FIPI

Federation of Indian Petroleum Industry

POLICY & ECONOMIC REPORT

OIL & GAS MARKET

JANUARY 2024

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Executive Summary

According to IMF, global growth is projected at 3.1 percent in 2024 and 3.2 percent in 2025, with the 2024 forecast 0.2 percentage point higher than that in the October 2023 World Economic Outlook (WEO). The forecast for 2024–25 is, however, below the historical (2000–19) average of 3.8 percent, reflecting the lagged and ongoing effects of tight monetary policies to rein in high inflation, restrictive credit conditions, and weak global trade and investment. For advanced economies, growth is projected to decline slightly from 1.6 percent in 2023 to 1.5 percent in 2024 before rising to 1.8 percent in 2025.

Figure 1: Growth projections

Source - IMF

As far as Indian economy is concerned, the National Statistical Office (NSO), Ministry of Statistics and Programme Implementation released the First Advance Estimates (FAE) of National Income for the financial year 2023-24. Real GDP in the year 2023-24 is estimated to attain a level of ₹171.79 lakh crore, as against the Provisional Estimate of GDP for the year 2022-23 of ₹160.06 lakh crore, released on 31st May, 2023. The growth in real GDP during 2023-24 is estimated at 7.3 per cent as compared to 7.2 per cent in 2022-23. The manufacturing industry is expected to grow at 6.5 per cent in FY24, up from 1.3 per cent registered in FY23. The service sector, the largest component of GDP, is estimated to grow relatively slow at 7.7 per cent in FY24 against 9.5 per cent in FY23. On the expenditure side of GDP, growth in private consumption is expected to slow down in 2023-2024 to 4.4 per cent, while government spending is projected to pick up pace, growing at 4.1 per cent.

According to the HSBC India Manufacturing Purchasing Managers' Index (PMI), which is compiled by S&P Global, India's manufacturing PMI fell to 54.9 in December from 56 in November and 55.5 in October. The pace of growth in India's manufacturing activity fell to an 18-month low in December as output growth and new orders softened burdened by high inflation and moderate growth in exports.

According to the data released by National Statistical Office (NSO), Ministry of Statistics and Programme Implementation (MoSPI), India's retail inflation hit 4-month high of 5.69% in December 2023. The CPI-inflation surged from 5.5% in November, led by an uptick in food prices that rose 9.5% nationally and breached the 10% mark for urban consumers, hitting 10.42%. The central bank projects inflation for Q3 and Q4 at 5.6% and 5.2%, respectively and the inflation for FY 2023-24 is projected at 5.4 per cent. Further, the Reserve Bank of India's Monetary Policy Committee unanimously decided to keep the repo rate unchanged at 6.5% for the fifth time in a row.

In the oil and gas industry, oil prices rose as positive U.S. economic growth and signs of Chinese stimulus boosted demand expectations, while Middle East supply concerns added support.

The oil futures prices were also buoyed by a higher geopolitical risk premium due to concerns about maritime trade flow disruptions, leading to worries about supply chain bottlenecks and increased supply costs. Concurrently, short covering by speculators, who had significantly reduced their bullish positions in November and the first two weeks of December, contributed to the upward movement in oil futures. The combination of a weaker US dollar and signs indicating renewed demand in the spot crude market ahead of the year-end holidays further limited the decline of oil prices. Indian crude basket price averaged $79.05 per barrel in January 2024, up by 2.1% on Month on Month (M-o-M) and down by 2.1% on a year on year (Y-o-Y) basis, respectively.

Non-OPEC liquids production in 2023 is estimated to grow by 2.1 mb/d, y-o-y, reaching 69.1 mb/d. Upward revisions to the estimation for the US, Russia and Latin America offset downward revisions to Africa, Canada, OECD Europe and Other Eurasia. Overall OECD supply growth for 2023 is revised up. The non-OECD supply growth estimation for 2023 is revised up to 0.4 mb/d, y-o-y. Latin America is estimated to be the main growth driver in the non-OECD region, followed by Other Eurasia and China. OPEC NGLs and non-conventional liquids production in 2023 is estimated to grow by about 50 tb/d to average 5.4 mb/d. It is expected to increase by around 60 tb/d to average 5.5 mb/d in 2024 and an additional growth of 110 tb/d is forecast in 2025, averaging 5.6 mb/d.

The forecast for 2023 world oil demand growth remains unchanged from the previous assessment at 2.5 mb/d. Minor data revisions are made in 1Q23 to 3Q23 for OECD and China to accommodate for the latest received data. Also, the demand forecast for OECD Americas in 4Q23 is adjusted upward, reflecting better-than-expected improvements in oil demand. Similarly, the demand forecast for China and the Middle East is adjusted slightly upwards, following data showing improvements in oil demand.

Natural gas spot prices at the US Henry Hub benchmark averaged $2.52 per million British thermal units (MMBtu) in December 2023. Record-high natural gas production, flat consumption, and rising natural gas inventories contributed to lower prices.

Economy in Focus

1. A snapshot of the global economy

Global economic growth

- According to IMF, global growth is projected at 3.1 percent in 2024 and 3.2 percent in 2025, with the 2024 forecast 0.2 percentage point higher than that in the October 2023 World Economic Outlook (WEO).

- The forecast for 2024–25 is, however, below the historical (2000–19) average of 3.8 percent, reflecting the lagged and ongoing effects of tight monetary policies to rein in high inflation, restrictive credit conditions, and weak global trade and investment.

- For advanced economies, growth is projected to decline slightly from 1.6 percent in 2023 to 1.5 percent in 2024 before rising to 1.8 percent in 2025.

    - In the United States, growth is projected to fall from 2.5 percent in 2023 to 2.1 percent in 2024 and 1.7 percent in 2025, with the lagged effects of monetary policy tightening, gradual fiscal tightening, and a softening in labor markets slowing aggregate demand.

    - Growth in the euro area is projected to recover from its low rate of an estimated 0.5 percent in 2023, which reflected relatively high exposure to the war in Ukraine, to 0.9 percent in 2024 and 1.7 percent in 2025.

    - Among other advanced economies, growth in the United Kingdom is projected to rise modestly, from an estimated 0.5 percent in 2023 to 0.6 percent in 2024, as the lagged negative effects of high energy prices wane, then to 1.6 percent in 2025.

- In emerging market and developing economies, growth is expected to remain at 4.1 percent in 2024 and to rise to 4.2 percent in 2025.
    - Growth in emerging and developing Asia is expected to decline from an estimated 5.4 percent in 2023 to 5.2 percent in 2024 and 4.8 percent in 2025, attributable to China's economy.

    - Growth in China is projected at 4.6 percent in 2024 and 4.1 percent in 2025, with an upward revision of 0.4 percentage point for 2024. The upgrade reflects carryover from stronger-than expected growth in 2023 and increased government spending on capacity building against natural disasters.

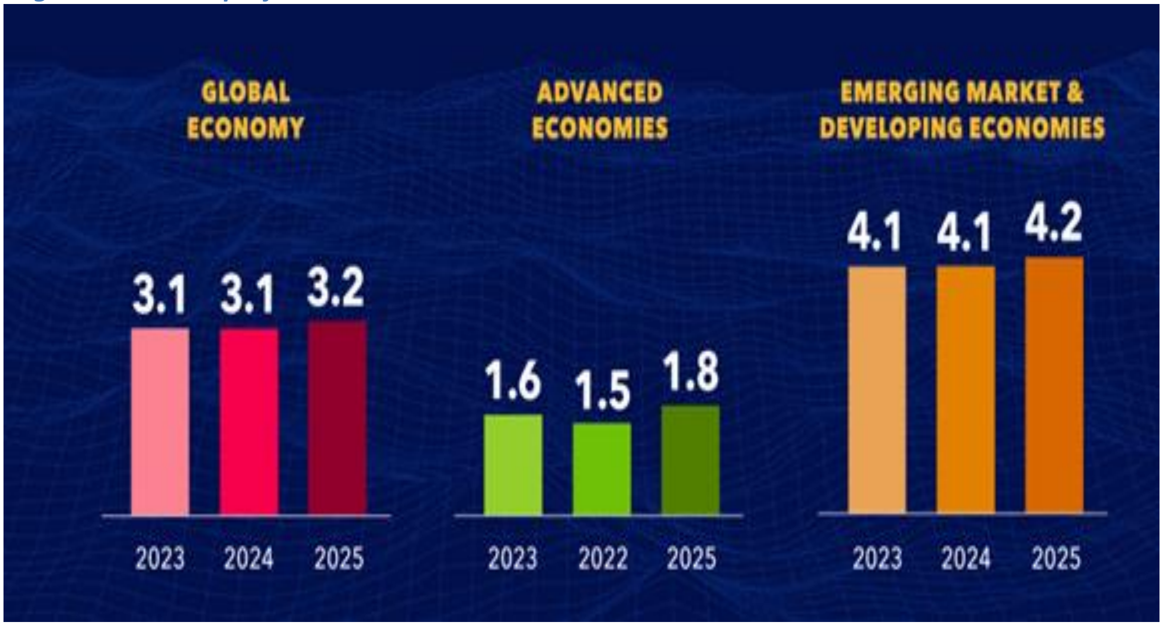
    - Growth in India is projected to remain strong at 6.5 percent in both 2024 and 2025, with an upgrade from October of 0.2 percentage point for both years, reflecting resilience in domestic demand.

Table 1: World economic outlook growth projections

(Real GDP, annual percent change)	ESTIMATE 2023	PROJECTIONS 2024	2025
World Output	3.1	3.1	3.2
Advanced Economies	1.6	1.5	1.8
United States	2.5	2.1	1.7
Euro Area	0.5	0.9	1.7
Germany	-0.3	0.5	1.6
France	0.8	1.0	1.7
Italy	0.7	0.7	1.1
Spain	2.4	1.5	2.1
Japan	1.9	0.9	0.8
United Kingdom	0.5	0.6	1.6
Canada	1.1	1.4	2.3
Other Advanced Economies	1.7	2.1	2.5
Emerging Market and Developing Economies	4.1	4.1	4.2
Emerging and Developing Asia	5.4	5.2	4.8
China	5.2	4.6	4.1
India	6.7	6.5	6.5
Emerging and Developing Europe	2.7	2.8	2.5
Russia	3.0	2.6	1.1
Latin America and the Caribbean	2.5	1.9	2.5
Brazil	3.1	1.7	1.9
Mexico	3.4	2.7	1.5
Middle East and Central Asia	2.0	2.9	4.2
Saudi Arabia	-1.1	2.7	5.5
Sub-Saharan Africa	3.3	3.8	4.1
Nigeria	2.8	3.0	3.1
South Africa	0.6	1.0	1.3
Memorandum			
Emerging Market and Middle-Income Economies	4.2	4.0	4.0
Low-Income Developing Countries	4.0	5.0	5.6

Source- IMF

Figure 2: Growth projections



Source - IMF

Global inflation

- Global headline inflation is expected to fall from an estimated 6.8 percent in 2023 to 5.8 percent in 2024 and to 4.4 percent in 2025.

- Advanced economies are expected to see faster disinflation, with inflation falling by 2.0 percentage points in 2024 to 2.6 percent, than are emerging market and developing economies, where inflation is projected to decline by just 0.3 percentage point to 8.1 percent.

- The drivers of declining inflation differ by country but generally reflect lower core inflation because of still-tight monetary policies, a related softening in labor markets, and pass-through effects from earlier and ongoing declines in relative energy prices.

- On the downside, IMF estimates new commodity and supply disruptions could occur, following renewed geopolitical tensions, especially in the Middle East. Shipping costs between Asia and Europe have increased markedly, as Red Sea attacks reroute cargoes around Africa.

2. How Asia Can Unlock $800 Billion of Climate Financing- IMF

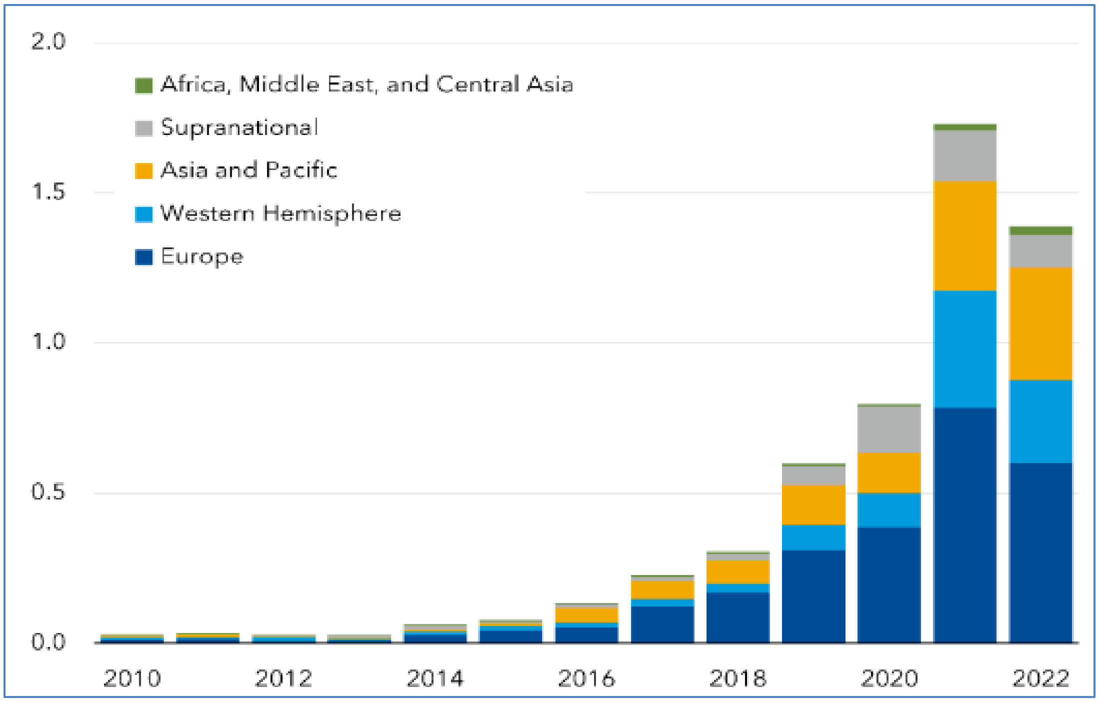
- Countries in the Asia-Pacific region face a shortfall of at least $800 billion in climate financing. With public finances depleted by the pandemic, policymakers must unlock the vast potential of private capital to join the fight more effectively against global warming.

- Doing so will demand a coordinated and multi-faceted approach by actors on all sides, from governments and central banks to financial supervisors and multilateral institutions. Important strategies include phasing out fossil-fuel subsidies, which have reached a record $1.3 trillion. It will also be key to expand carbon pricing, bridge critical data gaps, and promote innovative financing along with public-private partnerships.

- Mobilizing more climate finance is vital not only for mitigating emissions but to build adaptive capacity through investments in climate resilient infrastructure. This is especially important for Asia, which is home to several of the largest emitters and a region acutely vulnerable to climate change due to high population density and geography.

- Asia contributed about two-thirds of global growth last year, and will again in 2024, but it contributes more than half of harmful global greenhouse gas emissions. Asia's economies recognize how climate hazards directly impact lives and livelihoods, and have made deeper commitments, as their revised Nationally Determined Contributions under the 2015 Paris Agreement show. Asia can aid the climate fight by demonstrating how to balance economic growth and environmental sustainability.

Figure 3: Global sustainable debt issuance, by region (trillions of US dollars)



Source- IMF

- Asia's emerging market and developing economies need investment of at least $1.1 trillion annually to meet mitigation and adaptation needs. But they are only getting $333 billion, mostly from sustainable debt instruments like green bonds, and public sources contribute more than half. Such a shortfall leaves these economies with a funding gap of at least $815 billion. China leads in attracting climate finance, making major strides in renewable energy adoption, and its collaborations with the EU have yielded crucial frameworks for sustainable finance, such as the Common Ground Taxonomy and stricter China Green Bond Principles.

- They should phase out fossil fuel subsidies and expand carbon pricing, which would generate revenue for sustainable public investment. This would help boost investment in green technology, jobs, and growth, while supporting vulnerable households.

- Further, collaborating with multilateral standard setters to develop internal capacity is crucial for improving the clarity and reliability of ESG score ratings, fostering greater trust and understanding in these evaluations

3. UNCTAD raises alarms on escalating disruption to global trade

- The United Nations Conference on Trade and Development (UNCTAD) has expressed concerns over the escalating disruptions in global trade due to geopolitical tensions affecting shipping in the Black Sea, attacks on ships in the Red Sea affecting the Suez Canal and the impact of climate change on the Panama Canal.

- The recent attacks on Red Sea shipping, coupled with existing geopolitical and climate-related challenges, have given rise to a complex crisis affecting key global trade routes. Nearly 80 per cent of goods globally are moved via maritime.

- UNCTAD, in a statement, estimates that the weekly transits going through the Suez Canal decreased by 42 per cent over the last two months.

- The ongoing conflict in Ukraine has triggered substantial shifts in oil and grain trades, reshaping established trade patterns. Simultaneously, the Panama Canal, a pivotal conduit for global trade, is grappling with diminished water levels, resulting in a staggering 36 per cent reduction in total transits over the past month compared to a year ago. The long-term implications of climate change on the canal's capacity are raising concerns about enduring impacts on global supply chains.

Global Implications-

- Energy prices are witnessing a surge as gas transits are discontinued, directly impacting energy supplies, especially in Europe.

- The crisis is also reverberating in global food prices, with longer distances and higher freight rates potentially cascading into increased costs. Disruptions in grain shipments from Europe, Russia, and Ukraine pose risks to global food security, affecting consumers and lowering prices paid to producers.

- The surge in the average container spot freight rates during the last week of December, by plus 500 dollars, in one week, was the highest ever weekly increase. Average container shipping spot rates from Shanghai this week are up by 122 per cent compared to early December. The rates from Shanghai to Europe went up by 256 per cent, i.e. more than tripled. Rates to the United States West coast also increased above average – by 162 per cent, although they do not go through Suez, reflecting the global impact of the crisis.

- According to UNCTAD, prolonged interruptions, particularly in container shipping, pose a direct threat to global supply chains, potentially leading to delayed deliveries and heightened costs.

4. Foreign direct investment in developing economies fell 9% in 2023- UNCTAD

- Foreign direct investment (FDI) flows to developing countries fell by 9% to $841 billion in 2023, according to UNCTAD's latest Global Investment Trends Monitor, published in January, 2024.

- Developing countries in Asia felt the brunt of the decline, registering a 12% drop, while flows to Africa and Latin America and the Caribbean remained stable.

- The decrease in FDI to developing regions last year occurred in a global context of weak investment and economic uncertainty.

- In 2023, some major developing economies in Asia saw significant declines in FDI inflows but remained attractive destinations for greenfield projects – when a parent company starts a venture in a foreign country by constructing new operational facilities from the ground up.

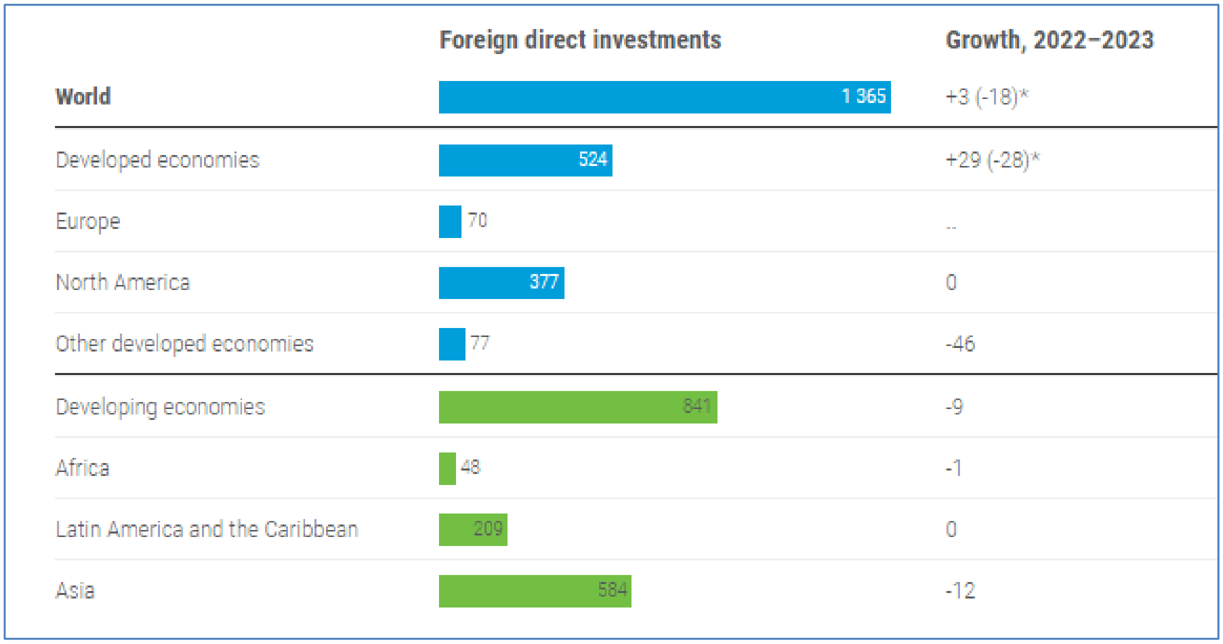
- China reported a rare 6% decrease in FDI inflows but saw 8% growth in new greenfield project announcements.

- Similarly, India saw a 47% drop in FDI inflows but remained among the top five global destinations for greenfield projects.

- FDI Flows to members of the Association of Southeast Asian Nations (ASEAN), normally an engine of FDI growth, declined by 16%. Yet the group remained attractive for manufacturing investments with a remarkable 37% increase in greenfield project announcements in nations like Viet Nam, Thailand, Indonesia, Malaysia, the Philippines and Cambodia.

- In West Asia, FDI remained stable at 2% buoyed by sustained investments in the United Arab Emirates, which saw greenfield announcements rise by 28%, trailing only the United States, the world's largest FDI recipient. Greenfield numbers also surged 63% in Saudi Arabia.

Figure 4: FDI trends in 2023, global and by region, billions of USD and % compared to 2022



Source- UNCTAD

- Africa's FDI flows remained nearly unchanged in 2023 at an estimated $48 billion, marking a slight 1% decrease compared to the previous year. The region saw an increase in greenfield project announcements, particularly in Morocco, Kenya and Nigeria.
- According to UNCTAD report, 2024 could see a modest increase in FDI flows. Projections for inflation and borrowing costs in major markets indicate a stabilization of financing conditions for international investment deals.

5. Indian Economy

India's economic growth

The National Statistical Office (NSO), Ministry of Statistics and Programme Implementation released the First Advance Estimates (FAE) of National Income for the financial year 2023-24. The salient features are given below:-

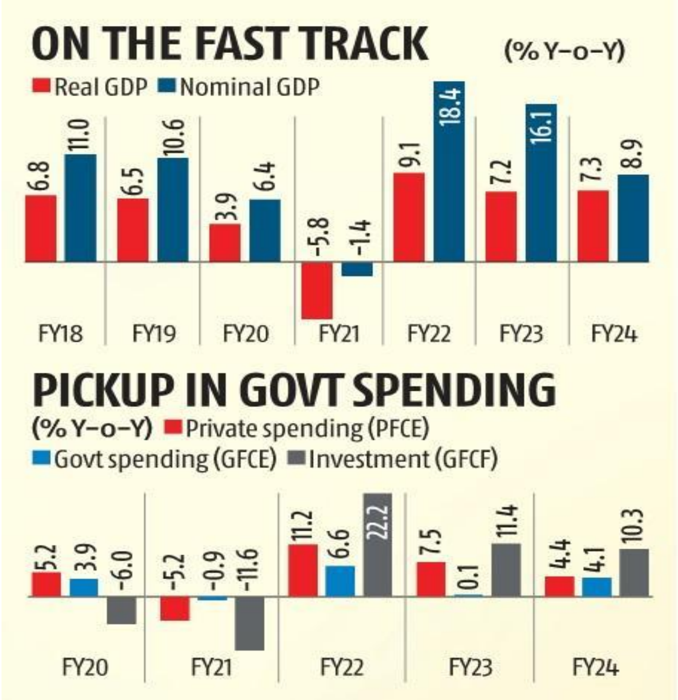
- Real GDP in the year 2023-24 is estimated to attain a level of ₹171.79 lakh crore, as against the Provisional Estimate of GDP for the year 2022-23 of ₹160.06 lakh crore, released on 31st May, 2023. The growth in real GDP during 2023-24 is estimated at 7.3 per cent as compared to 7.2 per cent in 2022-23.

- Nominal GDP in the year 2023-24 is estimated at ₹296.58 lakh crore, as against the Provisional Estimate of GDP for the year 2022-23 of ₹272.41 lakh crore, released on 31st May, 2023. The growth in nominal GDP during 2023-24 is estimated at 8.9 per cent as compared to 16.1 per cent in 2022-23.

- The manufacturing industry is expected to grow at 6.5 per cent in FY24, up from 1.3 per cent registered in FY23.

- Agriculture, livestock, forestry & fishing growth, which contributes around 15 per cent to the GDP, is pegged at 1.8 per cent in FY24, down from 4 per cent in FY23.
- The labor-intensive construction sector is expected grew at 10.7 per cent in FY24.
- The mining and quarrying industry, which grew at 4.6 per cent in FY23, is seen growing at 8.1 per cent in FY24.
- The service sector, the largest component of GDP, is estimated to grow relatively slow at 7.7 per cent in FY24 against 9.5 per cent in FY23.
- Growth of trade, hotels, transport, communication & services related to the broadcasting industry has been pegged at 6.3 per cent in FY24, down from 14 per cent in FY23.
- The other two components of the services sector – financial, real estate and professional services, and public administration -- are pegged at 8.9 per cent and 7.7 per cent growth, respectively, this financial year.
- On the expenditure side of GDP, growth in private consumption is expected to slow down in 2023-2024 to 4.4 per cent, while government spending is projected to pick up pace, growing at 4.1 per cent.
- With global growth remaining weak, the external sector remains a major drag on India's growth, with net exports contributing negatively to real GDP growth (at -3 percentage points).

Figure 5: India's GDP



Source- NSO

India PMI

- According to the HSBC India Manufacturing Purchasing Managers' Index (PMI), which is compiled by S&P Global, India's manufacturing PMI fell to 54.9 in December from 56 in November and 55.5 in October.

- The pace of growth in India's manufacturing activity fell to an 18-month low in December as output growth and new orders softened burdened by high inflation and moderate growth in exports.

Figure 6: India manufacturing PMI

Source- S&P Global

- The HSBC India Services Purchasing Managers' Index rose to 59.0 in December from November's one-year low of 56.9. With this, India's services activity index has expanded for 29 straight months and is well above the 50-mark reading.

- While the input costs rose at a slower pace than in November, the output prices rose at a faster pace, indicating improved corporate margins in December, 2023.

Inflation in India

- According to the data released by National Statistical Office (NSO), Ministry of Statistics and Programme Implementation (MoSPI), India's retail inflation hit 4-month high of 5.69% in December 2023.

- The CPI-inflation surged from 5.5% in November, led by an uptick in food prices that rose 9.5% nationally and breached the 10% mark for urban consumers, hitting 10.42%.

- Beyond food, most items saw lower inflation than November. Fuel and light prices fell 1% year-on-year, compared to a 0.8% dip in November. Transport and communication prices rose 2%, slightly below November levels, while inflation in personal care and effects eased from 7.8% to 7.3% in December.

- Although rural India's consumers faced a slightly lower rise in food prices at just under 9%, they faced higher overall inflation at nearly 6%, compared to 5.5% faced by their urban population in December.

- While price rise hardened in December, the average consumer price inflation for the October-to-December quarter has been 5.4%, moderately lower than the Reserve Bank of India (RBI) projection of 5.6%.

- The central bank projects inflation for Q3 and Q4 at 5.6% and 5.2%, respectively and the inflation for FY 2023-24 is projected at 5.4 per cent.

- For the next fiscal year - FY 2024-25, CPI inflation for Q1FY25 is projected at 5.2 per cent; Q2 at 4.0 per cent; and Q3 at 4.7 per cent.

- Further, the Reserve Bank of India's Monetary Policy Committee unanimously decided to keep the repo rate unchanged at 6.5% for the fifth time in a row.

Unemployment in India

- According to the latest data available from the Centre for Monitoring Indian Economy (CMIE), youth unemployment (20-34 age group) has been on the rise.

- In the October-December 2023 quarter, joblessness among those in the age group of 20 to 24 grew to 44.49% from 43.65% in the previous quarter of July to September 2023. On the other hand, it stood at 14.33% for the age group of 25-29 compared to 13.35% in the July-September quarter.

- In a similar trend, the joblessness rate for the 30-34 age group stood at a 10-quarter high of 2.49% as against 2.06% in the previous quarter.

- According to CMIE, the rise in unemployment is largely attributed to rural unemployment as against urban joblessness. Among the rural unemployed, it rose to the highest among those in the 20-24 age group (43.79%) followed by 13.06% in the 25-29 age group and 2.24% in the 30-34 age group.

- Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) is the largest provider of employment in rural India. According to the official figures, the work demanded by households in Q3FY24 was up by 1.3% year-on-year; but this was lower than the 15.1% increase recorded in Q2.

India's external position

India's foreign trade position

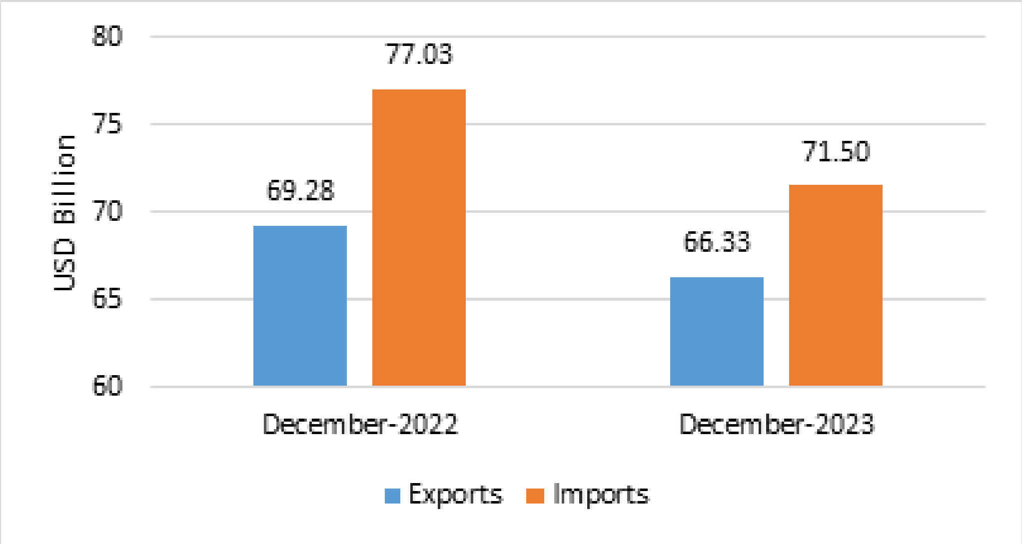
- India's overall exports (Merchandise and Services combined) in December 2023 is estimated to be USD 66.33 Billion, exhibiting a negative growth of (-) 4.25 per cent over December 2022.
- Overall imports in December 2023 is estimated to be USD 71.50 Billion, exhibiting a negative growth of (-) 7.18 per cent over December 2022.

Table 2: Trade during December 2023

		December 2023 (USD Billion)	December 2022 (USD Billion)
Merchandise	Exports	38.45	38.08
	Imports	58.25	61.22
Services	Exports	27.88	31.19
	Imports	13.25	15.81
Overall Trade (Merchandise +Services)	Exports	66.33	69.28
	Imports	71.50	77.03
	Trade Balance	-5.17	-7.75

Source- RBI

Figure 7: Overall Trade during December 2023



Source- RBI

- For the month of December 2023, under merchandise exports, 17 of the 30 key sectors exhibited growth in December 2023 as compared to same period last year (December 2022). These include Tobacco (38.94%), Meat, Dairy & Poultry Products (29.76%), Spices (27.68%), Fruits & Vegetables (25.36%), Electronic Goods (14.41%), Gems & Jewellery (14.07%), Cereal Preparations & Miscellaneous Processed Items (13.5%), Plastic & Linoleum (10.43%), Engineering Goods (10.19%), Handicrafts Excl. Hand Made Carpet (9.37%), Drugs & Pharmaceuticals (9.3%), Cotton Yarn/Fabs./Made-Ups, Handloom Products Etc. (8.62%), Oil Seeds (8.48%), Mica, Coal & Other Ores, Minerals Including Processed Minerals (5.17%), Carpet (3.82%) and Ceramic Products & Glassware (2.95%).
- For April-December 2023, under merchandise exports, 14 of the 30 key sectors exhibited growth during April-December 2023 as compared to April-December 2022. These include Iron Ore (215.54%), Oil Meals (27.36%), Electronic Goods (22.24%), Ceramic Products & Glassware (18.75%), Fruits & Vegetables (16.29%), Tobacco (13.15%), Oil Seeds (9.4%), Meat, Dairy & Poultry Products (8.87%), Drugs & Pharmaceuticals (8.2%), Cereal Preparations & Miscellaneous Processed Items (7.07%), Cotton Yarn/Fabs./Made-Ups, Handloom Products Etc. (6.03%), Spices (5.83%), Coffee (4.25%) and Cashew (0.13%).
- India’s trade deficit has shown considerable improvement in April-December 2023. Overall trade deficit for April-December 2023* is estimated at USD 69.34 Billion as compared to the deficit of USD 108.13 Billion during April-December 2022, registering a decline of (-) 35.87 percent. The merchandise trade deficit during April-December 2023 is USD 188.02 Billion compared to USD 212.34 Billion during April-December 2022, registering a decline of (-) 11.45 percent.

6. India reinforces its status as a resilient global economy and a preferred investment destination at Davos

- The 54th World Economic Forum (WEF) Annual Meeting, held from January 15 to January 19, 2024, in Davos, Switzerland, brought forth a compelling narrative as India claimed a spotlight under the overarching theme, "Building Trust”. WEF's chosen workstreams resonate with India's vision—growth, carbon neutrality, sustainability, robust economy, and the concept of "Vasudhaiva Kutumbakam: The World Is One Family," championed by India during its G20 Presidency. India's presence at Davos reinforces its status as a resilient global economy and a preferred investment destination.

- Indian Government delegation representing at WEF led by Smt Smriti Irani, Hon’ble Minister of Women & Child Development along with Sh. Hardeep Singh Puri, Hon’ble Minister of Petroleum & Natural Gas, Housing & Urban Affairs, Sh. Ashwini Vaishnaw, Hon’ble Minister of Railways, Communications, Electronics & IT and Sh RK Singh, Secretary, DPIIT, Ministry of Commerce & Industry.

- India's commanding presence is marked by securing four distinct spaces at WEF, each dedicated to illuminating the India Opportunity and unfolding its Growth Story to the global investors:

- **India Engagement Centre**: This lounge unfolds India's growth narrative, showcasing its digital public infrastructure, vibrant startup ecosystem, and burgeoning energy sector. Fireside chats on globally significant pillars will enrich the dialogue.
- **Experience India Centre**: This lounge unveils the technological leaps powered by New India, commitments to sustainability and inclusivity along with its vibrant culture.
- **India Investment Centre**: This served as the center for Government-to-Business (G2B) and Business-to-Business (B2B) networking, hosting roundtables, sessions, and panels on leading topics.
- **We Lead Lounge**: This year a dedicated gender lounge "We Lead Lounge" focused on women participation in various walks of life, financial inclusion and bridging the digital gender gap.

- The first day at the India centers begun with a compelling panel discussion on "Beyond Borders: India's Impact on the World Stage." Organized as a cornerstone event, the panel delved into India's evolving role in the global landscape. PHDCCI, in collaboration with Invest India, organized this panel which provided a comprehensive exploration of India's contributions and influence on the global stage, offering insights that resonate beyond geographical borders.

- The India Engagement Centre also hosted the briefing of India delegation in the presence of Smt Smriti Irani, Hon'ble Minister of Women & Child Development along with Sh. Hardeep Singh Puri, Hon'ble Minister of Petroleum & Natural Gas, Housing & Urban Affairs, and Sh RK Singh, Secretary, DPIIT, Ministry of Commerce & Industry. The briefing was attended by Indian business leaders and Industry chambers present in Davos to attend the World Economic Forum 2024.

- At WEF, a total of 21 sessions were held over the span of 5 days. India showcased its opportunity for discussion on Manufacturing, Technology, Gender based impact, Sustainability, Mobility, Startups, Healthcare, AI etc.

- In tandem with the India Lounges, the establishment of five State Lounges underscores India's consolidated and prominent role at WEF, fostering collaboration and discourse on a global scale. The 5 states include Karnataka, Maharashtra, Tamil Nadu, Telangana, and Uttar Pradesh.

7. India's emission intensity reduced by 33% between 2005 and 2019: Govt report

- India reduced its GDP emission intensity by 33 per cent between 2005 and 2019. A government report also said India's GDP grew at a cumulative annual growth rate of 7 per cent but its emissions rose by only 4 per cent per year during this period, suggesting that the country has been successful in decoupling its economic growth from planet-warming greenhouse gas emissions.

- The report called 'The Third National Communication to the United Nations Framework Convention on Climate Change' was submitted to the UN climate change body.

- Hon'ble Environment Minister Shri Bhupender Yadav said that India reduced its GDP emission intensity by 33 per cent between 2005 and 2019, achieving the target 11 years in advance. India created an additional carbon sink of 1.97 billion tonnes of CO2 equivalent during this period.

- However, the country's total emissions (including the Land Use, Land-Use Change and Forestry sector) have increased by 4.56 per cent with respect to 2016.

- The emission intensity of the economy refers to the total amount of greenhouse gases emitted for every unit increase of gross domestic product (GDP). It is different from absolute emissions.

8. India needs a surplus of $101 bn in investment to triple RE targets

- India will need additional investment of $101 billion to align with International Energy Agency's (IEA) Net Zero target of tripling renewable energy capacity, compared to the 14th National Electricity Plan (NEP14) pathway, according to a report by energy think tank Ember.

- The renewable-based installed capacity for 2031-32 is 596,275 megawatts (MW), according to National Electricity Plan (NEP) projections. This includes large hydro (62,178 MW), solar (364,566 MW), wind (121,895 MW), small hydro (5,450 MW), biomass (15,500 MW), pump storage plants (26,686 MW) and battery energy storage systems capacity of 47,244 MW/236,220 MWh.

- According to NEP, "the share of non-fossil-based capacity is likely to increase to 57.4 per cent by the end of 2026-27 and may likely further increase to 68.4 per cent by the end of 2031-32 from around 42.5 per cent as of April 2023,".

- The report estimated, that to achieve these generation levels from solar and wind, India will need to build an additional capacity of 115 GW of solar and 9 GW of wind by 2030 on top of the solar and wind targets set out in its NEP14 plan. It will take India's total renewable capacity to 448 GW of solar and 122 GW of wind by 2030.

- India has committed to adding 500 GW of installed electricity capacity from non-fossil fuel sources by 2030 and achieving Net Zero by 2070. The establishment of a grid that integrates renewables would help meet these targets, making interstate transmission system (ISTS) essential. The NEP14 targets for FY 2030-31 outline a target of 227 GW of ISTS and 37 GW of intra-state transmission systems to integrate renewable energy. Additionally, plans include 18 GW of pumped storage and 42 GW (five hours) of battery storage.

- The report mentioned that while on the rise, investment in renewable energy projects is prone to risks. Some of these challenges include payment delays, renegotiation of Power Purchase Agreements and complexities related to land acquisition. Effectively addressing these risk factors and actively attracting investment, particularly from foreign sources despite these risks, is pivotal for ensuring the successful implementation of renewable energy projects.

9. World Bank keeps India's FY25 GDP growth estimate unchanged at 6.4%

- The World Bank kept its FY25 economic growth projection for India unchanged at 6.4 per cent, mainly on account of strong domestic demand, rising public infrastructure spending and strong private-sector credit growth. However, it projected that the private consumption growth might taper off due to high food inflation and diminishing pent-up demand.

- According to World Bank, India was likely to maintain the fastest growth rate among the world's largest economies, but its post-pandemic recovery was expected to slow, with estimated growth of 6.3 per cent in FY24, before recovering gradually to 6.5 per cent in FY26.

- Further World Bank highlighted that headline retail inflation remained within monetary authorities' target band of 2-6 per cent throughout most of 2023, with policy rates being kept unchanged since February 2023.

- Further, on the fiscal front, the Bank said government revenues were expected to gain from solid corporate profits, and current expenditures were likely to decrease with the conclusion of pandemic-related measures.

10. India to Become a $7 Trillion Economy by 2030- Government of India

- According to the Government, the Indian economy is expected to become the third largest in the world having a size of $5-trillion in the next 3 years as the financial year 2023-24 marks the third successive year of over 7 per cent GDP growth. Besides, the country's economy will touch $7-trillion by 2030 on the back of continued reforms.

- The robustness seen in domestic demand, namely, private consumption and investment, traces its origin to the reforms and measures implemented by the government over the last ten years," the review said.

- Ten years ago, India was the 10th largest economy in the world, with a GDP of $1.9-trillion at current market prices. "This 10-year journey is marked by several reforms, both substantive and incremental, which have significantly contributed to the countries. Today, it is the 5th largest with a GDP of $3.7 trillion, despite the pandemic and inheriting an economy with macro imbalances and a broken financial sector, said the ministry's economic review.

- According to the report, the strength of the domestic demand has driven the economy to a 7 per cent plus growth rate in the last three years. In FY25, real GDP growth will likely be closer to 7 per cent,

Lessons from Economics

Varied colors of Economy and Impact on UN Sustainable Development Goals

- **The brown economy**

The brown economy basically refers to the industries which cause high levels of pollution and gas emissions. Such industries are cement, iron smelting, quarrying and coal mining and coal-using production facilities. One of the byproducts of this form of economy is massive levels of climate change-causing greenhouse gas (GHG). The impacts of the brown economy adversely impact all 17 SDG including- Goal 1- No Poverty, GOAL 2: Zero Hunger GOAL 8: Decent Work and Economic Growth, GOAL 3: Good Health and Well-being, GOAL etc.

- **The green economy**

The green economy seeks to sustain and advance economic, environmental, and social well-being, increase GDP, and contribute to poverty reduction. The UN succinctly defines the green economy as one that, "carries the promise of a new economic growth paradigm that is friendly to the earth's ecosystems and can also contribute to poverty alleviation." This economy contains many diverse approaches to enhance efficiency, eliminate pollution and recycle waste.

United Nations Environmental Program (UNEP) defines a green economy as, "one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities." This definition is in line with the three pillars of sustainable development (economic, social, and environmental).

All 17 SDGs benefit from the green economy. GOAL 1: No Poverty. GOAL 2: Zero Hunger, GOAL 3: Good Health and Well-being, GOAL 4: Quality Education, GOAL 5: Gender Equality, GOAL 6: Clean Water and Sanitation, GOAL 7: Affordable and Clean Energy, GOAL 8: Decent Work and Economic Growth, GOAL 9: Industry, Innovation, and Infrastructure, GOAL 10: Reduced Inequality, GOAL 11: Sustainable Cities and Communities, GOAL 12: Responsible Consumption and Production, GOAL 13: Climate Action, GOAL 14: Life Below Water, GOAL 15: Life on Land, GOAL 16: Peace and Justice Strong Institutions, GOAL 17: Partnerships to Achieve the Goal.

- **The blue economy**

It refers to efforts to preserve the finite resources in our oceans and waterways. Biotechnology, fisheries, and aquaculture are all part of this economy. The blue economy seeks to manage marine resources through the adoption of sustainable harvests, and regeneration (restoration) where necessary and possible. This economy strives to eradicate pollution and recycle waste in the marine environment.
While many SDGs benefit indirectly, the blue economy directly serves GOAL 3: Good Health and Well-being, GOAL 6: Clean Water and Sanitation, GOAL 12: Responsible Consumption and Production, GOAL 14: Life Below Water, GOAL 16: Peace and Justice Strong Institutions, and GOAL 17: Partnerships to Achieve the Goal.

- **The white economy**

The white economy refers to the health industry. It includes hospitals, the pharmaceutical industry, the medical supply sector as well as providers of medical equipment, both diagnostic and biomedical. This involves workers with varying degrees of specialization. This is a broad and inclusive category as it applies to everyone as everyone avails themselves of some kind of health-related service at some point in their lives. This type of economy is primarily concerned with SDG GOAL 3: Good Health and Well-being.

The white economy has also been used by Professor Douglas McWilliams, a British economist to describe the digital economy.

- **The silver economy**

According to the Oxford Institute of Population Aging, the EU defines the silver economy as the sum of the economic activities of people over the age of 50. This includes the products and services they purchase and the economic activity this spending generates. This economy contributes to a wide range of industries including health and nutrition; leisure and well-being; finance and transport; housing; education; and employment. The silver economy is also concerned with services related to wellbeing, health monitoring, health sports, health tourism, and green care. The silver economy supports SDGs like GOAL 1: No Poverty. GOAL 2: Zero Hunger, GOAL 3: Good Health and Well-being, GOAL 4: Quality Education, GOAL 8: Decent Work and Economic Growth.

- **The red economy**

The red economy is about mass production and mass consumption, it is derived from Fordism, which was named after Henry Ford who operated as though environmental resources were unlimited. This economic model is focused on reducing production costs by employing a linear business model of extracting resources and producing waste. It is hostile to both social and environmental concerns making it an unsustainable economic system.

The red economy has dire implications for GOAL 6: Clean Water and Sanitation, GOAL 9: Industry, Innovation, and Infrastructure, GOAL 11: Sustainable Cities and Communities, GOAL 12: Responsible Consumption and Production, GOAL 13: Climate Action, GOAL 14: Life Below Water, and GOAL 15: Life on Land

Oil Market

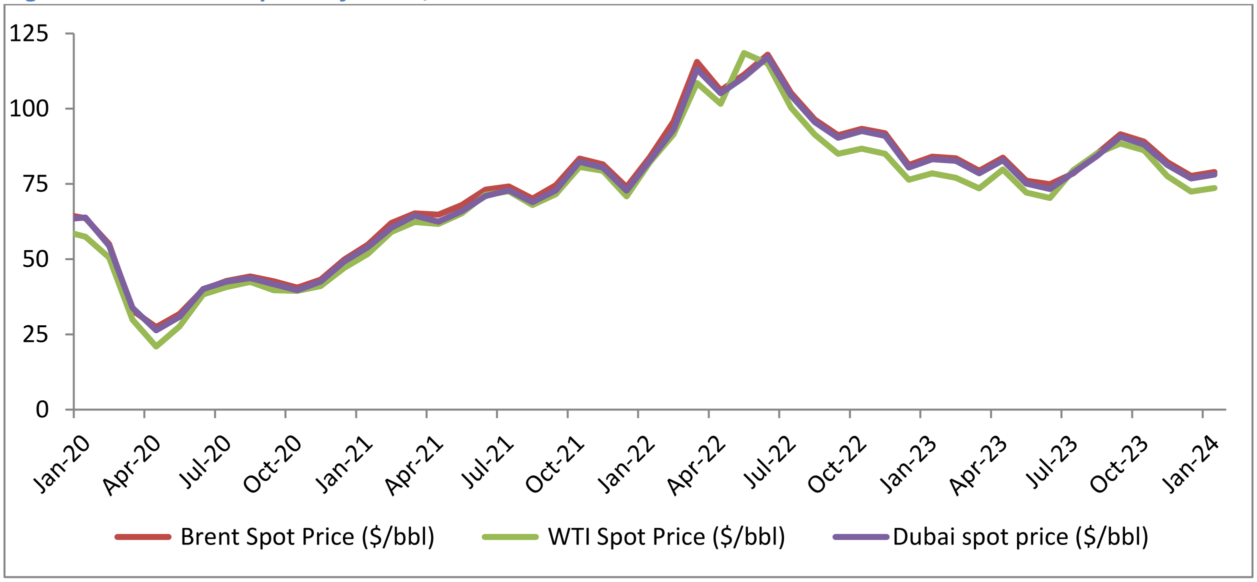
Crude oil price – Monthly Review

Oil prices rose as positive U.S. economic growth and signs of Chinese stimulus boosted demand expectations, while Middle East supply concerns added support.

The oil futures prices were also buoyed by a higher geopolitical risk premium due to concerns about maritime trade flow disruptions, leading to worries about supply chain bottlenecks and increased supply costs. Concurrently, short covering by speculators, who had significantly reduced their bullish positions in November and the first two weeks of December, contributed to the upward movement in oil futures. The combination of a weaker US dollar and signs indicating renewed demand in the spot crude market ahead of the year-end holidays further limited the decline of oil prices.

Brent crude ranged an average to $78.94 a barrel and WTI ranged to $73.63 per barrel in the month of January 2024.

Figure 8: Benchmark price of Brent, WTI and Dubai crude



Source- World Bank

- Brent crude price averaged $78.94 per bbl in January 2024, up by 1.6% on a month on month (MoM) and down by 6.0% on year on year (YoY) basis, respectively.

- WTI crude price averaged $73.63 per bbl in January 2024, up by 1.6% on a month on month (MoM) and down by 6.3% on year on year (YoY) basis, respectively.

- Dubai crude price averaged $78.08 per bbl in January 2024, up by 1.6% on a month on month (MoM) and down by 6.1% on year on year (YoY) basis, respectively.

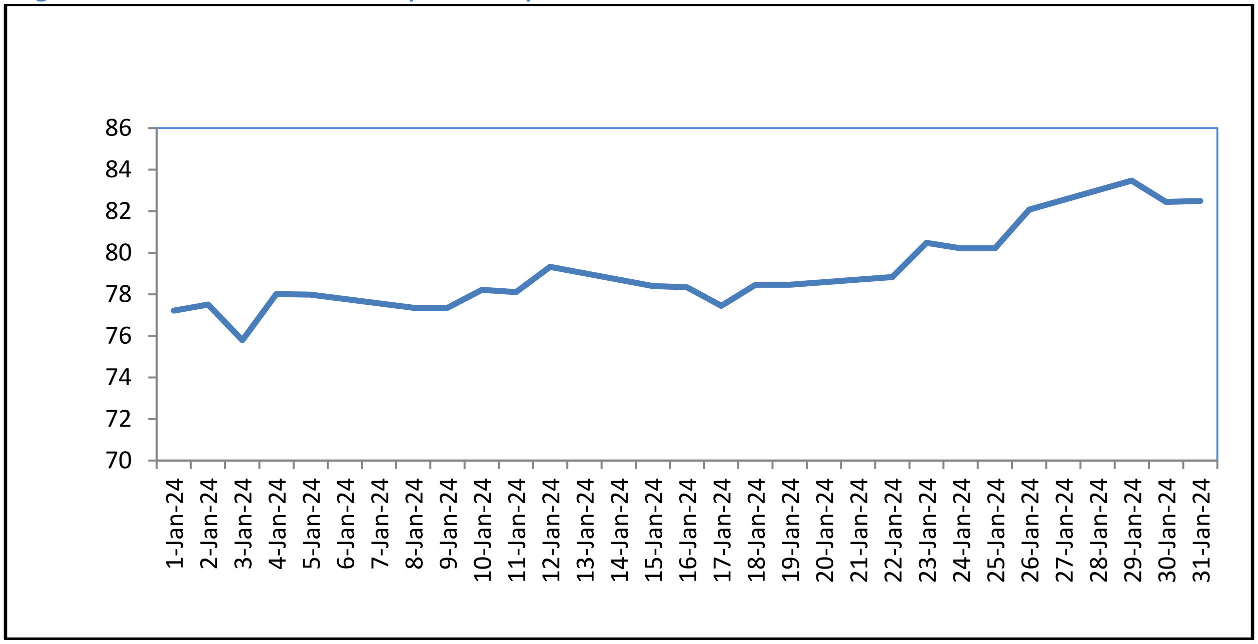
Table 3: Crude oil price in January, 2024

Crude oil	Price ($/bbl)	MoM (%) change	YoY (%) change
Brent	78.94	1.6%	-6.0%
WTI	73.63	1.6%	-6.3%
Dubai	78.08	1.6%	-6.1%

Source- World Bank

Indian Basket Crude oil price

Figure 9: Indian crude oil basket price in $ per bbl



Source- PPAC

- Indian crude basket price averaged $79.05 per barrel in January 2024, up by 2.1% on Month on Month (M-o-M) and down by 2.1% on a year on year (Y-o-Y) basis, respectively.

Oil production situation

- Non-OPEC liquids production in 2023 is estimated to grow by 2.1 mb/d, y-o-y, reaching 69.1 mb/d. Upward revisions to the estimation for the US, Russia and Latin America offset downward revisions to Africa, Canada, OECD Europe and Other Eurasia. Overall OECD supply growth for 2023 is revised up. The non-OECD supply growth estimation for 2023 is revised up to 0.4 mb/d, y-o-y. Latin America is estimated to be the main growth driver in the non-OECD region, followed by Other Eurasia and China.

- OPEC NGLs and non-conventional liquids production in 2023 is estimated to grow by about 50 tb/d to average 5.4 mb/d. It is expected to increase by around 60 tb/d to average 5.5 mb/d in 2024 and an additional growth of 110 tb/d is forecast in 2025, averaging 5.6 mb/d.

Table 4: Non-OPEC liquids production in 2024, mb/d

Non-OPEC liquids production	2023	1Q24	2Q24	3Q24	4Q24	2024
Americas	28.50	28.96	29.00	29.47	29.78	29.30
of which US	*20.76*	*21.02*	*21.24*	*21.51*	*21.67*	*21.36*
Europe	3.63	3.84	3.72	3.67	3.81	3.76
Asia Pacific	0.45	0.46	0.43	0.44	0.42	0.44
Total OECD	32.58	**33.25**	**33.15**	**33.57**	**34.01**	**33.50**
China	4.57	4.59	4.58	4.55	4.55	4.57
India	0.77	0.79	0.79	0.79	0.78	0.79
Other Asia	2.27	2.25	2.23	2.21	2.21	2.22
Latin America	6.93	7.14	7.17	7.29	7.37	7.24
Middle East	3.27	3.28	3.31	3.30	3.31	3.30
Africa	2.40	2.36	2.36	2.40	2.43	2.39
Russia	10.78	10.74	10.78	10.79	10.79	10.77
Other Eurasia	2.92	2.93	3.01	2.99	3.03	2.99
Other Europe	0.10	0.10	0.10	0.10	0.10	0.10
Total Non-OECD	34.01	**34.19**	**34.33**	**34.43**	**34.57**	**34.38**
Total Non-OPEC production	66.59	67.44	67.48	68.00	68.58	67.88
Processing gains	2.47	2.52	2.52	2.52	2.52	2.52
Total Non-OPEC liquids production	69.06	**69.96**	**70.00**	**70.52**	**71.10**	**70.40**

*Note. *2024 = Forecast. Totals may not add up due to independent rounding*
Source- OPEC

- From the above table, it can be inferred, that the total non-OPEC liquids production is expected to reach 66.59 mb/d by 2023.
- OPEC NGLs and non-conventional liquids production in 2023 is forecast to grow by around 50 tb/d to an average of 5.4 mb/d.

Oil demand situation

- The forecast for 2023 world oil demand growth remains unchanged from the previous assessment at 2.5 mb/d. Minor data revisions are made in 1Q23 to 3Q23 for OECD and China to accommodate for the latest received data. Also, the demand forecast for OECD Americas in 4Q23 is adjusted upward, reflecting better-than-expected improvements in oil demand. Similarly, the demand forecast for China and the Middle East is adjusted slightly upwards, following data showing improvements in oil demand.
- The global oil demand growth forecast for 2024 remains unchanged at 2.2 mb/d, with the OECD growing by around 0.3 mb/d and the non-OECD by about 2.0 mb/d. In 1Q24, oil demand is expected to grow by 2.0 mb/d y-o-y. Total world oil demand is anticipated to reach 104.4 mb/d in 2024, bolstered by strong air travel demand and healthy road mobility, including on-road diesel and trucking, as well as healthy industrial, construction and agricultural activities in non-OECD countries.

Table 5: World Oil demand, mb/d

	2023	1Q24	2Q24	3Q24	4Q24	2024	Growth	%
Total OECD	**45.75**	**45.43**	**45.71**	**46.20**	**45.93**	**45.82**	**0.07**	**0.14**
~ of which US	*20.16*	*19.92*	*20.50*	*20.47*	*20.05*	*20.24*	*0.08*	*0.38*
Total Non-OECD	**53.90**	**56.15**	**55.76**	**55.92**	**57.35**	**56.29**	**2.39**	**4.44**
~ of which India#	*5.14*	*5.40*	*5.40*	*5.17*	*5.50*	*5.37*	*0.23*	*4.48*
~ of which China	14.95	15.73	16.06	16.27	16.37	16.11	1.16	7.75
Total world	**99.66**	**101.57**	**101.47**	**102.12**	**103.28**	**102.11**	**2.46**	**2.47**

Source- OPEC monthly report, January 2024

Note: 2024 = Forecast. Totals may not add up due to independent rounding*

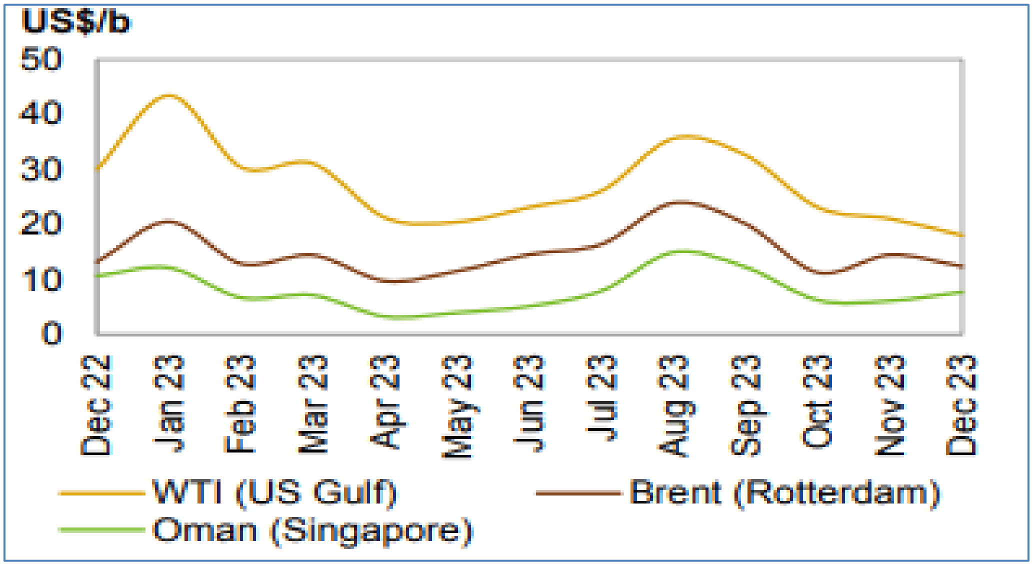
Global petroleum product prices

US Gulf Coast (USGC) refining margins against WTI decreased, with a sharp loss registered for the middle section of the barrel, more pronouncedly jet/kerosene markets, which outweighed gains derived from local naphtha and high sulphur fuel oil markets. The vast majority of the downturn was linked to jet/kerosene, as inventories for the same product ended the month higher. Gasoline crack spreads were volatile throughout the month, and while showing improvement, the upside was nearly negligible on a monthly basis and completely offset by weakness derived from the middle section of the barrel. Bearish product signals also overshadowed robust high sulphur fuel oil performance, underpinned by lower residual fuel imports.

Refinery margins in Rotterdam against Brent declined to a lesser extent than in the USGC, as weakness from jet/kerosene, gasoline and gasoil combined suppressed overall product market performance over the month. This is despite total Amsterdam-Rotterdam-Antwerp (ARA) product inventories declined by 14.2%, m-o-m, and 9.7%, y-o-y, at the end of December, with the drop mostly driven by gasoline and, to a lesser extent, by jet/kerosene relative to November, amid a temporary year-end holiday boost in product exports. However, refining margins responded to rising refinery output levels, signalling ample product supply amid usually moderated levels during the overall winter season.

Refinery throughput in Europe increased in December, according to preliminary data, and was 270 tb/d higher, to average 9.59 mb/d. Refinery margins against Brent in Europe averaged $12.39/b in December, $2.09 lower, m-o-m, and 79¢ lower, y-o-y.

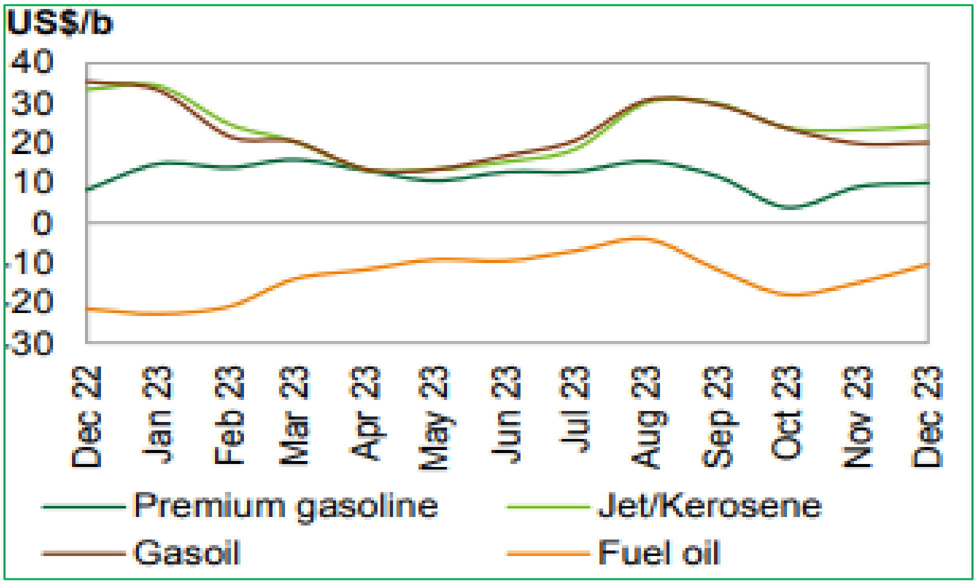
Figure 10: Refining Margins ($/bbl)



Source- Argus and OPEC

The Asian gasoline 92 crack posted significant gains, reaching a three-month high in December. MoM improvement in gasoline performance was limited, and the product represented the weakest positive margin contributor in Singapore. Ample supply in the region amid subdued exports to the Atlantic Basin, with western refiners operating at high runs, likely weighed on Asian gasoline exports to the West. The recent release of crude import licenses and product export quotas in China will most likely boost gasoline supplies and limit the upside potential for gasoline crack spreads in the near term leading up to the next maintenance season. The Singapore gasoline crack spread against Dubai in December averaged $9.96/b. This was up 93¢, m-o-m, and $1.69, y-o-y.

Figure 11: Singapore crack Spreads vs. Dubai ($/bbl)



Source- Argus and OPEC

The Singapore gasoil crack spread showed a slight rise, strengthening along with that of jet/kerosene. In the near term, gasoil balances are expected to expand globally with elevated refinery runs, including in Southeast Asia, which points to added pressure going forward. The Singapore gasoil crack spread against Oman averaged $20.07/b, up by 19¢, m-o-m, but down by $15.25, y-o-y.

Table 6: Singapore FOB, refined product prices ($/bbl) in December 2023

Singapore product prices	Price ($/b)	MoM (%) change	YoY (%) change
Naphtha	72.69	4.5%	9.5%
Premium gasoline (unleaded 95)	91.27	-6.9%	2.1%
Regular gasoline (unleaded 92)	87.27	-5.5%	2.2%
Jet/Kerosene	101.65	-4.7%	-8.0%
Gasoil/Diesel (50 ppm)	99.43	-6.3%	-12.4%
Fuel oil (180 cst 2.0% S)	97.31	-5.6%	-12.0%
Fuel oil (380 cst 3.5% S)	66.95	-2.2%	20.5%

Source- OPEC

Petroleum products consumption in India

Monthly Review:

- Overall consumption of all petroleum products in December 2023 with a volume of 20.05 MMT registered a growth of 2.30% on volume of 19.60 MMT in December 2022.
- MS (Petrol) consumption during the month of December 2023 with a volume of 2.99 MMT recorded a growth of 0.20% on volume of 2.98 MMT in December 2022.
- HSD (Diesel) consumption during the month of December 2023 with a volume of 7.60 MMT recorded a de-growth of 2.26% on volume of 7.78 MMT in the month of December 2022.
- LPG consumption during the month of December 2023 with a volume of 2.62 MMT registered growth of 2.03% over the volume of 2.57 MMT in the month of December 2022.
- ATF consumption during December 2023 with a volume of 0.720 MMT registered a growth of 9.81% over the volume of 0.659 MMT in December 2022.
- Bitumen consumption during December 2023 with a volume of 0.794 MMT registered growth of 19.94% over volume of 0.662 MMT in the month of December 2022.
- Kerosene consumption registered growth of 2.25% during the month of December 2023 as compared to December 2022.

Table 7: Petroleum products consumption in India, December 2023

Consumption of Petroleum Products (P)	Consumption in '000 MT	MoM (%) change	YoY (%) change
LPG	2,628	5.7%	2.0%
Naphtha	1,326	27.6%	19.5%
MS	2,990	-4.5%	0.2%
ATF	720	4.3%	9.2%
SKO	41	-8.9%	2.3%
HSD	7,605	1.0%	-2.3%
LDO	67	21.8%	2.1%
Lubricants & Greases	329	3.9%	-22.4%
FO & LSHS	574	9.5%	-7.8%
Bitumen	794	17.0%	19.9%
Petroleum coke	1,598	4.8%	22.8%
Others	1,384	58.1%	0.3%
TOTAL	20,054	6.2%	2.3%

Source- PPAC

Natural Gas Market

Natural Gas Price – Monthly Review

- Natural gas spot prices at the US Henry Hub benchmark averaged $2.52 per million British thermal units (MMBtu) in December 2023. Record-high natural gas production, flat consumption, and rising natural gas inventories contributed to lower prices. U.S. dry natural gas production averaged a record-high 104 billion cubic feet per day (Bcf/d) in 2023, 4% higher than the 2022 annual average. Further, Warmer-than-average temperatures in January and February 2023 led to reduced consumption in the residential and commercial sectors and the lowest total U.S. natural gas consumption for these months.

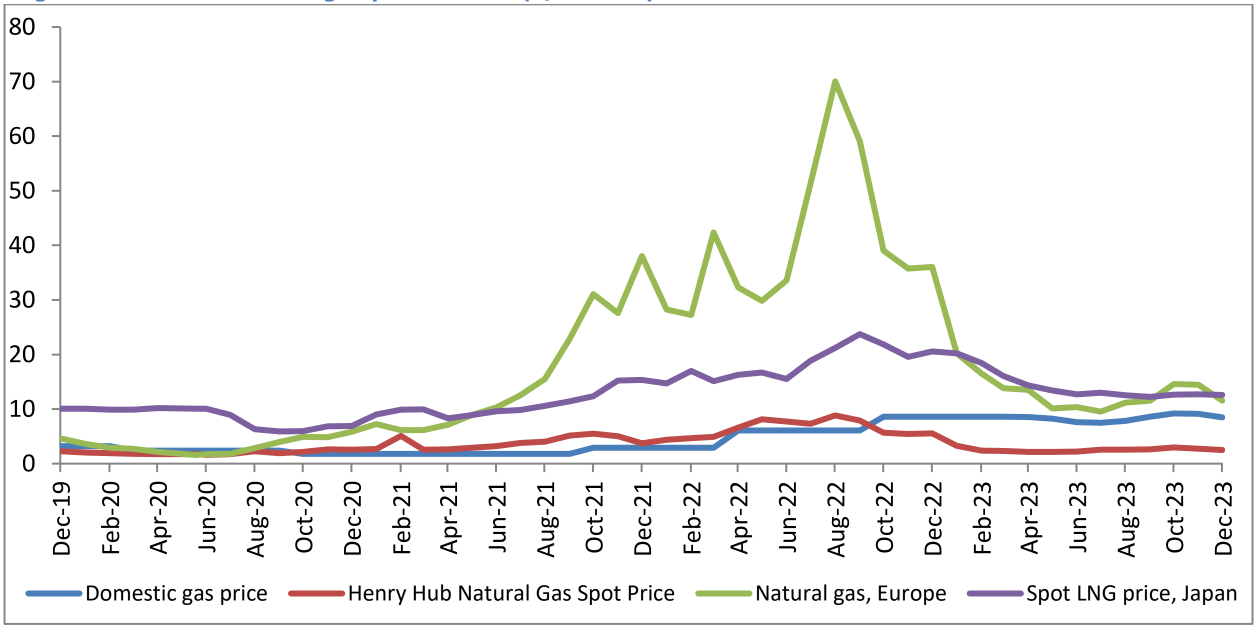
- The natural gas spot price at the Title Transfer Facility (TTF) in the Netherlands in Europe traded at an average of $11.51 per MMBtu. Natural gas prices in Europe receded after three consecutive monthly increases.

- Japan Liquefied Natural Gas Import Price averaged at $12.61 per MMBtu for December 2023. This is a change of -0.90% from last month and -38.72% 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 per cent of the price of basket of crude oil that India imports. The rate such arrived at however will be capped at USD 6.5 per MMBTU. The price such arrived at will also have a floor of USD 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.

Figure 12: Global natural gas price trends ($/mmbtu)



Source- EIA, World Bank

Table 8: Gas price, December 2023

Natural Gas	Price ($/MMBTU)	MoM (%) change	YoY (%) change
India, Domestic gas price (Jan'23)	7.82	-7.67%	-8.75%
India, Gas price ceiling – difficult areas (Oct'23-Mar'24)	9.96	-17.82%	-20.06%
Henry Hub	2.52	-7.0%	-54.4%
Natural Gas, Europe	11.51	-20.6%	-68.1%
Liquefied Natural Gas, Japan	12.61	-0.9%	-38.7%

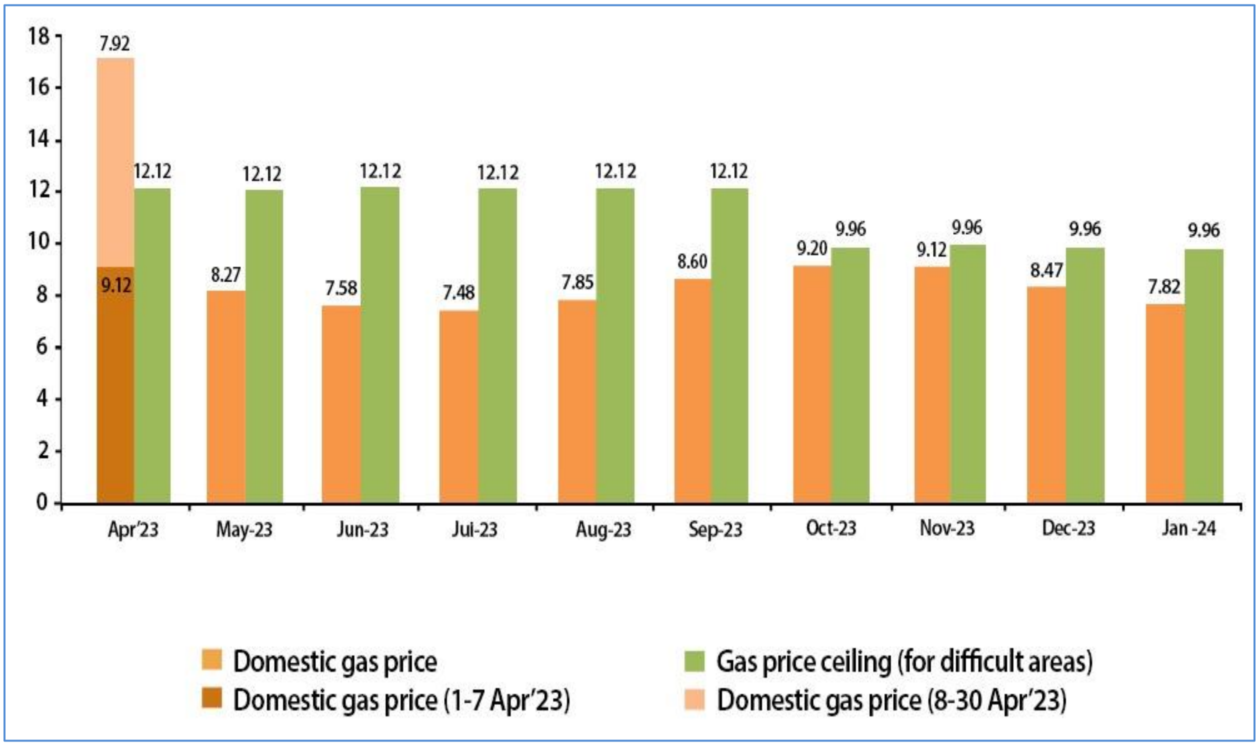
Source- EIA, PPAC, World Bank

Table 9: Gas price, GCV Basis

Period	Domestic Gas calculated price in US$/MMBTU
1-7 April 2023	9.16
8-30 April 2023	7.92
1-31 May 2023	8.27
1-30 June 2023	7.58
1-31 July 2023	7.48
1-31 August 2023	7.85
1-30 September 2023	8.60
1-31 October 2023	9.20
1-30 November 2023	9.12
1-31 December 2023	8.47
1-31 January 2024	7.82

Source- PPAC

Figure 13: Domestic natural gas price April – December 2023 ($/mmbtu)



Source- PPAC

Indian Gas Market

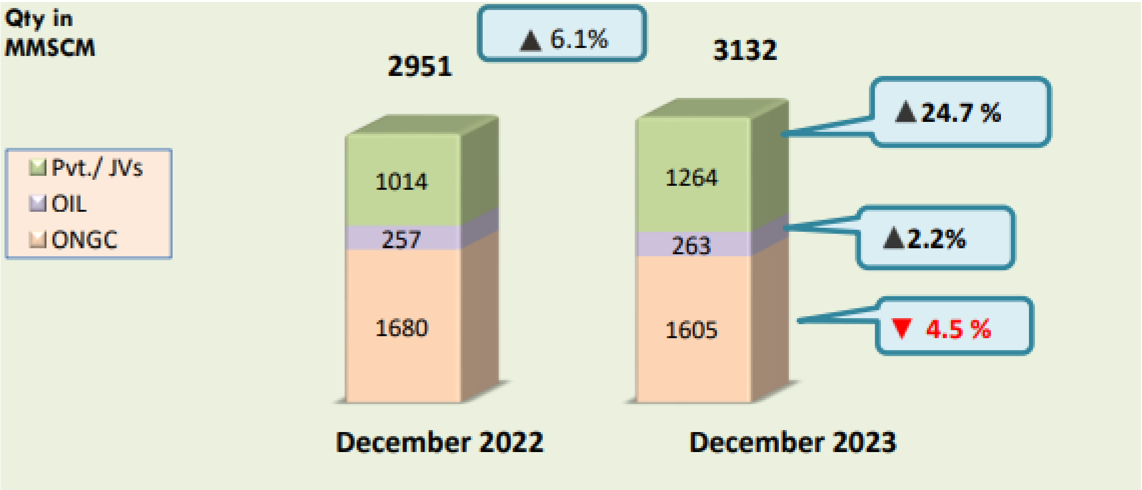
- Gross production of natural gas for the month of December 2023 was 3132 MMSCM which was higher by 6.1 % compared with the corresponding month of the previous year.
- Total import of LNG (provisional) during the month of December 2023 was 2410 (P) (increase of 12.8 % over the corresponding month of the previous year).
- Natural gas available for sale during December 2023 was 5021 MMSCM (increase of 10% over the corresponding month of the previous year).
- Total consumption during December 2023 was 5887 MMSCM (provisional). Major consumers were fertilizer (32%), City Gas Distribution (CGD) (20%), Power (11%), Refinery (8%) and Petrochemicals (4%).

Monthly Report on Natural gas production, imports and consumption – November 2023

1. Domestic Natural Gas Gross Production:

Domestic natural gas gross production for the month of December 2023 was 3132 MMSCM (increase of 6.1% over the corresponding month of the previous year).

Figure 14: Domestic natural gas Gross production (Qty in MMSCM)

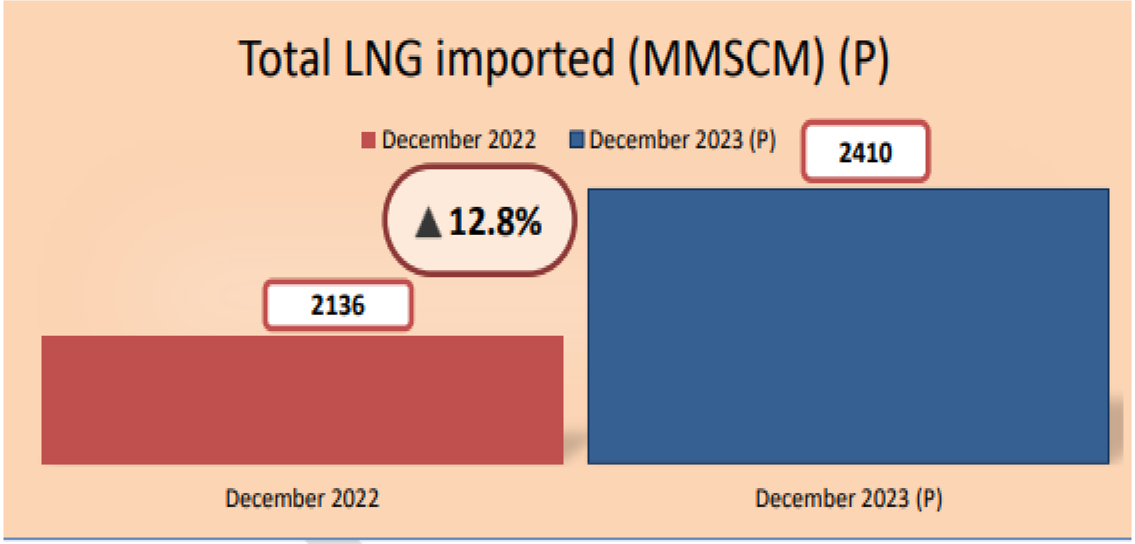


Source- PPAC

2. LNG imports:

Total imports of LNG (provisional) during the month of December 2023 were 2,410 MMSCM (increase of 12.8%) over the corresponding month of the previous year 2,136 MMSCM.

Figure 15: LNG imports (Qty in MMSCM)

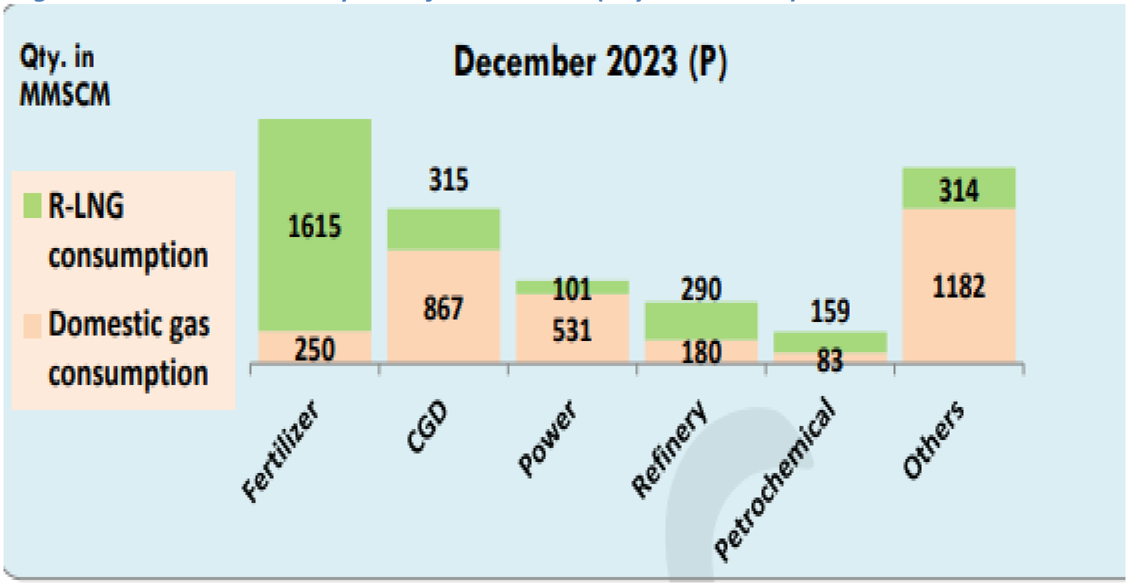


Source- PPAC

3. Sectoral Consumption of Natural Gas:

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

Figure 16: Sectoral Consumption of Natural Gas (Qty in MMSCM) in November 2023



Source- PPAC

Key developments in Oil & Gas sector

- **Monthly Production Report for November, 2023**

1. Production of Crude Oil

Indigenous crude oil and condensate production during December 2023 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 December 2023. There is a degrowth of 1.03% in crude oil and condensate production during December 2023 as compared to December 2022.

2. Production of Natural Gas

Gross production of natural gas for the month of December 2023 (P) was 3132 MMSCM which was higher by 6.1 % compared with the corresponding month of the previous year. The cumulative gross production of natural gas of 27213 MMSCM for the current financial year till December 2023 was higher by 5.2 % compared with the corresponding period of the previous year.

3. Crude Oil Processed (Crude Throughput)

Total Crude oil processed during December 2023 was 22.7 MMT which is 1.9% higher than December 2022, where PSU/JV refiners processed 15.7 MMT and private refiners processed 7.0 MMT of crude oil. Total indigenous crude oil processed was 2.6 MMT and total Imported crude oil processed was 20.1 by all Indian refineries (PSU+JV+PVT). There was a growth of 3.3 % in total crude oil processed in April December FY 2023 – 24 as compared to same period of FY 2022 – 23.

4. Production of Petroleum Products

Production of petroleum products was 24.5 MMT during December 2023 which is 4.0% higher than December 2022. Out of 24.5 MMT, 24.2 MMT was from refinery production & 0.3 MMT was from fractionator. There was a growth of 4.9 % in production of petroleum products in April December FY 2023 – 24 as compared to same period of FY 2022 – 23. Out of total POL production, in December 2023, share of HSD is 41.7 %, MS 17.4 %, Naphtha 6.1 %, ATF 6.1 %, Pet Coke 5.5 %, LPG 4.8% which are of major products and rest are shared by Bitumen, FO/LSHS, LDO, Lubes & others.

Key Policy developments/significant news in Energy sector

Decrease in windfall tax on petroleum crude, SAED on export of diesel, petrol and jet fuel or ATF has been retained at nil

The Indian government decreased the windfall tax on crude petroleum to Rs 1,700 per ton from Rs 2,300 per ton with effect from January 16, 2024. Special Additional Excise Duty (SAED) on export of diesel, petrol and jet fuel or ATF has been retained at nil.

India first imposed windfall profit taxes on 1st July 2022, joining a growing number of nations that tax super normal profits of energy companies. At that time, export duties of ₹6 per litre ($12 per barrel) each were levied on petrol and ATF and ₹13 per litre ($26 a barrel) on diesel. A ₹23,250 per ton ($40 per barrel) windfall profit tax on domestic crude production was also levied. The export tax on petrol has since been scrapped. The tax rates are reviewed every fortnight based on average oil prices in the country.

No. of retail outlets retailing E20 is now more than 9300 and will cover entire country by 2025

India's GDP growth was 7.7% in the first six months of the current fiscal year, said Shri Hardeep Singh Puri, Minister for Petroleum & Natural Gas and Housing & Urban Affairs. Elaborating on the growth-energy correlation in Indian context, he said that the growth-energy correlation is evident in India as it is now the world's 3rd largest energy consumer, 3rd largest consumer of oil, 3rd Largest LPG consumer, 4th largest LNG importer, 4th largest refiner and 4th largest automobile market in the world.

While interacting with media, Shri Puri talked about the steps taken by Government to augment India's Exploration & Production (E&P) sector. He said that the "No Go" areas in EEZ have been reduced by almost 99% and 10 Lakh SKM area is now free in EEZ for E&P Activity. As on date, total operational area (active) under Nomination, Pre-NELP, NELP, CBM, DSF and OALP/ HELP is 3.27lakh Sq Km, he said.

The Minister also talked about the achievements of India's Ethanol Blending Programme. These included:

Foreign exchange savings (2014-2023)	Rs.78,118 crore
CO2 emissions lowered (2014-2023)	426 lakh MT
Crude Oil substitution achieved (2014-2023)	142 lakh MT
Amount paid to the distillers by OMCs (2014-2023)	Rs.1,15,623 crore
Amount paid to the farmers (2014-2023)	Rs.69,374 crore

Shri Puri stressed that Ethanol blending during ESY 2022-23 has saved approx. 509 crore litres of Petrol resulting in savings of more than Rs. 24,300 crore of foreign exchange and expeditious payment of about Rs.19,300 crore to farmers including net CO2 reduction of 108 lakh metric tonnes.

The number of retail outlets retailing E20 is now more than 9300 and will cover the entire country by 2025, said the Petroleum Minister.

The Minister also talked about CBG blending Obligation (CBO) which will be voluntary till FY 2024-2025 and mandatory blending obligation would start from FY 2025-26.

He said that India has taken global leadership role in Biofuels supply chain with the successful launch of Global Biofuels Alliance (GBA) in September 2023. "India has been successful to promote GBA as a pivotal path in the sustainability journey at COP 28 held in December 2023. GBA is also an important part of India's agenda in WEF that is scheduled in Jan'2024", He said.

Minister said that the Government has taken a lot of steps to increase share of Natural gas from present 6.3% to 15% in primary energy mix with an approx. investment of $67 Billion in Natural Gas infrastructure by next 5-6 years. This will translate into increase in the gas consumption by over three-fold, from the present level of around 155 MMSCMD to over 500 MMSCMD by the year 2030.

Open Acreage Licensing Policy Bid Round-IX launched

Ministry of Petroleum and Natural Gas (MoPNG) signed contracts for 10 blocks awarded under Open Acreage Licensing Policy (OALP) Bid Round-VIII and 3 Coal Bed Methane (CBM) Blocks awarded under Special CBM Bid Round-SCBM 2022. The Contracts were signed in the presence of the Minister of Petroleum and Natural Gas & Housing and Urban Affairs, Shri Hardeep Singh Puri. Secretary, Petroleum and Natural Gas, Shri Pankaj Jain, and Director General, Directorate General of Hydrocarbons, Dr. Pallavi Jain Govil, also attended the event.

OALP-IX Bid Round was also launched at the event. In this bid round, 28 blocks, with an area of approximately 1,36,596 Sq. Km., are on offer for bidding.

Addressing the event, Shri Puri said that signing ceremony for OALP-VIII & SCBM-2022 and Launch of OALP-IX Bid Round is a crucial step in ensuring India's energy security. He mentioned that vast offshore acreage of more than 1 Million Sq. Km. has been made available in recent past for E&P operations which were earlier so called 'No-Go' areas. He said that currently only 10% of Indian Sedimentary Basin Area is under active exploration, however, with the initiatives of Government, more areas will come under exploration and it is estimated that after award of blocks under forthcoming OALP-IX and X Bid Rounds, about 5,60,000 Sq. Km. area (16%) will come under exploration by end of year 2024.

Secretary, MoPNG, Shri Pankaj Jain, highlighted the importance of the signing of contracts for awarding blocks under OALP and launch of OALP-IX Bid Round. He said that the size of bidding round IX is expected to be much bigger.

Speaking at the event, DG, DGH, Dr. Pallavi Jain Govil said that OALP -IX Bid Round bears a special significance as many of the offshore blocks on offer are in hydrocarbon rich basin areas which were earlier out of bound for E & P activities due to restrictions posed by different agencies.

Under OALP VIII Bid Round, total 10 blocks were offered for bidding comprising an area of 34,364 Sq. Km., spread across 9 Sedimentary Basins and included 2 Onland blocks (both in Category-I Basin), 4 Shallow Water blocks (1 in Category-I and 3 in Category II/III Basins), 2 Deep Water blocks (both in Category II/III Basins) and 2 Ultra Deep-Water blocks (1 in Category-I and 1 in Category-II Basin). Total 13 bids were received for all 10 blocks. These 10 blocks were awarded to 4 Companies. The estimated investments in awarded blocks for committed exploration work programme is about USD 233 Million.

Under Special CBM Round-2022, total 16 CBM blocks were offered for bidding which spread across 7 States covering an area of 5817 Sq. Km. Total 6 bids were received for 3 blocks with an area of 717 Sq. Km. These 3 blocks were awarded to 2 Companies. Estimated investments in awarded blocks for committed exploration work programme is to the tune of USD 7.4 Million.

As a major reform in E&P sector, the Hydrocarbon Exploration & Licensing Policy (HELP) was approved in March 2016. In continuation to its determination for reduction in import dependency of oil and gas and accelerating E&P activities, Government notified further policy reforms in upstream sector in February 2019 and again in May 2023 with a focus to shift from 'revenue' to 'production' maximization. There is also continued focus on greater transparency and streamlined procedures.

The first seven OALP Bid Rounds led to an award of 134 blocks, covering an area of about 2,07,691 Sq. Km. to leading E&P companies. Now, with the award of 10 more blocks under Round-VIII, a total of 144 exploratory blocks have been awarded under HELP regime covering an area of 2,42,055 Sq. Km.

Several initiatives have been taken by the Government for making available good quality data of Indian Sedimentary Basins to investors, such as National Seismic Programme (NSP) in Onshore areas, EEZ Survey in Offshore areas, opening of Andaman Basin, upgradation of NDR, etc. Other initiatives planned are Mission Anveshan Project (Part II of NSP), Continental Shelf Survey, drilling of Stratigraphic Wells and Hydrocarbon Resource Reassessment Study. A Data Centre has been opened within the campus of University of Houston for ease of data viewing by foreign companies. Several International Oil Companies (IOCs) (ExxonMobil, Shell, Total Energies, ENI, Chevron, POSCO, JAPEX, Murphy Oil, EOG etc.) have visited this Data Room/Presentations and shown interests in Indian Basins.

Investors outreach program has also been aggressively taken up through organizing Investors Meet at prominent global locations and International Conferences. Several IOCs have visited NDR and purchased large volume of E&P Data for analysis.

Significant steps have been taken by the Government towards improving the 'Ease of Doing Business' in the Indian Exploration and Production (E&P) sector. All approvals and clearances are through online systems for faster approval. A dispute resolution mechanism to resolve various contractual matters has been put in place through a Committee of Eminent External Experts which has resolved many old disputes through mediation.

In continuation to its aggressive acceleration of E&P activities and adhering to the prescribed timelines, the Government has now launched **OALP Bid Round-IX** for International Competitive Bidding on 3rd January 2024. In this bid round, 28 blocks, with an area of approximately 1,36,596 Sq. Km., are on offer for bidding. Out of these, 23 blocks are based on Expression of Interests (EoIs) received from Companies during April 2022 to March 2023 and 5 blocks have been carved out by DGH.

28 blocks under the present bid round are spread across 8 Sedimentary Basins and include 9 onland blocks, 8 shallow water blocks and 11 Ultra-Deep-water blocks.

Cabinet approved signing of Memorandum of Understanding between India and Guyana on cooperation in the hydrocarbon sector

The Union Cabinet chaired by the Prime Minister, Shri Narendra Modi has approved the signing of Memorandum of Understanding (MoU) between the Ministry of Petroleum & Natural Gas, Government of India and the Ministry of Natural Resources, Republic of Guyana on cooperation in the hydrocarbon sector.

The proposed MoU covers the complete value chain of hydrocarbon sector including sourcing of crude oil from Guyana, participation of Indian companies in Exploration and Production (E&P) sector of Guyana, cooperation in the areas of crude Oil refining, capacity building, Strengthening bilateral trade, collaboration in natural gas sector, collaboration in developing regulatory policy framework in oil & gas sector in Guyana; Cooperation in the area of clean energy including biofuels as well as renewables sector including solar energy etc.

The MoU on cooperation in hydrocarbon sector with Guyana will strengthen bilateral trade, foster investment in each other countries and help diversifying source of crude oil, thus augmenting the energy & supply security of the country. It will also provide opportunity to Indian company to participate in E&P sector of Guyana, gaining experience by working with global oil & gas companies in upstream projects, thus fostering the vision of "Aatmanirbhar Bharat".

This MoU shall enter into force on the date of its signature and will remain in force for a period of five years and shall be automatically renewed thereafter on a quinquennium basis unless either Party gives the other Party a written notice three months in advance of its intention to terminate this Understanding.

IEW'24 expected to witness 17 Energy ministers from different countries, 35,000+ attendees, over 900 exhibitors: Minister Hardeep S Puri

"India today on the energy front presents the picture of confidence of positive growth of solutions in many areas. India Energy Week (IEW) represents a golden opportunity to showcase these developments on the energy front and provide the platform for further development and growth in the energy sector.", said Shri Hardeep Singh Puri, Minister of Petroleum & Natural Gas and Housing &Urban Affairs.

Briefing the media about the important features of 2nd Edition of India Energy Week, being organised in Goa from 6th February to 9th February 2024, the Minister said that India Energy Week 24 is expected to witness 17 Energy ministers from different countries, 35,000+ attendees, more than 900 exhibitors. "I am pleased to share that this time we will have dedicated 6 country pavilions namely Canada, Germany Netherlands, Russia, UK and USA", he added.

The Minister said that during IEW 2024, a special Make in India Pavilion is being organized with more than 300 exhibitors to showcase innovative solutions Indian MSMEs are spearheading in the energy sector. He said, with the number of domestic and international participants this gives them an unparalleled platform to demonstrate their abilities to both domestic and international markets.

Highlighting the increase in scale of the event as compared to first edition, the Minister noted that the number of exhibitors for this IEW 24' is expected to be more than 900 (30% growth). There is 25% increase in exhibition area (IEW'24 – 18.5k sqm and IEW'23 15k sqm) resulting in 46% increase in revenue from exhibition, he said.

The IEW is just one year old, and the enthusiasm that we see including from international sponsors is very encouraging, the Minister said.

Noting the significant rise in private sponsorship, Shri Puri informed that there has been 81% increase in total revenue from private firms and a 44% increase in number of private sponsors (IEW'24 – 13 and IEW'23 – 9) resulting in more than 3 times private sponsorship revenue than last year.

Building on the incredible success of 1st edition of IEW, the Minister noted that the duration and the number of strategic sessions of IEW'24 have increased from 3 to 4 days. 44% more sessions planned in IEW'24 (Forecasted) including 46 strategic sessions and 46 technical sessions which is more than double the technical sessions in IEW'23, he said.

Under the technical sessions, Shri Puri noted that the number of submission papers received has doubled from 1000 for IEW 2023 to 2000 for IEW 2024.

"Four new technical categories have been added including Shipping, Logistic & Supply Chain, Manufacturing & Industrialization, Future Mobility and Mining & Minerals in line with domestic priorities", noted the Minister.

The Minister spoke about Avinya, an Energy startup challenge organized by Ministry of Petroleum and Natural Gas, for startups from the energy sector. From the approximate 120 applications received after a tiered selection process, 5 startups were selected, he said. The winners of the startup challenge will be provided inter-alia mentorship opportunities by Industry leaders, and an opportunity to exhibit their startup ideas at India Energy Week'24 showcasing their cutting-edge solutions to a global audience.

The Petroleum Minister said that building on our G20 priorities, various number of side events are being planned on the sidelines of IEW covering important themes like Global South Cooperation, Carbon Capture and Utilization and PM's roundtable with Oil & Gas CEOs, India-US investment roundtables etc. The event also features an Increased focus across energy value chain, including 3 sessions on Biofuels, 3 sessions on Hydrogen and 2 sessions in CCUS, he said.

Speaking at the event, the Minister also talked about the importance of biofuels, green Hydrogen especially in context of growth of country's economy in coming years. He said that the country's GDP is over 4 trillion, and by end of fiscal year 2025, we should be a 5 trillion economy. Growing economy consumes more energy and that energy is also witnessing a shift towards sustainable energy, he said.

One more step by Ministry of Power, Government of India for Ease of Doing Business and ensuring financial sustainability

For ease of doing business by industries like Green Hydrogen manufacturers and to facilitate energy transition along with energy security by faster establishment of energy storage capacity new rules have been prescribed. Now consumers, having more than a specified quantum of load and Energy Storage Systems (ESS) are allowed to establish, operate and maintain dedicated transmission lines themselves without the requirement of licence. By allowing such facility a new category of Bulk Consumers would emerge in the country, benefiting from more affordable electricity and enhanced grid reliability. This facility was already available to generating companies and captive generating stations.

The new rule prescribes that a generating company or a person setting up a captive generating plant or an Energy Storage System or a consumer having load of not less than twenty five Megawatt in case of Inter State Transmission System and ten Megawatt in case of Intra-State Transmission System shall not be required to obtain licence for establishing, operating or maintaining a dedicated transmission line to connect to the grid, if such company or person or consumer complies with the Regulations, technical standards, guidelines and procedures issued under the provisions of the Act.

Open Access is one of the key features of Electricity Act, 2003. However, due to very high Open Access charges levied by some State Regulators this facility of Open Access could not be utilised by the consumers to the desired level. Open Access charges must be reasonable and uniform throughout the country to facilitate the consumers like commercial establishments and industries in getting electricity through Open Access at competitive and reasonable rates. To rationalise the open access charges new rules have been prescribed with methodologies for determining various open access charges like wheeling charges, state transmission charges and additional surcharge.

The rule inter-alia prescribes that for a person availing General Network Access or Open Access, the additional surcharge shall be linearly reduced and get eliminated within four years from the date of grant of General Network Access or Open Access. It is also provided that the additional surcharge shall be applicable only for the Open Access Consumers who are or have been consumers of the concerned Distribution licensee. Thus, a person who has never been a consumer of the Distribution licensee would not have to pay additional surcharge.

To ensure financial sustainability of the power sector, it is necessary that the tariff is cost reflective and all the prudent costs are allowed. However, some States Regulators had created a large revenue gap leading to financial distress to the distribution companies due to disallowance of various costs incurred including even power purchases costs. To discourage such practice, there was a need to make statutory provisions to ensure that there is no such gap. It is also imperative that liquidation of any such existing gaps in revenue is done in a time bound manner. New rules are notified to ensure that revenue gap is not created except in extraordinary circumstances like natural calamity and to provide for time bound liquidation of the gaps created, if any.

The rule mandates that the tariff shall be cost reflective and there shall not be any gap between approved Annual Revenue Requirement and estimated annual revenue from approved tariff except under natural calamity conditions. Such gap, created if any, shall not be more than three percent of the approved Annual Revenue Requirement.

The rule also provides that such gap along with the carrying costs at the base rate of Late Payment Surcharge as specified in the Electricity (Late Payment Surcharge and Related Matters) Rules, 2022, as amended from time to time shall be liquidated in maximum three numbers of equal yearly instalments from the next financial year.

For a revenue gap existing at the time of promulgation of the rules, it is mandated that any such gap, on the date of notification of these rules, along with the carrying costs at the base rate of Late Payment Surcharge as specified in the Electricity (Late Payment Surcharge and Related Matters) Rules, 2022, as amended from time to time, shall be liquidated in maximum seven numbers of equal yearly instalments starting from the next financial year.

Releasing the Rules, the Minister for Power Mr. R. K. Singh stated that the steps taken by the Govt. had already brought down the losses of the distribution companies from 27% in 2014 to 15.41% in 2022-23. These rules will ensure that their losses are further reduced and their viability increases; leading to them having able to provide better services to the consumers.

Rs. 17 lakh crores investments made in power sector in last nine years, capacity under construction is worth investment of a further Rs. 17.5 lakh crores: Union Power and New & Renewable Energy Minister R. K. Singh

The Union Minister for Power and New & Renewable Energy Shri R. K. Singh has said that electricity is the most important infrastructure which is a sine qua non for development, observing that the one major distinguishing feature between a developing and a developed country is that in a developed country, there is no loadshedding. "No country can develop if it does not have sufficient power. The power shortage in India has come down from around 4.5% in 2014 to less than 1% today. We have ensured universal electricity access, connecting 29 million homes in 19 months, which the International Energy Agency called the largest and fastest expansion of energy access in the history of the power sector." The Minister said this, while addressing Moneycontrol's Policy Next Summit in New Delhi, on January 18, 2024.

Shri Singh laid down the details of the power capacity addition and strengthening of the electricity distribution system. "We added about 194 GW of power capacity, out of which around 107 GW is renewables. We constructed 193,0000 circuit km of transmission lines, which connected the whole country into one grid on one frequency, making it the largest integrated grid in the world. We increased the power transfer capacity from 36 GW to 117 GW today. We added 3,000 substations, upgraded 4000 substations, added about 5.5 lakh circuit km. of LT lines, 2.5 lakh circuit km. of HT lines, about 7.5 lakh transformers and sundry other equipment."

The Minister said that as a result of all this, we were able to bring up rural power availability from 12.5 hours in 2015 to around 21 hours today and in urban areas to 23.8 hours. "Days of generators are gone. We have Rules which say that 24*7 power is now a right, no discom can do gratuitous loadshedding; if they do that, they will have to pay penalties and consumers will get compensation."

The Minister observed that India has also emerged as a country which is at the forefront of energy transition. "Our rate of renewable capacity addition has been one of the fastest. We have 187 GW of renewable capacity. We had pledged that we will have 40% of our capacity from non-fossil-fuels by 2030, and today, we have 44% of our capacity from non-fossil-fuel sources. We have now upped our target and while we have pledged to have 50% of our capacity from non-fossil-fuel sources by 2030.

The Minister informed the industry that the total investments made in the power sector in the last nine years is about 17 lakh crores, and the capacity under construction is worth investment of a further 17.5 lakh crores. "We have about 99 GW of renewable energy capacity under construction and around 32 GW of renewables under bidding stage. We shall be bidding around 40 – 50 GW of renewable capacity every year. In thermal capacity, we have about 27 GW under construction, we have bid out additional 12 GW, 21 GW more under survey and investigation and a further 22 GW under initial stages. We have 47 GW of hydro capacity installed, 18 GW under construction and 13 GW under various stages of survey and investigation."

The Power and New & Renewable Energy Minister said that the government has transformed the power sector and made it viable. "The AT&C losses have been brought down from 27% to 15.41%, we want to bring it down further to 10% - 11%. We are making Rules and ensuring that people follow them. Anybody who violates them will be prosecuted."

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