainty about the impacts of US tariffs on energy imports from Canada and Mexico.

Crude spot prices rebounded in January, after two consecutive months of decline, with the sour benchmark Dubai leading the gains, rising 10.2% m-o-m. The increase was driven by uncertainty over short-term oil supply, alongside easing concerns about demand in China. Supply concerns were further intensified by US trade policies that could disrupt crude flows from Eastern Europe and North America. Strong buying activity in the spot market, particularly for near-term loading volumes, as refiners rushed to secure supply, added further support. A decline in US crude stocks also contributed to the upward momentum, while short covering in futures markets provided an additional boost.

In January, the ORB value increased by $6.31, or 8.6%, m-o-m, to stand at $79.38/b, as all ORB component values rose alongside their respective crude oil benchmarks. This largely offset lower official crude selling prices, particularly toward Asian markets, and mixed movement in the value of crude differentials. The ORB value was 66¢, or 0.8%, lower in January 2025, compared to the same month last year. West and North African Basket components – Bonny Light, Djeno, Es Sider, Rabi Light, Sahara Blend and Zafiro, rose by an average of $5.62, or 7.7% m-o-m, to $78.29/b, and multiple-region destination grades – Arab Light, Basrah Medium, Iran Heavy and Kuwait Export – increased on average by $6.42, or 8.8%, m-o-m, to settle at $79.70/b.

Brent crude ranged an average to $75.15 a barrel and WTI ranged to $71.50 per barrel in the month of January 2025.

Figure 10: Benchmark price of Brent, WTI and Dubai crude



Source- World Bank

- Brent crude price averaged $75.15 per bbl in February 2025, down by 3.5% on a month on month (MoM) and by 8.2% on year on year (YoY) basis, respectively.

- WTI crude price averaged $71.50 per bbl in February 2025, down by 4.9% on a month on month (MoM) and by 6.6% on year on year (YoY) basis, respectively.

- Dubai crude price averaged $74.26 per bbl in February 2025, down by 3.5% on a month on month (MoM) and by 8.1% on year on year (YoY) basis, respectively.

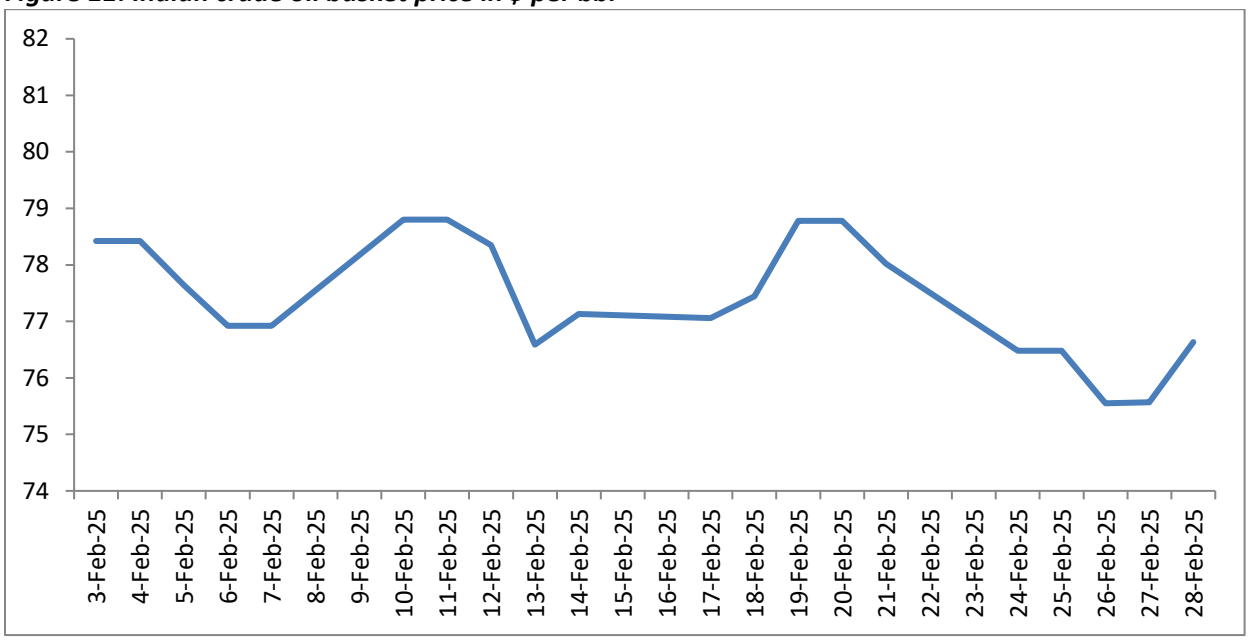
Table 2: Crude oil price in February, 2025

Crude oil	Price ($/bbl)	MoM (%) change	YoY (%) change
Brent	75.15	-3.5%	-8.2%
WTI	71.50	-4.9%	-6.6%
Dubai	74.26	-3.5%	-8.1%

Source- World Bank

Indian Basket Crude oil price

Figure 11: Indian crude oil basket price in $ per bbl



Source- PPAC

- Indian crude basket price averaged $77.33 per barrel in February 2025, down by 3.4% on Month on Month (M-o-M) and by 5.2% on a year on year (Y-o-Y) basis, respectively.

Oil production situation

- Non-DoC liquids supply (i.e. liquids supply from countries not participating in the Declaration of Cooperation) in 2025 is forecast to grow by 1.0 mb/d, y-o-y, unchanged from last month's assessment.
- The main growth drivers are expected to be the US, Brazil, Canada, and Norway. Non-DoC liquids supply growth in 2026 is also forecast at 1.0 mb/d, mainly driven by the US, Brazil and Canada. Meanwhile, natural gas liquids (NGLs) and non-conventional liquids from countries participating in the DoC are forecast to grow by about 80 tb/d, y-o-y, in 2025, to average 8.4 mb/d, followed by an increase of about 0.1 mb/d, y-o-y, in 2026 to average 8.5 mb/d. Crude oil production by the countries participating in the DoC decreased by 118 tb/d in January, m-o-m, averaging about 40.62 mb/d, as reported by available secondary sources.

Table 3: Non-DoC liquids production in 2025, mb/d

Non-OPEC liquids production	2024	1Q25	2Q25	3Q25	4Q25	2025
Americas	27.68	27.94	28.10	28.40	28.64	28.27
of which US	*21.76*	*21.84*	*22.23*	*22.34*	*22.41*	*22.21*
Europe	3.60	3.78	3.65	3.63	3.74	3.70
Asia Pacific	0.43	0.43	0.42	0.43	0.43	0.43
Total OECD	**31.71**	**32.14**	**32.17**	**32.46**	**32.81**	**32.40**
China	4.57	4.63	4.61	4.53	5.54	4.58
India	0.79	0.79	0.79	0.81	0.80	0.80
Other Asia	1.61	1.61	1.58	1.57	1.57	1.58
Latin America	7.23	7.37	7.40	7.48	7.61	7.47
Middle East	2.00	2.01	2.03	2.03	2.03	2.02
Africa	2.30	2.33	2.32	2.32	2.31	2.32
Other Eurasia	0.37	0.37	0.37	0.37	0.37	0.37
Other Europe	0.10	0.10	0.10	0.10	0.10	0.10
Total Non-OECD	**18.97**	**19.19**	**19.21**	**19.21**	**19.32**	**19.23**
Total Non-DoC production	50.68	51.33	51.38	51.67	52.13	51.63
Processing gains	2.52	2.58	2.58	2.58	2.58	2.58
Total Non-DoC liquids production	**53.20**	**53.91**	**53.96**	**54.25**	**54.71**	**54.21**

Source- OPEC monthly report, February 2025

- From the above table, it can be inferred, that the total non-DoC liquids production is expected to reach 54.21 mb/d by 2025.
- The non-DoC liquids supply (i.e. liquids supply from countries not participating in the Declaration of Cooperation) in 2025 is forecast to grow by 1.0 mb/d, y-o-y.

Oil demand situation

- The global oil demand growth forecast for 2025 remains unchanged at 1.4 mb/d. The OECD is forecast to grow by about 0.1 mb/d, while the non-OECD is forecast to grow by about 1.3 mb/d. This robust oil demand growth is expected to continue in 2026.
- The global oil demand in 2026 is forecast to grow by 1.4 mb/d, y-o-y. The OECD is projected to grow by about 0.1 mb/d, y-o-y, while demand in the non-OECD is forecast to grow by about 1.3 mb/d.

Table 4: World Oil demand, mb/d

	2024	1Q25	2Q25	3Q25	4Q25	2025	Growth	%
Total OECD	**45.80**	**44.89**	**45.63**	**46.47**	**46.60**	**45.91**	**0.11**	**0.23**
~ of which US	*20.46*	*19.95*	*20.50*	*20.72*	*20.84*	*20.51*	*0.04*	*0.21*
Total Non-OECD	**57.95**	**59.31**	**58.71**	**59.03**	**60.11**	**59.29**	**1.34**	**2.32**
~ of which India#	*5.55*	*5.88*	*5.86*	*5.55*	*5.89*	*5.79*	*0.24*	*4.31*
~ of which China	16.67	16.99	16.74	17.08	17.12	16.98	0.31	1.86
Total world	**103.75**	**104.20**	**104.34**	**105.50**	**106.71**	**105.20**	**1.45**	**1.40**

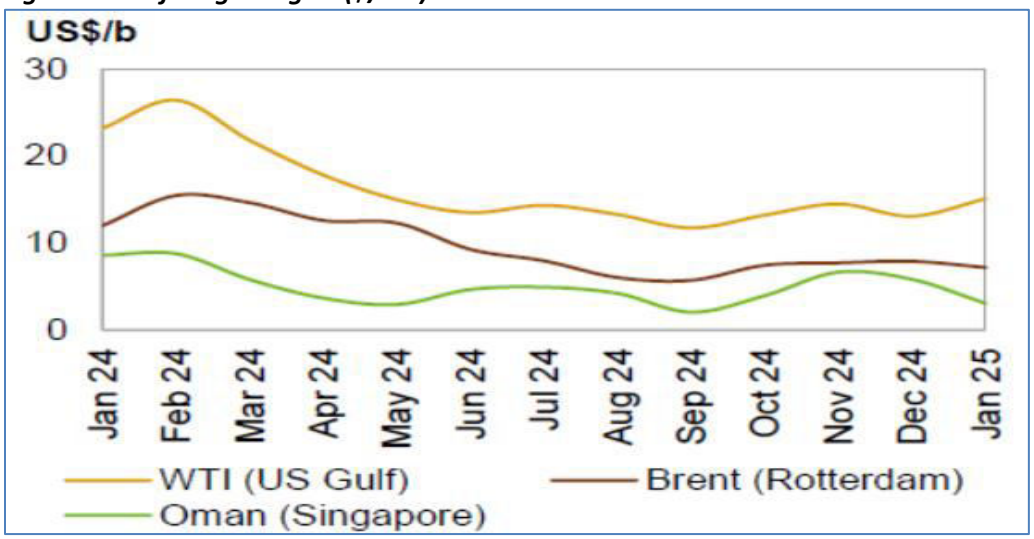
Source- OPEC monthly report, February 2025

Global petroleum product prices

USGC refining margins reversed directions following the previous month's downturn to reach an eight-month high in January. Crack spreads for most major products increased, most pronouncedly for naphtha, which jumped $4.19/b, m-o-m. Transportation fuel cracks performed positively, with the middle distillate crack spreads up by $3.48/b and $2.63/b for jet/kerosene and diesel, respectively. According to preliminary data, refinery intake in the USGC was 1.04 mb/d lower, m-o-m, averaging 15.91 mb/d in January. The improvement in refining economics was largely attributed to product output reductions as severe weather caused temporary refinery shutdowns. Although the impact of winter storms on refineries in the USGC in January was limited, secondary unit outages contributed to short-lived product supply disruptions, thus providing support to product markets. Moreover, an increase in refinery turnaround works ahead of the heavy maintenance season further weighed on product supplies, strengthening product margins. USGC margins against WTI averaged $15.08/b in January, up by $2.00, m-o-m, but down $8.08, y-o-y.

Refinery margins in Rotterdam against Brent registered a slight decrease while continuously demonstrating significant stability for the fourth consecutive month compared to the margin performance seen in the USGC and Singapore. Crack spreads of all key products decreased, except for jet/kerosene and gasoil cracks, which moved up, m-o-m. Platts data from 30 January indicated a significant total product inventory rise at the Amsterdam- Rotterdam-Antwerp storage hub in January. This was the largest monthly total product stock build registered since February 2024, signalling a growing demand-supply imbalance leading to an overall weaker product market in Northwest Europe. Refinery runs in January reversed trends and moved down by an estimated 200 tb/d, m-o-m, before settling at 9.77 mb/d across the EU-14 plus Norway and the UK. Refinery margins against Brent in Europe averaged $7.17/b in January, which was 71¢ lower, m-o-m, and $4.82 lower, y-o-y.

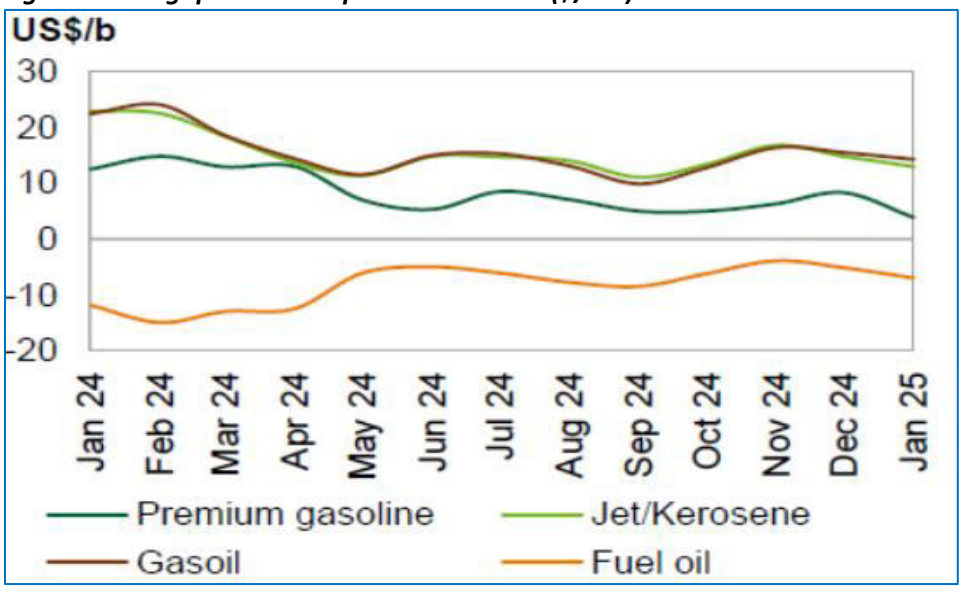
Figure 12: Refining Margins ($/bbl)



Source- Argus and OPEC

The Southeast Asia gasoline 92 crack spread against Dubai fell from the five-month high reached in the previous month. In January gasoline showed the strongest downturn across the barrel in Southeast Asia with stronger feedstock prices and firm gasoline output within the region weighing on the product's performance. The product's margin averaged $3.85/b in January, down $4.43, m-o-m, and $8.60, y-o-y.

Figure 13: Singapore crack Spreads vs. Dubai ($/bbl)



Source- Argus and OPEC

The Singapore gasoil crack spread eased with higher Chinese exports leading to higher gasoil availability in Singapore. Additionally, weaker demand from Europe amid a tight arbitrage, a weak cross-regional price spread and stronger freight rates further contributed to weaker Asian gasoil margins. The Singapore gasoil crack spread against Dubai averaged $14.26/b, down by $1.23, m-o-m, and $8.17, y-o-y.

Table 5: Singapore FOB, refined product prices ($/bbl) in January 2025

Singapore product prices	Price ($/b)	MoM change (%)	YoY change (%)
Naphtha	73.11	5.2%	0.1%
Premium gasoline (unleaded 95)	86.70	2.1%	-9.6%
Regular gasoline (unleaded 92)	84.40	3.8%	-7.4%
Jet/Kerosene	93.48	6.5%	-8.0%
Gasoil/Diesel (50 ppm)	95.21	7.3%	-7.1%
Fuel oil (180 cst 2.0% S)	94.56	7.1%	-6.1%
Fuel oil (380 cst 3.5% S)	73.58	8.4%	9.9%

Source- OPEC

Petroleum products consumption in India

Monthly Review:

- Overall consumption of all petroleum products in January 2025 with a volume of 20.49 MMT registered a growth of 2.25% on volume of 20.04 MMT in January 2024.
- MS (Petrol) consumption during the month of January 2025 with a volume of 3.31 MMT recorded a growth of 6.70% on volume of 3.10 MMT in January 2024.
- HSD (Diesel) consumption during the month of January 2025 with a volume of 7.74 MMT recorded growth of 4.22% on volume of 7.43 MMT in the month of January 2024.
- LPG consumption during the month of January 2025 with a volume of 2.84 MMT registered growth of 5.43% over the volume of 2.70 MMT in the month of January 2024.
- ATF consumption during January 2025 with a volume of 0.784 MMT registered a growth of 9.50% over the volume of 0.716 MMT in January 2024.
- Bitumen consumption during January 2025 with a volume of 0.767 MMT registered de-growth of 3.03% over volume of 0.791 MMT in the month of January 2024.
- Kerosene consumption registered de-growth of 3.21% during the month of January 2025 as compared to January 2024.

Table 6: Petroleum products consumption in India, January 2025 and Year till Date (YTD)

	Monthly			Year till Date	
Consumption of Petroleum Products (P)	**Consumption in '000 MT**	**MoM (%) change**	**YoY (%) change**	**Consumption in '000 MT**	**YoY (%) change**
LPG	2,844	2.3%	5.4%	26,035	6.51%
Naphtha	1,149	6.9%	-11.9%	11,204	0.12%
MS	3,308	-0.4%	6.7%	33,318	7.93%
ATF	784	0.3%	9.5%	7,449	9.83%
SKO	35	-1.0%	-3.2%	343	-17.56%
HSD	7,739	-3.9%	4.2%	75,989	2.42%
LDO	76	8.8%	11.4%	685	5.08%
Lubricants & Greases	398	2.1%	22.9%	3,817	22.22%
FO & LSHS	549	-3.7%	-3.1%	5,511	0.11%
Bitumen	767	-3.2%	-3.0%	6,535	-4.66%
Petroleum coke	1,895	-1.7%	12.8%	18,280	18.30%
Others	946	1.7%	-28.8%	10,047	-13.87%
TOTAL	20,489	-1.2%	2.2%	1,99,214	4.22%

Source- PPAC

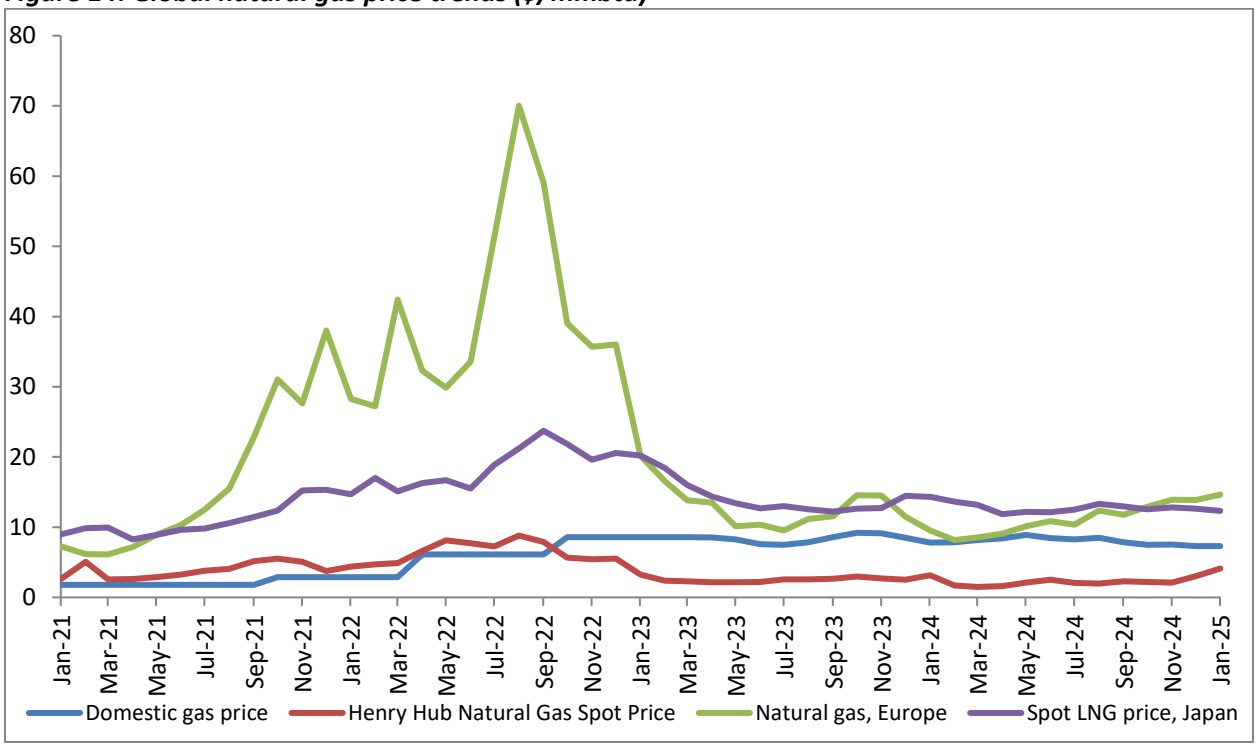
Year Till Date: 1st April 2024 – 31st March 2025

Natural Gas Market

Natural Gas Price – Monthly Review

- Natural gas spot prices at the US Henry Hub benchmark averaged $4.13 per million British thermal units (MMBtu) in January 2025. Henry Hub's natural gas prices advanced for a second consecutive month in January, rising by 37.2%, m-o-m. Prices rose sharply in the first half of the month following unexpectedly colder weather across the US, leading to sharp declines in storage amid higher demand. According to data from the US Energy Information Administration (EIA), weekly average underground storage decreased in January by 16.5%, m-o-m. Henry Hub prices were up by 29.9%, y-o-y.
- Natural gas spot price at the Title Transfer Facility (TTF) in the Netherlands in Europe traded at an average of $14.66 per MMBtu. The average Title Transfer Facility (TTF) rose in January, increasing by 5.8%, m-o-m. Prices rose amid lingering supply concerns. According to data from Gas Infrastructure Europe, EU storage levels fell sharply to 53.6% of capacity as of 31 January, 18.6 percentage points below the previous month. Moderate demand partially offset gains amid sporadic cold snaps. However, a combination of US sanctions on Russia's LNG exports and uncertainties regarding US trade policy heightened TTF volatility in January. Prices were up by 53.3%, y-o-y.
- Japan Liquefied Natural Gas Import Price averaged at $12.33 per MMBtu for January 2025. There is a change of -2.5% from last month and -14.0% from one year ago.
- The Union Cabinet has approved a new formula for pricing of natural gas and imposed cap or ceiling price on the same. Natural gas produced from legacy or old fields, known as APM gas, will now be indexed to crude oil prices. From April 1 2023, APM gas will be priced at 10% of the price of basket of crude oil that India imports. The rate such arrived at however will be capped at US$ 6.5 per MMBTU. The price such arrived at will also have a floor of US$4 per MMBTU.
- Further, in accordance with MoP&NG, Govt. of India, pricing freedom for gas being produced from discoveries in Deepwater, Ultra Deepwater and High Pressure-High Temperature areas, the gas price ceiling for the period 1st April, 2023 - 30th September, 2023 was notified as US$ 12.12/MMBTU on Gross Calorific Value (GCV) basis as per notification dated 31st March, 2023. Gas price ceiling was further revised for the period 1st October, 2023 – 31st March, 2024 was notified as US$9.96/MMBTU on Gross Calorific Value (GCV) basis as per notification dated 30th September 2023. Gas price ceiling was further revised for the period 1st April, 2024 – 30th September, 2024 was notified as US$9.87/MMBTU on Gross Calorific Value (GCV) basis as per notification dated 31st March 2024. For the period 1st October, 2024 – 31st March, 2025 Gas price ceiling was further revised as US$10.16/MMBTU on Gross Calorific Value (GCV) basis as per notification dated 30th September 2024.

Figure 14: Global natural gas price trends ($/mmbtu)



Source- EIA, World Bank

Table 7: Gas price, January 2025

Natural Gas	Price ($/MMBTU)	MoM (%) change	YoY (%) change
India, Domestic gas price (Feb'25)	7.94	8.77%	1.15%
India, Gas price ceiling – difficult areas (Oct'24-Mar'25)	10.16	2.94%	2.01%
GIXI (Gas index of India) price*	14.06	-0.2%	21%
Henry Hub	4.13	37.2%	29.9%
Natural Gas, Europe	14.66	5.8%	53.3%
Liquefied Natural Gas, Japan	12.33	-2.5%	-14.0%

Source- EIA, PPAC, World Bank, IGX
**Prices are weighted average prices (excluding ceiling price gas)*

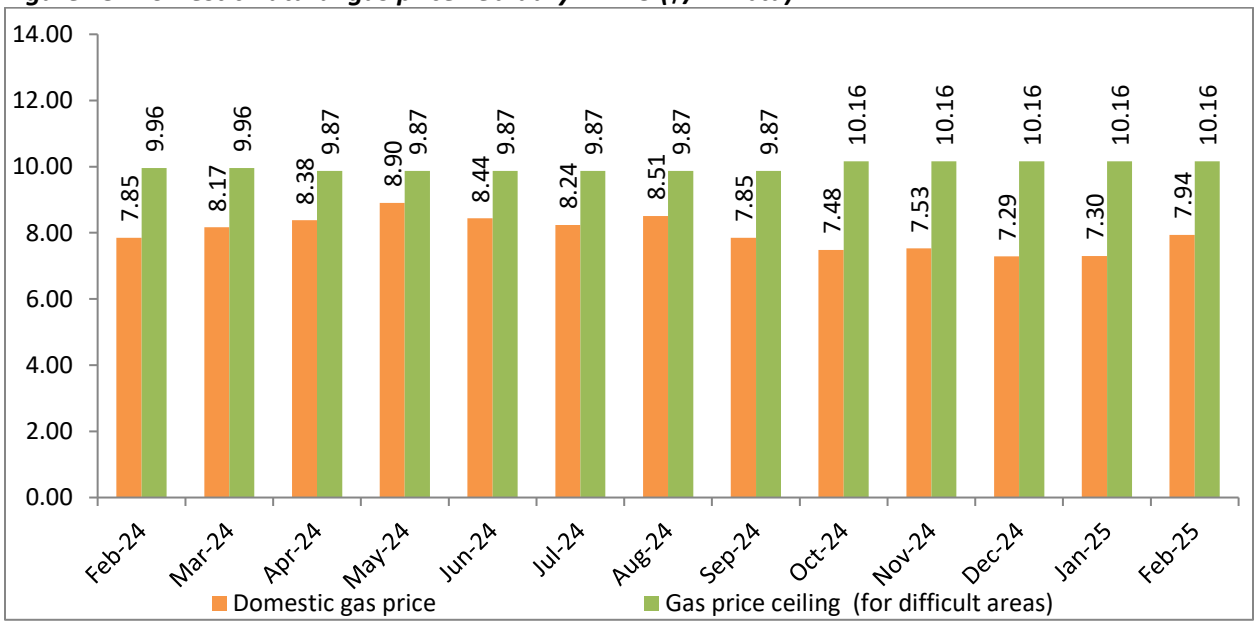
Table 8: Gas price, GCV Basis

Period	Domestic Gas calculated price in US$/MMBTU	Gas price ceiling – difficult areas price in US$/MMBTU
1-31 May 2023	8.27	12.12
1-30 June 2023	7.58	12.12
1-31 July 2023	7.48	12.12
1-31 August 2023	7.85	12.12
1-30 September 2023	8.60	12.12

Period	Domestic Gas calculated price in US$/MMBTU	Gas price ceiling – difficult areas price in US$/MMBTU
1-31 October 2023	9.20	9.96
1-30 November 2023	9.12	9.96
1-31 December 2023	8.47	9.96
1-31 January 2024	7.82	9.96
1-29 February 2024	7.85	9.96
1-31 March 2024	8.17	9.96
1-30 April 2024	8.38	9.87
1-31 May 2024	8.90	9.87
1-30 June 2024	8.44	9.87
1-31 July 2024	8.24	9.87
1-31 August 2024	8.51	9.87
1-30 September 2024	7.85	9.87
1-31 October 2024	7.48	10.16
1-30 November 2024	7.53	10.16
1-31 December 2024	7.29	10.16
1-31 January 2025	7.30	10.16
1-28 February 2025	7.94	10.16

Source- PPAC

Figure 15: Domestic natural gas price February'24–25 ($/mmbtu)



Source- PPAC

Indian Gas Market

- Gross production of natural gas for the month of January 2025 (P) was 3066 MMSCM which was lower by 2.3% compared with the corresponding month of the previous year.

- Total import of LNG (provisional) during the month of January 2025 was 3047 MMSCM (P) (increase of 7.6% over the corresponding month of the previous year).

- Natural gas available for sale during January 2025 was 5602 MMSCM (increase of 3.7% over the corresponding month of the previous year).

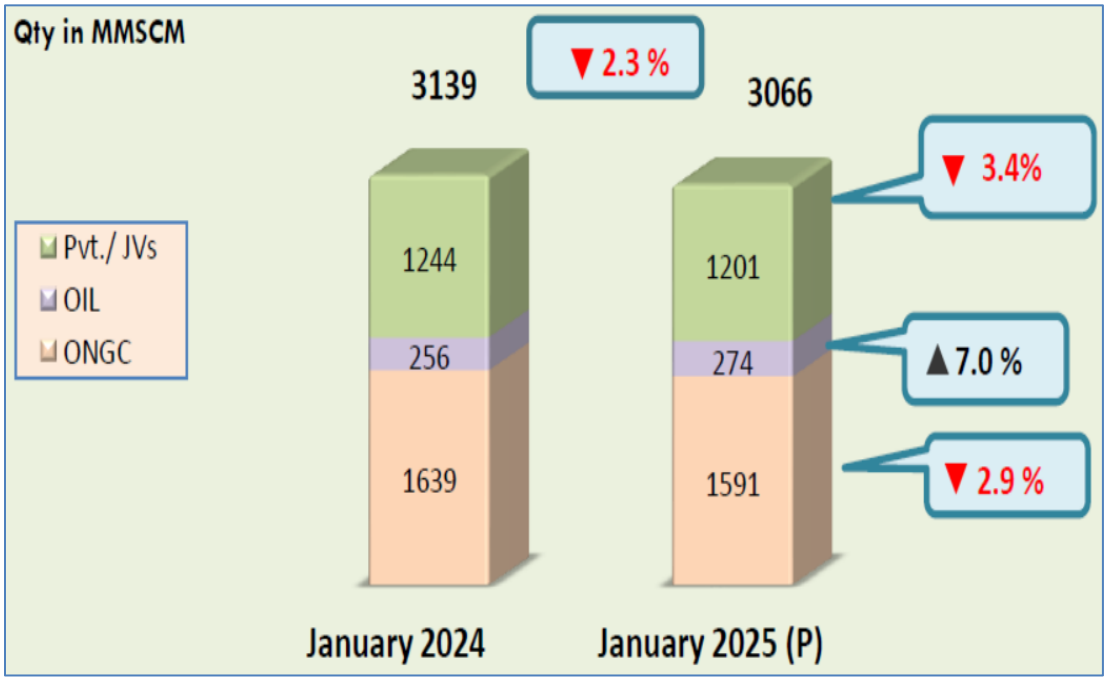
- Total consumption during January 2025 was 5834 MMSCM (provisional). Major consumers were fertilizer (30%), City Gas Distribution (CGD) (23%), Power (10%), Refinery (8%) and Petrochemicals (6%).

Monthly Report on Natural gas production, imports, and consumption – January 2025

1. Domestic Natural Gas Gross Production:

Domestic natural gas gross production for the month of January 2025 was 3066 MMSCM (decrease of 2.3% over the corresponding month of the previous year).

Figure 16: Domestic natural gas Gross production (Qty in MMSCM)

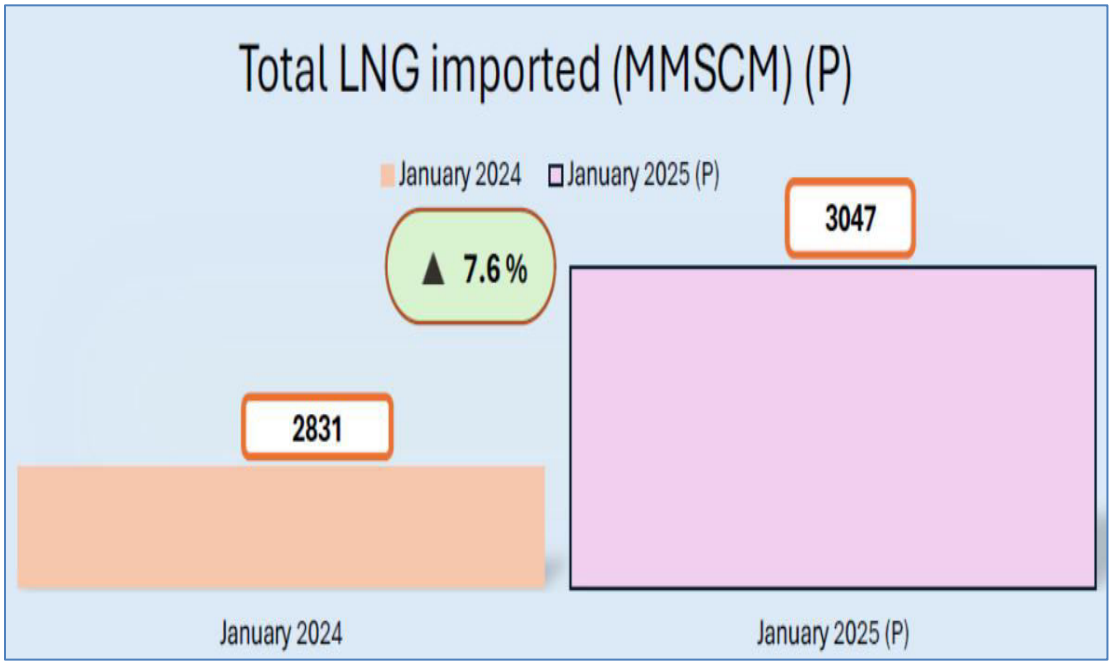


Source- PPAC

2. LNG imports:

Total import of LNG (provisional) during the month of January 2025 was 3047 MMSCM (P) (increase of 7.6% over the corresponding month of the previous year).

Figure 17: LNG imports (Qty in MMSCM)

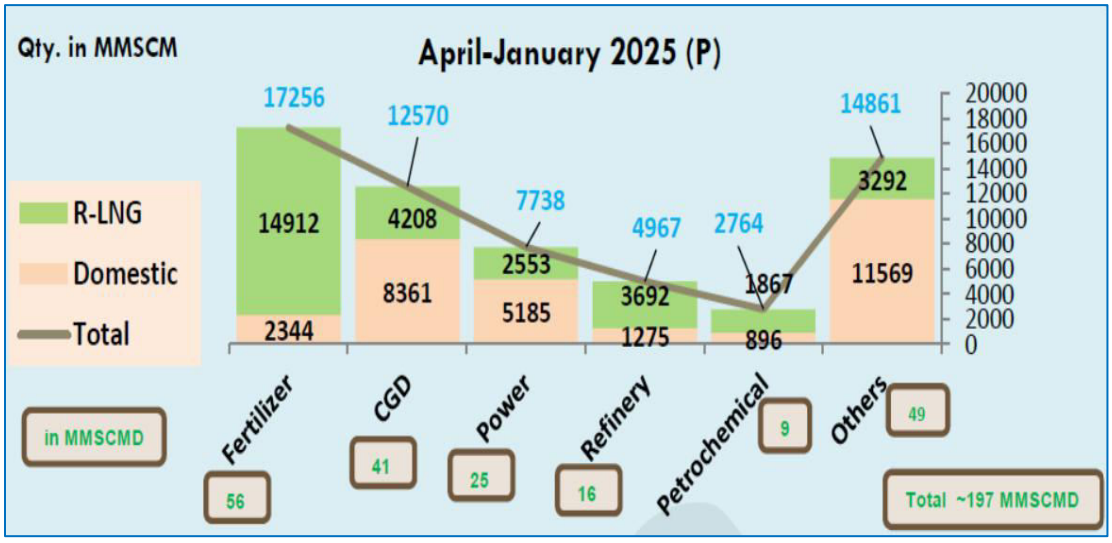


Source- PPAC

3. Sectoral Consumption of Natural Gas:

Major consumers were fertilizer, CGD, power, refinery, petrochemicals among others.

Figure 18: Sectoral Consumption of Natural Gas (Qty in MMSCM) in April-January 2025



Source- PPAC

Key developments in Oil & Gas sector

- **Monthly Production Report for January, 2025**

1. Production of Crude Oil

Indigenous crude oil and condensate production during January 2025 was 2.5 MMT. OIL registered a production of 0.3 MMT, ONGC registered a production of 1.6 MMT whereas PSC/RSC registered production of 0.6 MMT during January 2025. There is a de-growth of 1.2% in crude oil and condensate production during January 2025 as compared with the corresponding period of the previous year.

2. Production of Natural Gas

Gross production of natural gas for the month of January 2025 (P) was 3066 MMSCM which was lower by 2.3% compared with the corresponding month of the previous year. The cumulative gross production of natural gas of 30376 MMSCM for the current financial year till January 2025 was higher by 0.1% compared with the corresponding period of the previous year.

3. Crude Oil Processed (Crude Throughput)

Total Crude oil processed during January 2025 was 23.7 MMT which is 5.2% higher than January 2024, where PSU/JV refiners processed 16.4 MMT and private refiners processed 7.3 MMT of crude oil. Total indigenous crude oil processed was 2.1 MMT and total Imported crude oil processed was 21.6 by all Indian refineries (PSU+JV+PVT). There was a growth of 2.5% in total crude oil processed in April-January current Financial Year as compared to same period of previous Financial Year.

4. Production of Petroleum Products

Production of petroleum products was 24.9 MMT during January 2025 which is 8.3% higher than January 2024. Out of 24.9 MMT, 24.6 MMT was from refinery production & 0.3 MMT was from fractionator. There was a growth of 3.4% in production of petroleum products in April-January FY 2024 – 25 as compared to same period of FY 2023 – 24. Out of total POL production, in January 2025, share of major products including HSD is 41.8%, MS 17.3%, Naphtha 6.2%, ATF 6.6%, Pet Coke 5.2%, LPG 4.5%, and rest is shared by Bitumen, FO/LSHS, LDO, Lubes & others.

Key Policy developments/Significant news in Energy sector

IEW' 25 Witnessed Unprecedented Global Participation and Innovation

"India Energy Week 2025 (IEW'25) is set to be the first major global event on the energy calendar and the most comprehensive and inclusive energy gathering of the year, especially in light of recent global developments that are expected to have a transformative impact on the energy market," said Shri Hardeep Singh Puri, Minister of Petroleum & Natural Gas, while interacting with the media.

Speaking on the sidelines of IEW'25, which was held at Yashobhoomi, Dwarka, from February 11 to 14, 2025, Shri Puri highlighted India's growing stature in the global energy landscape. He stated that IEW'25 is set to be even larger, more diverse, and more impactful than its previous two editions. Covering over 1 lakh square meters, IEW'25 will be the second-largest energy event globally in terms of ministerial and CEO participation, exhibition space, and the number of sessions.

IEW'25 is set to be a landmark event in the global energy calendar, continuing its rapid growth from previous editions. Shri Hardeep Singh Puri, highlighted key metrics showcasing this expansion: a 65% increase in exhibition space over 2024 (28,000 sqm), 105 conference sessions (15% higher than 2024, 24% higher than 2023), 70,000+ delegates (55% higher than 2024, 89% higher than 2023), 500 speakers (38% higher than 2024, 58% higher than 2023), and 700+ exhibitors (57% higher than 2024, 115% higher than 2023). He touched upon some more key milestones, including a 35% increase in abstracts received as compared to last year (2,702 submissions) and a rise in international speakers at the Strategic Conference from 33% in 2024 to 48% in 2025.

The Minister said that on the sidelines of IEW'25, the Ministry of Petroleum & Natural Gas will host a Clean Cooking Ministerial, bringing together global policymakers, industry leaders, and experts to accelerate the transition to clean cooking solutions. The event will showcase India's success with the Pradhan Mantri Ujjwala Yojana (PMUY) as a model for global adoption. It aims to foster international collaboration, drive policy discussions, and facilitate technology sharing to ensure clean, affordable, and accessible cooking energy for households worldwide.

Union Minister for Petroleum & Natural Gas, Shri Puri, underlined the event's unprecedented scale, with 10 country pavilions (including Canada, Germany, Japan, the USA, and the UK) and 8 thematic zones covering areas such as hydrogen (1951 sqm), biofuels (1164 sqm), and net zero initiatives (350 sqm).

The event saw participation from major Indian energy ministries, including the Ministry of Power, MNRE, NITI Aayog, and the Ministry of Mines, reflecting India's commitment to integrated energy solutions, the Minister said. The Sustainable Mobility Pavilion, set up by SIAM, will showcase 15 cutting-edge vehicle models from 10 OEMs, under the theme "People-Centric Mobility Ecosystem."

Minister Shri Puri encouraged attendees to explore pioneering technologies developed by Public Sector Undertakings (PSUs). Key exhibits include ONGC's deep-sea simulation game, HPCL's indigenous Solid Oxide Fuel Cell System, BPCL's LPG cylinder ATM, and CSIR's e-tractor for sustainable agriculture.

With its scale, innovation, and global participation, IEW'25 is poised to position India at the forefront of the global energy transition.

Prime Minister Shri Narendra Modi addressed inaugural session of India Energy Week 2025

The Prime Minister Shri Narendra Modi delivered his remarks at the inauguration of third edition of India Energy Week 2025 via video message. Addressing the gathering at Yashobhoomi, he emphasized that the attendees are not just part of the Energy Week, but are also integral to India's energy ambitions.

India Energy Week was envisioned as more than just another industry conference, it was designed to be a dynamic platform redefining global energy dialogues. In just two years, this self-funded initiative has achieved precisely that, becoming the world's second-largest energy event. IEW 2025, scheduled from February 11-14, 2025, at Yashobhoomi, New Delhi, represents a significant milestone in shaping the global energy narrative.

Highlighting that experts worldwide are asserting that the 21st century belongs to India, Shri Modi remarked, "India is driving not only its growth but also the growth of the world, with the energy sector playing a significant role". He emphasized that India's energy ambitions are built on five pillars: harnessing resources, encouraging innovation among brilliant minds, economic strength and political stability, strategic geography making energy trade attractive and easier, and commitment to global sustainability. The Prime Minister noted that these factors are creating new opportunities in India's energy sector.

"India has grown from the tenth largest to the fifth largest economy in the past decade", remarked Shri Modi. He highlighted that India's solar energy generation capacity has increased thirty-two times in the last ten years, making it the third-largest solar power generating nation in the world. He noted that India's non-fossil fuel energy capacity has tripled and that India is the first G20 country to achieve the goals of the Paris Agreement. The Prime Minister emphasized India's achievements in ethanol blending, with a current rate of nineteen percent, leading to foreign exchange savings, substantial farmer revenue, and significant reductions in CO2 emissions. He highlighted India's goal of achieving a twenty percent ethanol mandate by October 2025. He remarked that India's biofuels industry is ready for rapid growth, with 500 million metric tonnes of sustainable feedstock. He further noted that during India's G20 presidency, the Global Biofuels Alliance was established and is continuously expanding, now involving 28 nations and 12 international organizations. He highlighted that this alliance is transforming waste into wealth and setting up Centers of Excellence.

Highlighting that India is continuously reforming to fully explore the potential of its hydrocarbon resources, Shri Modi highlighted that major discoveries and extensive expansion of gas infrastructure are contributing to the growth of the gas sector, increasing the share of natural gas in India's energy mix. He noted that India is currently the fourth largest refining hub and is working to increase its capacity by 20 percent.

Pointing out that India's sedimentary basins hold numerous hydrocarbon resources, some of which have already been identified, while others await exploration, the Prime Minister highlighted that to make India's upstream sector more attractive, the Government introduced the Open Acreage Licensing Policy

(OALP). He emphasized that the Government has provided comprehensive support to the sector, including opening the Exclusive Economic Zone and establishing a single-window clearance system. Shri Modi noted that changes to the Oilfields Regulation & Development Act now offer stakeholders policy stability, extended leases, and improved financial terms. He emphasized that these reforms will facilitate the exploration of oil and gas resources in the maritime sector, increase production, and maintain strategic petroleum reserves.

Prime Minister underlined that due to several discoveries and the expanding pipeline infrastructure in India, the supply of natural gas is increasing. He emphasized that this will lead to a rise in the utilization of natural gas in the near future. He also highlighted that there are numerous investment opportunities in these sectors.

Shri Hardeep Singh Puri, Minister of Petroleum & Natural Gas, in his address at the event, highlighted the growing significance of the event, which has rapidly become the second-largest energy conference in the world in just three years. This year's edition has drawn over 70,000 energy professionals from more than 50 countries, including over 20 Ministers and 100 CEOs from Fortune 500 energy companies, making it a key forum 6for discussions on the evolving global energy landscape.

Shri Puri underscored that IEW 2025 comes at a crucial juncture amid major geopolitical shifts that have reshaped the global energy order. He stressed that the conference offers a unique opportunity for policymakers, industry leaders, and stakeholders to engage in meaningful dialogue, exchange ideas, and chart a course for a balanced and inclusive energy transition. While reaffirming India's commitment to sustainability, he emphasized that the transition must be pragmatic, recognizing the continued role of hydrocarbons alongside renewables, hydrogen, and biofuels. He cited the International Energy Agency's (IEA) projection of global energy investment surpassing USD 3 trillion in 2024, with USD 2 trillion dedicated to clean energy technologies, as a clear indication of the accelerating shift toward cleaner energy sources.

The Minister highlighted India's leadership in driving energy innovation and entrepreneurship, noting that major global energy firms like BP, Shell, ExxonMobil, and Chevron operate Global Capability Centres in India, employing thousands of Indian engineers to develop cutting-edge solutions for energy efficiency, data analytics, and sustainable operations. He also acknowledged the role of 500+ entrepreneurs participating in start-up challenges such as Avinya and Vasudha, and the 700 exhibiting companies, including over 100 start-ups, showcasing AI-driven energy solutions, quantum computing applications, and advancements in biofuels and battery technologies.

A key theme of his address was energy justice, where he warned against fragmented energy policies that could deepen inequality by leaving developing economies behind in the transition. He emphasized the need for resilient supply chains in critical minerals, semiconductors, and emerging energy technologies, calling for global collaboration to prevent disruptions that could hinder progress. He also pointed out that India is strategically investing in diverse energy sources, including scaling up biofuel production, increasing its gas share from 6% to 15%, and targeting 5 million metric tonnes of hydrogen production by 2030 to ensure a smooth transition without compromising energy security.

Concluding his remarks, Shri Puri urged all stakeholders to leverage India Energy Week as a platform for forging transformative partnerships and shaping the global energy agenda. He invited the 6,000+ delegates to engage in the conference's discussions over the next four days, focusing on strategies to stabilize energy markets, drive technological advancements, and enhance international cooperation. With India playing an increasingly central role in the global energy ecosystem, IEW 2025 is set to be a landmark event for defining the future of energy.

India Energy Week 2025 Showcased India's Clean Cooking Gas Model: A Blueprint for the Global South

Union Minister of Petroleum and Natural Gas, Shri Hardeep Singh Puri chaired a Ministerial Roundtable on Clean Cooking on the second day of India Energy Week 2025. Shri Puri highlighted India's remarkable success in ensuring universal access to clean cooking gas through targeted subsidies, strong political will, digitization of distribution networks by Oil Marketing Companies (OMCs), and nationwide campaigns promoting cultural shifts towards clean cooking.

The session brought together representatives from Brazil, Tanzania, Malawi, Sudan, Nepal, and industry leaders including the International Energy Agency (IEA), Total Energy, and Boston Consulting Group (BCG).

Shri Puri emphasized that India's model is not only successful but also highly replicable in other Global South nations facing similar energy access challenges. The Union Minister noted that under India's Pradhan Mantri Ujjwala Yojana (PMUY), beneficiaries receive LPG access at a highly affordable cost of just 7 cents per day, while other consumers can avail themselves of clean cooking fuel at 15 cents per day. This affordability has been a game-changer in driving widespread adoption.

During the discussion, international representatives shared their experiences and challenges in expanding access to clean cooking solutions. Hon. Dkt. Doto Mashaka Biteko, Deputy Prime Minister and Minister of Energy, Tanzania outlined its strategy to enable 80% of households to transition to clean cooking by 2030, leveraging subsidies and a mix of energy sources, including LPG, natural gas, and biogas. However, he acknowledged significant challenges, including financing constraints, the high cost of infrastructure, and the need for regulatory reforms to encourage private-sector participation.

H.E. Dr. Mohieldien Naiem Mohamed Saied, Minister of Energy and Oil, Sudan, emphasized the need for private sector engagement to bridge gaps in LPG supply, as the country still imports a significant portion of its energy needs. Encouraging local cylinder production and ensuring cost-effective imports remain key hurdles in achieving broader adoption. Representatives of Rwanda and Nepal shared their efforts in reducing firewood dependency through electric stoves and biogas expansion.

Mary Burce Warlick, Deputy Executive Director of IEA noted that India's success offers valuable lessons for other countries, particularly in tackling challenges related to affordability, access, and infrastructure. She further emphasized the role of concessional financing and public-private partnerships (PPP) in expanding clean cooking access globally. Addressing cultural acceptance and regulatory adjustments, such as tax reductions, were also highlighted as crucial measures for large-scale adoption.

Rahool Panandiker, Partner at Boston Consulting Group (BCG) highlighted India's clean cooking transformation, underscoring its strong political commitment, effective subsidy targeting, and robust

public awareness campaigns. He further credited India's Oil Marketing Companies (OMCs) for enabling last-mile LPG delivery through digital platforms, making adoption seamless. Panadiker also underscored the need for refining the cylinder refill model to ensure sustained usage and balancing affordability with economic sustainability.

Responding to the potential of solar cookers in expanding clean cooking technologies across the Global South, Shri Puri highlighted that IOCL's advanced solar cookers, featuring integrated solar panels, are priced at approximately $500 per unit with no additional costs over their lifecycle. The Union Minister added that while the current price point remains a challenge for widespread adoption, leveraging carbon financing and collaborating with the private sector could drive costs down, making solar cooking a viable alternative for millions.

This initiative aligns with India's broader efforts to diversify clean cooking options beyond LPG, reinforcing the country's commitment to reducing reliance on traditional biomass fuels and cutting carbon emissions.

Shri Puri concluded the discussion by reaffirming India's commitment to supporting energy access initiatives worldwide. He underscored that the Indian model, backed by smart subsidies and sustainable policies, provides a scalable solution for other developing nations striving to achieve clean cooking access. He stressed that achieving universal clean cooking access is not merely an economic imperative but a moral one, given the severe health and environmental impacts of traditional biomass cooking.

This roundtable reaffirmed India's position as a global leader in energy transition and clean cooking solutions, setting the stage for greater international cooperation in achieving universal access to clean energy.

India Strengthens Global Energy Partnerships at India Energy Week 2025

At the India Energy Week 2025, India signed multiple strategic agreements and MoUs aimed at enhancing energy security, diversifying supply sources, and fostering innovation in the oil and gas sector. Addressing a press conference on the sidelines of the event, Shri Hardeep Singh Puri, Minister of Petroleum and Natural Gas highlighted these agreements as crucial steps toward a more resilient and sustainable energy future for the country.

As part of efforts to diversify crude oil imports, BPCL signed an optional term contract with Petrobras, Brazil, to import up to 6 million barrels of crude. Strengthening India's transition to a natural gas-based economy, IOCL and ADNOC (UAE) signed a USD 7 billion contract to source 1.2 MMTPA LNG for 14 years starting in 2026, while BPCL and ADNOC entered into a five-year LNG offtake agreement for 2.4 MMT, extendable by another five years. Expanding India's role as a regional energy supplier, IOCL signed its first LNG export agreement with Nepal's Yogya Holdings, ensuring the delivery of 1,000 metric tons (TMT) annually via cryogenic trucks through Odisha's Dhamra Terminal.

On the technical front, ONGC selected BP as the Technical Services Provider for the Mumbai High field, India's largest offshore oilfield. BP will conduct a comprehensive review of field performance, implement technological improvements, and work to stabilize and enhance production. Additionally, EIL signed an

MoU with BP Business Solutions India Pvt. Ltd. To collaborate on refining, pipeline operations, and emission reduction technologies.

In offshore exploration, ONGC Videsh Ltd. And Petrobras signed an MoU to jointly participate in upstream oil and gas projects in Brazil, India, and third countries, exploring opportunities in trading, low-carbon solutions, and digitalization. Oil India Limited and Petrobras also signed an MoU for hydrocarbon exploration in India's deep and ultra-deep offshore basins, aligning with the government's Hydrocarbon Exploration and Licensing Policy.

India also took steps toward clean energy with BPCL partnering with Eco Wave Power, Israel, to establish the country's first wave energy pilot project in Mumbai using wave energy converter technology. In the biofuel sector, BPCL signed an MoU with the National Sugar Institute, Kanpur, to scale up sweet sorghum-based bioethanol production and build capacity for farmers and industry partners.

Further enhancing hydrocarbon trade, BPCL entered into an agreement with Equinor India Pvt. Ltd. for the purchase of LPG (propane and butane).

The Minister emphasized that these agreements reaffirm India's commitment to securing affordable, sustainable, and diversified energy supplies while fostering global collaborations in cutting-edge energy solutions. These partnerships will help us achieve our energy transition goals and ensure a robust and resilient energy ecosystem for India.

At the Conclusion of India Energy Week 2025, India Cements Position as Global Energy Leader

Shri Hardeep Singh Puri, Minister of Petroleum and Natural Gas, highlighted the measurable success of India Energy Week 2025 through its unprecedented participant and exhibitor numbers and technical paper submissions. The Minister noted that the event had exceeded expectations by encompassing a comprehensive range of sectors including petroleum, natural gas, green energy, biofuel, and CBG, showcasing remarkably innovative developments.

Shri Puri emphasized that within the short span of three years, India Energy Week has established itself as the world's second-largest energy platform, with its fourth edition scheduled to take place in Goa.

The Minister emphasized that IEW 2025 distinguished itself from other global energy forums by facilitating actual business transactions rather than merely serving as a networking platform. Shri Hardeep Singh Puri specifically highlighted practical innovations such as the cost-effective conversion kit demonstrated at the HPCL stall, designed for enabling biofuel usage in two and three-wheelers. Additionally, the Minister also expressed satisfaction at the convergence of investors, manufacturers, and consumers, particularly evident in the display of flex fuel vehicles.

Speaking on India-US energy cooperation, the Minister noted the substantial progress in bilateral relations, particularly in the natural gas sector. The Minister highlighted India's stated goal of increasing natural gas consumption to 15% in its energy mix from about 6% currently, emphasizing the strategic importance of the relationship with the United States for Liquified Natural Gas (LNG) supplies.

Addressing reforms in the Exploration and Production (E&P) sector, Shri Puri detailed the scale of Open Acreage Licensing Program (OALP) Round X covering about 200,000 square kilometers. The Minister explained that enhanced interest in this round has been driven by systematic reforms in the regulatory regime, transitioning from production to revenue sharing mechanisms, along with the proposed amendments to Oilfields (Regulation and Development) Act 1948.

Additionally, Shri Puri announced that the new legislative framework, developed through extensive consultations, is set to be presented in the Lok Sabha. He particularly noted the collaboration of ONGC with BP, and Reliance in bidding for blocks in earlier rounds as a strong message of industry partnership.

Outlining the Ministry's priorities, the Minister emphasized focus on E&P, stressing the importance of expert collaboration and the proposed changes to regulatory framework that allows appropriate compensation for resource discovery to the stakeholders in the sector.

The Minister highlighted the significance of the amendments, passed by the Rajya Sabha, in ensuring policy predictability, particularly regarding windfall tax implementation. He emphasized the removal of discretionary elements in policy implementation as a move toward more transparent governance in the energy sector.

Discussing the global energy scenario, the Minister observed that the new US administration's push for increased oil supply has created favourable conditions in global markets. He noted the emergence of new oil sources from the Western Hemisphere, including Brazil, Argentina, Suriname, Canada, US, and Guyana, as beneficial for major consuming nations like India. Shri Puri expressed complete confidence in India's international investments in the Oil & Gas assets across Brazil, Venezuela, Russia, and Mozambique.

Shri Hardeep Singh Puri described the biofuel program as a remarkable story, citing current capacity of 1,700 crore litres for ethanol blending, while discussing potential beyond the 20% blending target. Moreover, Shri Puri expressed particular excitement about green hydrogen, confirming confident progression toward the 5MMT annual production target for 2030, while also highlighting sustainable aviation fuel development.

Secretary, Ministry of Petroleum and Natural Gas, Shri Pankaj Jain, detailed the business conducted during IEW 2025 across various domains. He categorized the agreements into distinct areas: supply arrangements for crude, LNG, and LPG across geographies; technology partnerships for digital refinery solutions; and exploration services.

Shri Pankaj Jain also highlighted the unprecedented scale of OALP Round X, emphasizing the need for global expertise to exploit hydrocarbon resources in the country. Shri Jain also discussed the potential use of the Oil Industry Development Fund, established under the Oil Industry Development Act, for innovative financing needs in deep-water exploration projects.

<u>Felicitation to Startup Competition and Hackathon Winners:</u>

The prestigious Avinya'25 – Energy Startup Challenge awards, the flagship initiative of the Ministry of Petroleum and Natural Gas, were presented by Shri Hardeep Singh Puri and Shri Pankaj Jai. Avinya'25

recognized startups with pioneering solutions addressing key energy challenges. UrjanovaC Pvt Ltd emerged as the winner for its synthetic catalyst technology that enables scalable and cost-competitive CO_2 capture and conversion. The first runner-up, Breathe ESG Private Limited, developed a SaaS platform that automates ESG reporting, decarbonization strategies, and compliance. AgriVijay, the second runner-up, introduced India's first curated marketplace for renewable energy solutions for farmers and rural households. Apeiro Energy, securing the third runner-up position, designed hybrid microgrids by integrating small wind turbines with solar panels. UGreen Technology, the fourth runner-up, developed a molecular-engineering approach that enhances CO_2 reactivity for efficient carbon capture.

Additionally, the Ministry introduced Vasudha – Oil and Gas Startup Challenge, an exclusive competition for overseas startups revolutionizing the upstream oil and gas sector. Out of 17 entries from 13 countries, two visionary startups were recognized. Latin Energy Partners Inc., Paraguay, won the challenge, while Ultrasound Process Consultation LLC, USA, was named the runner-up. Their innovations in oil and gas exploration, AI-driven production management, ESG compliance, CCUS technologies, and geothermal exploration were highly commended.

Promoting research and technological innovation, a Hackathon was organized among seven premier IITs, including IIT Delhi, Mumbai, Madras, Guwahati, Roorkee, Kharagpur, and ISM Dhanbad. The competition aimed to drive forward-thinking solutions in CCUS and renewable energy. IIT (ISM) Dhanbad secured the winner's title, while IIT Guwahati emerged as the runner-up.

India Energy Week 2025

India Energy Week (IEW) 2025, held from February 11 to 14, 2025, at the Yashobhoomi Convention Centre, New Delhi, is a premier global event in the energy sector. The event held under the patronage of the Ministry of Petroleum and Natural Gas and organized by the Federation of Indian Petroleum Industry (FIPI) has grown into the world's second-largest energy conference.

A Hub of Innovation and Transformation

The India Energy Week exhibition has grown exponentially to become the world's new meeting place for energy professionals, with millions of dollars of business conducted onsite, positioning it at the very heart of international business.

A key facilitator of dialogue between international and regional producers, the event provides international exhibitors with the opportunity to network with key buyers from over 120 countries across the full energy value chain. Exhibitors will have the opportunity to showcase cutting-edge technologies that drive sustainable energy solutions, forge strategic partnerships, and explore opportunities to shape the future of energy.

Defining Achievements of IEW 2025

- 70K+ Energy Professionals
- 700+ Exhibiting Companies showcased innovations
- 120+ Countries participated, highlighting global interest

- 95+ Conference sessions covered sustainability and energy transition
- 6K+ Conference delegates engaged in discussions
- 500+ Speakers shared insights on energy trends

Key Focus Areas of IEW 2025

- Energy Transition & Green Future: Major focus on biofuels, flex-fuel vehicles, ethanol blending, and green hydrogen. India is steadily progressing toward its goal of producing 5 million metric tons (MMT) of green hydrogen annually by 2030.
- Exploration & Production (E&P) Reforms: Launch of Open Acreage Licensing Program (OALP) Round X, covering 200,000 sq. km, along with regulatory changes to boost investment in oil and gas exploration.
- India-US Energy Cooperation: Strengthening LNG supply partnerships and increasing natural gas consumption in India's energy mix from 6% to 15%.
- Global Energy Investments: Expanding investments in oil and gas assets across Brazil, Venezuela, Russia, and Mozambique while benefiting from emerging oil sources.
- Startup & Innovation Recognition: The Avinya'25 – Energy Startup Challenge, led by the Ministry of Petroleum and Natural Gas, awarded innovative startups for breakthroughs in CO_2 capture, ESG solutions, and renewable energy. The Vasudha – Oil and Gas Startup Challenge recognized overseas startups revolutionizing the upstream oil and gas sector with AI-driven solutions.

IEW 2025 introduced nine thematic zones, each focusing on different aspects of the energy sector:

1. Hydrogen Zone – Hosted by Oil India Limited, showcasing cutting-edge innovations in hydrogen fuel generation.
2. Biofuels Zone – Highlighting India's advancements in Biodiesel, Bioethanol, Compressed Biogas, and Sustainable Aviation Fuel.
3. Renewable Energy Zone – Featuring innovations in solar, wind, and other renewable energy technologies.
4. LNG EcoSystem – Hosted by Petronet LNG, focusing on India's downstream LNG supply chain and eco-friendly fuel solutions.
5. Make in India Zone – Hosted by Engineers India Limited, highlighting indigenous energy manufacturing capabilities.
6. City Gas Distribution Zone – Hosted by GAIL, emphasizing India's rapid progress towards a gas-based economy.
7. Petrochem Zone – Hosted by ONGC, showcasing advancements in petrochemical technologies and sustainable solutions.
8. Innovation Zone – Featuring emerging startups and breakthrough technologies in energy.
9. Digitalisation Zone – Showcasing AI, IoT, and automation in optimizing energy production and distribution.

India: The Rising Energy Powerhouse

India, the world's third-largest energy consumer, is poised for the highest energy demand growth. Under PM Narendra Modi's leadership, the nation is advancing towards a greener future with significant

investments in secure, sustainable, and affordable energy. India Energy Week 2025 will serve as a key platform for global collaboration, driving discussions on energy security, innovation, and sustainability.

India's Path to Sustainability

As a rapidly advancing economic powerhouse, India faces the twin challenge of surging energy demand while mitigating its carbon footprint. In response, Hon'ble Prime Minister Shri Narendra Modi launched the concept of "Panchamrit" at COP 26, representing a blend of five essential elements. "Panchamrit" underscores India's commitment to addressing climate change and fostering sustainable growth on a global scale.

Panchamrit: India's Five Point Pledge Towards Climate Change

- India will take its non-fossil energy capacity to 500 GW by 2030
- By 2030, India will reduce the carbon intensity of its economy by less than 45%
- India will meet 50% of its energy requirements from renewable energy by 2030
- By the year 2070, India will achieve target of net-zero
- India will reduce the total projected carbon emissions by one billion tonnes till 2030

Conclusion

India Energy Week 2025 serves as a pivotal platform for global energy stakeholders to exchange ideas, foster partnerships, and witness India's leadership in energy transition. As Shri Pankaj Jain, Secretary, Ministry of Petroleum and Natural Gas, highlighted, IEW 2025 will act as a catalyst for groundbreaking projects in green hydrogen, solar advancements, and exploration technologies, reinforcing India's commitment to sustainability and innovation. With a focus on transformative collaboration and investment, the event will shape the global energy agenda, positioning India at the forefront of energy security, technological progress, and a sustainable future.

Hardeep Singh Puri launched the 10th round of the Open Acreage Licensing Policy (OALP) on the sidelines of India Energy Week 2025

The Minister for Petroleum and Natural Gas Hardeep Singh Puri launched the 10th round of the Open Acreage Licensing Policy (OALP) on the sidelines of India Energy Week 2025. This round is the largest bid round in terms of acreage offered in a single OALP bid round. The round-X puts 25 blocks on offer across 13 sedimentary basins, including 19 offshore blocks. The blocks are cumulatively spread over an area of 1.91 lakh sq km. This round is also the largest offshore block bid round with 19 offshore blocks on offer, covering an area of 1,75,115 sq km.

Out of the total 25 blocks on offer, 16 blocks with an area of 97,919.6 Sq Km (51 percent) fall in earlier 'No-Go' area. Out of 25 blocks, six are onland, six are in shallow water, one in deep water and 12 blocks are in ultra deep-water areas. There are nine category-I blocks, 11 Category-II blocks and five Category-III blocks.

For OALP Round-X, a new e-bidding portal is available for transparent and secure bidding with additional ease of doing business features. OALP bid Round-X comes after ORD amendment. The latest round of OALP bids is the first to be launched after the introduction of the Oilfields (Regulation and Development) Amendment Bill, 2024, in Lok Sabha. The bill has already been passed by Rajya Sabha in December 2024 and now awaits clearance from Lok Sabha. Sources said that with the launch of the largest OALP bid round, the government is hoping to attract interest from foreign bidders this time. The amendment separates petroleum lease from mining lease and strives to offer leases on stable terms. It also introduces a simpler business regime and streamlines clearances.

The OALP Round-X was launched by Puri in the presence of British Secretary of State for energy and climate change, Edward Miliband, Qatar's Energy Minister Saad Sherida Al-Kaabi, and Doto Mashaka Biteko, the deputy Prime Minister of Tanzania. It comes over a year after OALP IX bidding opened in January 2024. The government has so far received limited interest from private players under the OALP regime, with PSUs bagging most of the blocks. With ORD amendment on the way, it remains to be seen if this round will attract interest from private and foreign players, in addition to state-owned upstream companies.

Fourth India-UK Energy Dialogue - Advancing India's energy transition

The Fourth India-UK Energy Dialogue, co-chaired by Shri Manohar Lal, Union Minister of Power and Housing and Urban Affairs of India, and Mr. Ed Miliband, Secretary for Energy Security and Net Zero for United Kingdom.

The dialogue focused on reviewing progress made in the energy sectors of both nations, including power and renewable energy, and reaffirming the commitment to a sustainable, resilient, and inclusive energy future. The Ministers underscored the importance of ensuring that the energy transition and economic growth proceed together, while maintaining affordable and clean energy access for all.

The Ministers underscored the importance of ensuring energy security and sustainable development and emphasized expanding the cooperation in the areas of power distribution, sector reforms, industrial energy efficiency and de-carbonization, and electric mobility while exploring new opportunities in the emerging fields such as energy storage, green data centers, and offshore wind, with an increased focus on MSMEs.

The Ministers were pleased to announce the launch of Phase-2 of the India-UK bilateral Accelerating Smart Power & Renewable Energy in India (ASPIRE) programme. This phase will aim to provide technical support for ensuring round-the-clock power supply, expanding renewable energy initiatives, and accelerating industrial energy efficiency and de-carbonization, in collaboration with the Ministry of Power (MOP) and Ministry of New and Renewable Energy (MNRE).

The Ministers were pleased to observe the bilateral collaboration between the two sides to promote growth and jobs, through technical assistance cooperation and investment. They also discussed the

progress of trade missions focusing on offshore wind and green hydrogen, as well as the cooperation between the UK's Energy Systems Catapult and India's Power Trading Corporation.

Recognizing the shared ambition for advancing offshore wind development, the Ministers announced the establishment of a UK-India Offshore Wind Taskforce, which will focus on advancing offshore wind ecosystem development, supply chains, and financing models in both countries. Mr. Miliband commended India's ambitious initiatives in the renewable energy sector and shown a strong interest in gaining insights from India's experience in implementing the Solar Rooftop Programme (PM – Surya Ghar Muft Bijli Yojna).

The Ministers agreed on the importance of power market regulations in driving the energy transition and ensuring greater energy security and access. To support this, they announced the continuation of the Power Sector Reforms programme under the UK Partnering for Accelerating Climate Change (UKPACT). Additionally, a new taskforce has been proposed between the UK's Office of Gas and Electricity Markets (OFGEM) and India's Central Electricity Regulatory Commission (CERC) to support renewable energy integration and grid transformation in India.

Both Ministers emphasized the ongoing value of the India-UK Energy Dialogue in advancing mutual energy transition goals, ensuring energy access, and building secure and sustainable clean energy supply chains while aligning these efforts with economic growth.

The Ministers expressed their intention to further strengthen their collaboration through the Comprehensive Strategic Partnership and looked forward to the fifth UK-India Energy Dialogue in 2026. The dialogue concluded with the launch of the 'Best Practices Compendium of Industrial Energy Efficiency/Decarbonisation' and a 'Pathways for Energy Efficiency and Decarbonisation in the Indian Aluminium Sector'.

India Achieves Historic Milestone of 100 GW Solar Power Capacity

India has achieved a historic milestone by surpassing 100 GW of installed solar power capacity, reinforcing its position as a global leader in renewable energy. This remarkable achievement is a testament to the nation's commitment to a cleaner, greener future and marks a significant step toward realizing its ambitious target of 500 GW of non-fossil fuel-based energy capacity by 2030 set by Prime Minister Shri Narendra Modi.

Union Minister of New and Renewable Energy, Shri Pralhad Joshi said, "Under the leadership of Prime Minister Shri Narendra Modi, India's energy journey over the past ten years has been historic and inspiring. Initiatives like solar panels, solar parks and rooftop solar projects have brought about revolutionary changes. As a result, today India has successfully achieved the target of 100 GW of solar energy production. In the field of green energy, India is not only becoming self-reliant but is also showing the world a new path".

Union Minister Joshi said that this achievement is powered by the relentless commitment to clear and greener future. The Minister added that PM SuryaGhar Muft Bijli Yojana is making rooftop solar a

household reality and is a game-changer in sustainable energy, empowering every home with clean power.

Unprecedented Growth in Solar Sector

India's solar power sector has witnessed an extraordinary 3450 % increase in capacity over the past decade, rising from 2.82 GW in 2014 to 100 GW in 2025. As of January 31, 2025, India's total solar capacity installed stands at 100.33 GW, with 84.10 GW under implementation and an additional 47.49 GW under tendering. The country's hybrid and round-the-clock (RTC) renewable energy projects are also advancing rapidly, with 64.67 GW under implementation and tendered, bringing the grand total of solar and hybrid projects to 296.59 GW.

Solar energy remains the dominant contributor to India's renewable energy growth, accounting for 47% of the total installed renewable energy capacity. In 2024, record-breaking 24.5 GW of solar capacity was added reflecting a more than two-fold increase in solar installations compared to 2023. Last year also saw the installation of 18.5 GW of utility-scale solar capacity, a nearly 2.8 times increase compared to 2023. Rajasthan, Gujarat, Tamil Nadu, Maharashtra and Madhya Pradesh are among the top-performing states, contributing significantly to India's total utility-scale solar installations.

The rooftop solar sector in India witnessed remarkable growth in 2024, with 4.59 GW of new capacity installed, reflecting a 53% increase compared to 2023. A key driver of this growth has been the PM Surya Ghar: Muft Bijli Yojana, launched in 2024, which is now nearing 9 lakh rooftop solar installations, enabling households across the country to embrace clean energy solutions.

India has also made significant strides in solar manufacturing. In 2014, the country had a limited solar module production capacity of just 2 GW. Over the past decade, this has surged to 60 GW in 2024, establishing India as a global leader in solar manufacturing. With continued policy support, India is on track to achieve a solar module production capacity of 100 GW by 2030.

Under the guidance of Union Minister Shri Pralhad Joshi, the Ministry of New and Renewable Energy (MNRE) has been implementing key initiatives to scale up renewable energy capacity in India. This 100 GW milestone in solar energy underscores India's role as a renewable energy powerhouse, ensuring clean, sustainable, and affordable energy access for millions while shaping a self-reliant energy future.

PM Surya Ghar: Muft Bijli Yojana Turns One

On February 13, 2025, the PM Surya Ghar: Muft Bijli Yojana (PMSGMBY) marked its first anniversary, celebrating a year of empowering households with affordable solar energy and accelerating India's transition to a sustainable future. Launched by Prime Minister Narendra Modi on February 13, 2024, this groundbreaking initiative aims to provide free electricity to households by facilitating the installation of rooftop solar panels. The PMSGMBY, the world's largest domestic rooftop solar initiative, is reshaping India's energy landscape with a bold vision to supply solar power to one crore households by March 2027.

As of January 27, 2025, the scheme has already benefitted 8.46 lakh households through rooftop solar installations. The rapid adoption of solar energy is evident in the tenfold increase in monthly installation rates, which now stand at around 70,000 installations per month, significantly surpassing pre-scheme levels. The scheme offers a subsidy of up to 40%, making renewable energy more affordable and accessible. So far, ₹4,308.66 crore has been disbursed as Central Financial Assistance (CFA) to 5.54 lakh residential consumers, with an average subsidy of ₹77,800 per household. Additionally, an estimated 45% of the beneficiaries are now receiving zero electricity bills, depending on their solar power generation and consumption patterns.

Key Benefits

- Free Electricity for Households: The scheme provides households with free electricity through the installation of subsidized rooftop solar panels, significantly reducing their energy costs.
- Reduced Electricity Costs for the Government: By promoting the widespread use of solar power, the scheme is expected to save the government an estimated ₹75,000 crore annually in electricity costs.
- Increased Use of Renewable Energy: The scheme encourages the adoption of renewable energy sources, contributing to a more sustainable and environmentally friendly energy mix in India.
- Reduced Carbon Emissions: The transition to solar energy under this scheme will help lower carbon emissions, supporting India's commitment to reducing its carbon footprint.

Mobilizing Finance is Key to Achieving 500 GW Renewable Energy by 2030: Union Minister Pralhad Joshi

Mobilising finance is key to achieving 500 GW Renewable Energy by 2030, said Union Minister for New & Renewable Energy Shri Pralhad Joshi. He was addressing the National Workshop on Mobilizing Finance for Renewable Energy organised by Union Ministry of New and Renewable Energy. Union Minister Joshi also called for collective efforts from financial institutions and policymakers to ensure accessible funding to Renewable Energy (RE) sector. The Minister along with the Minister of State, (MNRE), Shri Shripad Naik also addressed a Press Conference held in conjunction with the Workshop.

Highlights of the Workshop

The Minister stated that the idea for the workshop emerged after a review meeting chaired by Prime Minister Narendra Modi, where discussions focused on accelerating flagship schemes like PM Surya Ghar and PM-KUSUM. Highlighting the scale of India’s energy needs, Shri Joshi said that as the country aims to become the third-largest economy, its energy demand is expected to double. He stressed that renewable energy must be scaled up to match thermal energy production, ensuring a reliable and resilient power supply.

The Minister also spoke about India’s commitment to achieving Net Zero by 2070 and reaching 500 GW of non-fossil fuel-based capacity by 2030. He called upon financial institutions to align their lending policies with India’s renewable energy growth strategy and emphasized that carbon-intensive industries will face reduced export opportunities in the future. Shri Joshi noted that India has already made significant progress in renewable energy, with capacity increasing to 222 GW today. He pointed out that

solar tariffs have drastically reduced, with a recent bid in Madhya Pradesh touching ₹2.15 per unit, compared to ₹11 per unit earlier. However, he stressed the importance of battery storage solutions to support large-scale renewable deployment.

Speaking on the role of decentralization, the Minister highlighted that PM-KUSUM and PM Surya Ghar empower farmers to become "Urjadata" (energy providers), while also reducing transmission losses. He urged banks to simplify financing processes, particularly for rooftop solar projects, and called for the introduction of a Renewable Energy Financing Obligation to ensure dedicated funding for the sector, similar to Renewable Purchase Obligations (RPOs) for discoms.

Shri Joshi underscored India's leadership in green hydrogen (GH2), stating that the country has already received major export orders and is ahead of several developed nations in this field. He noted that global investors are increasingly looking at India as a preferred destination for manufacturing and clean energy investments, recognizing its young workforce and strong industrial capacity.

The Minister also highlighted Prime Minister Modi's directive to engage global financial institutions for renewable energy investments, citing India's recent success in securing commitments worth ₹34.5 lakh crore during a global RE summit in Gandhinagar. He emphasized that the transition to renewable energy is not optional—it is a necessity. Concluding his address, Shri Pralhad Joshi called for a national movement in renewable energy financing, stating that PM Surya Ghar is not just a scheme but an Andolan (movement). He urged financial institutions to streamline lending processes, reduce unnecessary compliance burdens, and adopt a more supportive approach towards financing clean energy projects.

Union Minister of State for Power and New & Renewable Energy Shri Shripad Y Naik said that achieving 500 GW of renewable energy by 2030 will require an investment of approximately ₹30 lakh crore, covering infrastructure, transmission, and storage systems. He urged the stakeholders to adopt innovative financing models, extend flexible lending terms, and prioritize green investments that will accelerate our energy transition.

In her context setting speech, Secretary MNRE Smt. Nidhi Khare emphasized the critical role of affordable finance, green bonds, and innovative funding models in driving India's renewable energy transition.

The National Workshop on Mobilizing Finance for Renewable Energy featured four key sessions focused on addressing financing challenges in the renewable energy sector. The first session examined the financing landscape for utility-scale renewable energy (RE) projects, assessing challenges faced by developers, banks, and NBFCs in securing funding. Discussions covered interest rates, perceived risks, and potential solutions for financial institutions to support large-scale RE projects. The second session focused on financing new and emerging RE technologies, such as offshore wind, floating solar, and green hydrogen. Panelists, including experts from NABARD, and leading financial institutions, discussed capital allocation strategies, policy interventions, and mechanisms to reduce financial risks for private sector investments in these technologies.

The third session addressed financing challenges for Distributed Renewable Energy (DRE) and innovative RE applications, including rooftop solar, canal-top PV, and Agri-PV. Experts explored financing constraints

for startups, perceived investment risks, and policy support required to scale up these solutions. The final session focused on regulatory and capacity-building measures for banks and NBFCs, discussing RBI guidelines, sector-specific lending policies, and strategies to enhance financing in consumer-oriented RE applications. Stakeholders highlighted the need for better regulatory frameworks, risk-sharing mechanisms, and financial instruments to unlock capital for India's renewable energy ambitions. The discussions reinforced the necessity of collaborative efforts among policymakers, financial institutions, and industry leaders to mobilize large-scale investments and achieve India's target of 500 GW of non-fossil fuel energy by 2030.

Nuclear Power in Union Budget 2025-26

The Union Budget 2025-26 outlines a significant push towards nuclear energy as part of India's long-term energy transition strategy. The government has set an ambitious target of 100 GW nuclear power capacity by 2047, positioning nuclear energy as a major pillar in India's energy mix. This development aligns with the broader objectives of Viksit Bharat, ensuring energy reliability and reducing dependency on fossil fuels. To achieve this goal, strategic policy interventions and infrastructure investments are being undertaken, with an emphasis on indigenous nuclear technology and public-private collaborations.

Recognizing nuclear power as a critical component for achieving energy security and sustainability, the government has introduced the Nuclear Energy Mission for Viksit Bharat. This initiative aims to enhance domestic nuclear capabilities, promote private sector participation, and accelerate the deployment of advanced nuclear technologies such as Small Modular Reactors (SMRs).

Small Modular Reactors (SMRs) and R&D Initiatives

A key highlight of the Union Budget 2025-26 is the launch of a Nuclear Energy Mission, which is focused on research and development (R&D) of Small Modular Reactors (SMRs). The government has allocated ₹20,000 crore for this initiative, aiming to develop at least five indigenously designed and operational SMRs by 2033.

Nuclear Energy Mission for Viksit Bharat

To facilitate the implementation of the Nuclear Energy Mission, amendments to the Atomic Energy Act and Civil Liability for Nuclear Damage Act will be taken up by the parliament. These amendments are expected to encourage private sector investments in nuclear power projects. These legislative changes are expected to create a more conducive environment for investment and innovation in the nuclear sector. The mission aligns with India's commitment to achieving 100 GW of nuclear energy capacity by 2047, a milestone deemed essential for reducing carbon emissions and meeting future energy demands. As of January 30, 2025, India’s nuclear capacity is 8180 MW.

The government will enter into partnerships with the private sector with the motive of:

- Setting up Bharat Small Reactors,
- Research & development of Bharat Small Modular Reactor, and
- Research & development of newer technologies for nuclear energy.

Bharat Small Reactors

The government is actively expanding its nuclear energy sector by developing Bharat Small Reactors (BSRs) and exploring partnerships with the private sector. BSRs are 220 MW Pressurized Heavy Water Reactors (PHWRs) with a proven safety and performance record. These reactors are being upgraded to reduce land requirements, making them suitable for deployment near industries such as steel, aluminium, and metals, serving as captive power plants to aid in decarbonization efforts.

The plan involves private entities providing land, cooling water, and capital, while the Nuclear Power Corporation of India Limited (NPCIL) handles design, quality assurance, and operation and maintenance, all within the existing legal framework. This initiative aligns with India's commitment to achieving 500 GW of non-fossil fuel-based energy generation by 2030 and meeting 50% of its energy requirements from renewable energy by 2030, as pledged at the COP26 Summit in Glasgow in 2021.

In addition to BSRs, the Bhabha Atomic Research Centre (BARC) is developing Small Modular Reactors (SMRs) for repurposing retiring coal-based power plants and meeting power needs in remote locations. The Department of Atomic Energy (DAE) also plans to introduce new nuclear reactors, including high-temperature gas-cooled reactors for hydrogen co-generation and molten salt reactors aimed at utilizing India's abundant thorium resources.

This strategic move signifies India's dedication to reducing carbon emissions and enhancing its civil nuclear energy program, with private sector participation playing a crucial role within the bounds of Indian laws and regulations.

Bharat Small Modular Reactors

India is actively exploring Small Modular Reactors (SMRs) as a crucial part of its energy transition strategy, aiming to achieve net-zero emissions while ensuring energy security. SMRs, are advanced nuclear reactors with a power generation capacity ranging from less than 30 MWe to 300+ MWe, provide a flexible, scalable, and cost-effective alternative to conventional large nuclear reactors. Given India's growing energy demands and the need for reliable, low-carbon power, SMRs can play a transformative role in complementing renewable energy sources and stabilizing the grid. Their modular design allows for factory-based manufacturing, reducing construction timelines and costs, making them suitable for both on-grid and off-grid applications, including deployment in remote locations.

India’s expertise in Pressurized Heavy Water Reactors (PHWRs) provides a strong foundation for the development and deployment of indigenous SMR designs. By integrating SMRs into its energy mix, India can address land constraints, reduce dependence on fossil fuels, and enhance its ability to meet international climate commitments under the Paris Agreement (2015) which India ratified in October 2016.

Government Initiatives for Enhancing India’s Nuclear Capacity

India is actively enhancing its nuclear power capacity to meet growing energy demands and achieve environmental goals. The government has initiated steps to increase nuclear power capacity from the

current 8,180 MW to 22,480 MW by 2031-32. This expansion includes the construction and commissioning of ten reactors, totalling 8,000 MW, across Gujarat, Rajasthan, Tamil Nadu, Haryana, Karnataka, and Madhya Pradesh. Additionally, pre-project activities for ten more reactors have commenced, with plans for progressive completion by 2031-32. Further, the government accorded in-principle approval to set up 6 x 1208 MW nuclear power plant in cooperation with the USA at Kovvada in Srikakulam district in the state of Andhra Pradesh.

A significant milestone was achieved on September 19, 2024, when the Rajasthan Atomic Power Project's Unit-7 (RAPP-7), one of the country's largest and third indigenous nuclear reactors, reached criticality, marking the beginning of controlled fission chain reaction. This event signifies India's growing capability in building and operating indigenous nuclear reactors, contributing to a future powered by homegrown technology.

Safety remains a cornerstone of India's nuclear energy policy. India's nuclear power plants operate with stringent safety protocols and international oversight. The radiation levels at Indian nuclear facilities are consistently well below global benchmarks, underscoring the country's commitment to secure and sustainable nuclear energy. These efforts align with India's broader strategy to provide clean and reliable energy, contributing to long-term energy security and environmental sustainability.

Recent Developments in Nuclear Energy in India

- A significant discovery of new deposit in India's oldest Uranium Mine, the Jaduguda Mines, has been made in and around the existing mine lease area. This will increase the life of an otherwise depleting mine by more than fifty years.
- First two units of the indigenous 700 MWe PHWR at Kakrapar, Gujarat (KAPS - 3 & 4) have started commercial operation in FY 2023-24.
- Closed fuel cycle being the cornerstone of Indian nuclear power program, the country's first Prototype Fast Breeder Reactor (PFBR 500 Mwe) achieved many of the milestones in 2024, viz., Primary Sodium filling in Main Vessel, purification of the filled sodium and commissioning of all the four Sodium pumps (2 Primary Sodium Pumps & 2 Secondary Sodium Pumps). Core loading was commenced with loading of first reactor control rod on 4th March 2024.
- NPCIL and National Thermal Power Corporation (NTPC) have signed a supplementary Joint Venture agreement to develop nuclear power facilities in the country. The JV named ASHVINI will function within the existing legal framework of the Atomic Energy Act 1962 (amended in 2015) and will build, own, and operate nuclear power plants, including the upcoming 4x700 MWe PHWR Mahi-Banswara Rajasthan Atomic Power Project.

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