FIPI

Federation of Indian Petroleum Industry

POLICY & ECONOMIC REPORT

OIL & GAS MARKET

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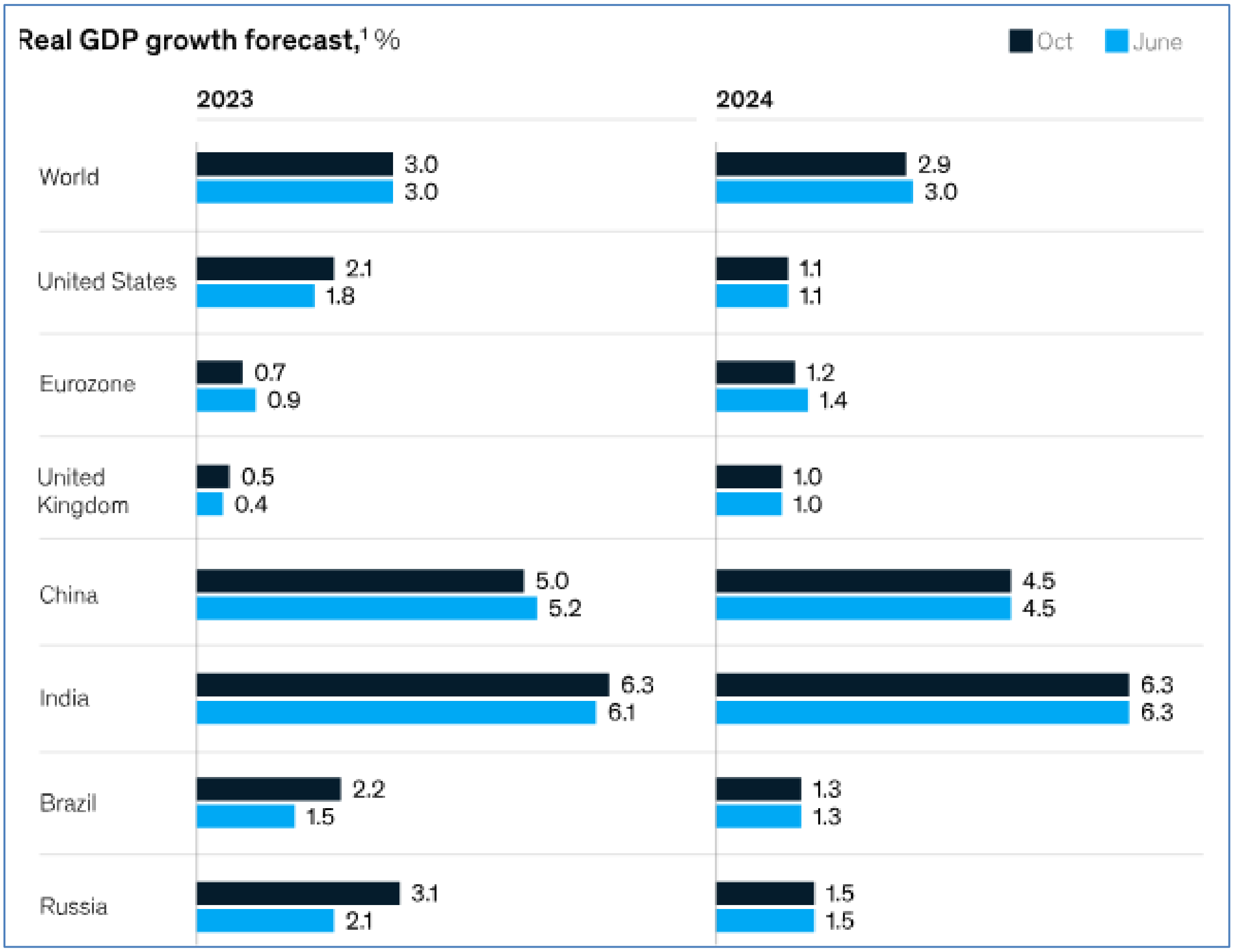
Executive Summary

According to IMF, the real GDP growth is expected to slow down from 3% in FY 2023-24 to 2.9% in FY 2024-25. The slowdown in growth in FY 2024-25 is attributed to high interest rates, increased energy prices along with geopolitical risk amid the Russian-Ukraine war crisis and war in the Middle East, that could further contribute to a weakening global financial outlook.

Figure 1: Real GDP growth forecast (%)



Source- IMF

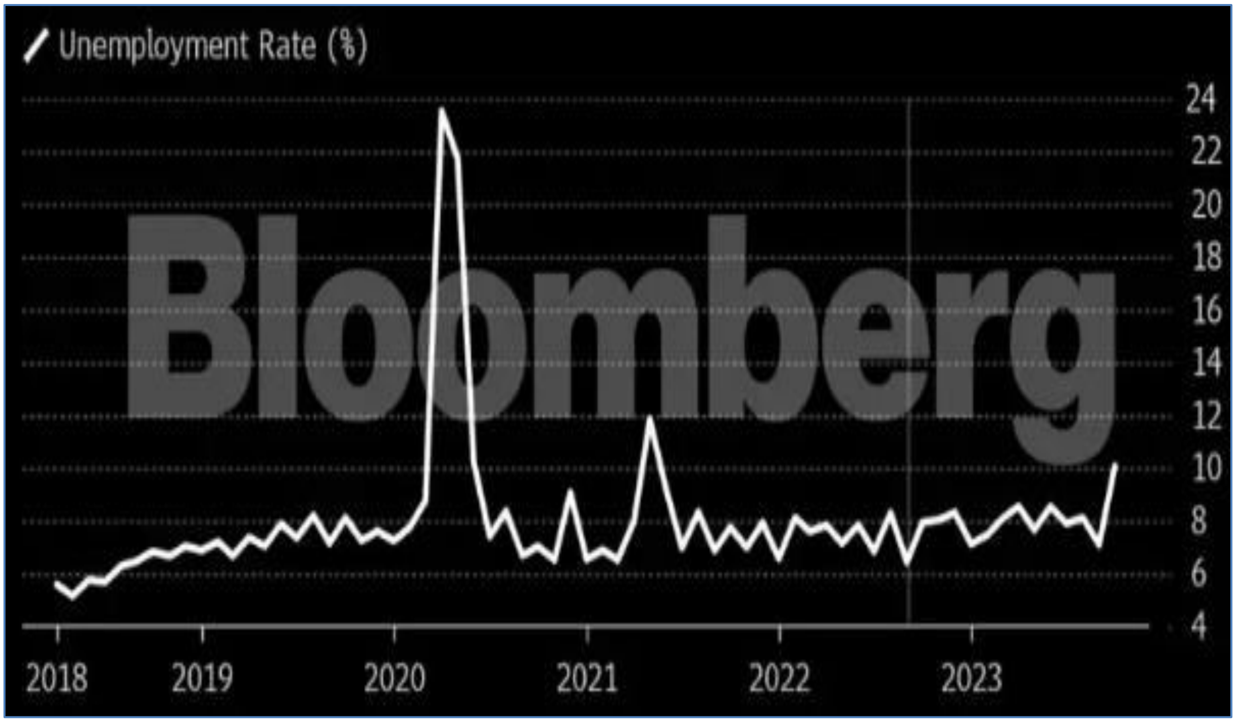
As far as India is concerned, according to the data released from Ministry of Statistics and Programme Implementation on November 30th, 2023, the Indian economy grew 7.6 per cent during the July-September quarter of the current financial year 2023-24 (Q2FY24), remaining the fastest-growing major economy in the world. It is also more than a percentage point above RBI's estimates of 6.5%. The real GDP or GDP at constant (2011-12) prices in Q2 2023-24 is estimated to attain a level of ₹41.74 lakh crore, as against ₹38.78 lakh crore in Q2 2022-23, showing a growth of 7.6 per cent, compared to 6.2 per cent in Q2 2022-23.

According to S&P Global India Services Purchasing Managers' Index (PMI) fell to 58.4 in October 2023 from 61.0 in September 2023. India's services sector activity grew at the slowest pace in the last seven months in October. This was due to subdued demand for services and competitive conditions. Further, inflationary forces in the Indian service sector intensified, primarily because of surging food, fuel, and staff costs.

India's retail inflation eased to a four-month low of 4.87% in October 2023 from 5.02% in September 2023. Inflation rate in urban and rural areas stood at 4.62 per cent and 5.12 per cent, down from 6.50 per cent and 6.98 per cent seen in the same month a year ago. The rate of inflation in the Consumer Food Price Index (CFPI) stood at 6.61 per cent in October, against 6.62 per cent in September and 7.01 per cent in October 2022. The RBI's rate-setting panel Monetary Policy Committee (MPC) in its October 2023 meeting projected CPI inflation at 5.4 per cent for 2023-24, a moderation from 6.7 per cent in 2022-23. The central bank is expected to keep its key policy rate unchanged at 6.50 per cent for the current financial year 2023-24.

According to the Centre for Monitoring of Indian Economy (CMIE), India's unemployment rate increased to its highest level in over two years in October, primarily due to rising joblessness in rural areas. The overall unemployment rate rose to 10.05% in October 2023, up from 7.09% in September 2023, marking the highest rate since May 2021. Rural unemployment jumped to 10.82% from 6.2%, while the urban rate eased slightly to 8.44%.

Figure 2: India's October jobless rate



Source- Bloomberg

According to RBI, India's forex reserves decreased by $462 million to $590.32 billion for the week ending November 10, 2023. The foreign currency assets increased by $108 million to $522 billion, according to the Weekly Statistical Supplement released by the RBI.

As far as oil and gas industry is concerned, the market rally that pushed benchmark oil prices towards triple digits in September reversed sharply in October, despite continued tight crude supplies and an intensifying conflict in the Middle East. Beginning November, ICE Brent futures plunged to a four-month low around $80/bbl. The abrupt sell-off came as market concerns shifted from supply risks to the global economy and oil demand.

Crude oil futures prices sharply declined in the first week of October, fuelled by investors engaging in profit taking, reacting to the significant price surge from September. This came amid a market narrative on concerns about the macroeconomic outlook and weaker-than-expected US consumer spending data for August. Additionally, investors anticipated that the Fed might keep borrowing rates high for an extended period. This sentiment led to the US dollar gaining strength against other major currencies, a factor that exerts downward pressure on oil prices. The US dollar index rose to nearly a year high. Further declines in prices were driven by heavy sell-offs in futures and options long positions from hedge funds and other money managers.

Hedge funds and other money managers turned less bullish on oil and heavily cut their bullish positions in October after they were net buyers in September. This fuelled price volatility and contributed to a drop in futures prices. Speculators sharply reduced net long positions over October, particularly in the NYMEX WTI futures and options contracts. They were net sellers in both ICE Brent and NYMEX WTI contracts. Money managers liquidated long positions built the month before, amid a weakening in the broader financial market, and uncertainty about the Fed’s policy and expectations that borrowing rates will remain high for an extended period.

Natural gas spot prices at the US Henry Hub benchmark averaged $2.98 per million British thermal units (MMBtu) in October 2023. Henry Hub's natural gas prices increased for a fifth consecutive month against a backdrop of strong production, rising by 13.2% m-o-m in October. Prices rallied on the back of increased demand for residential heating amid colder weather across the US. Prices were further supported by solid US LNG exports amid higher prices in Asia and Europe.

Economy in Focus

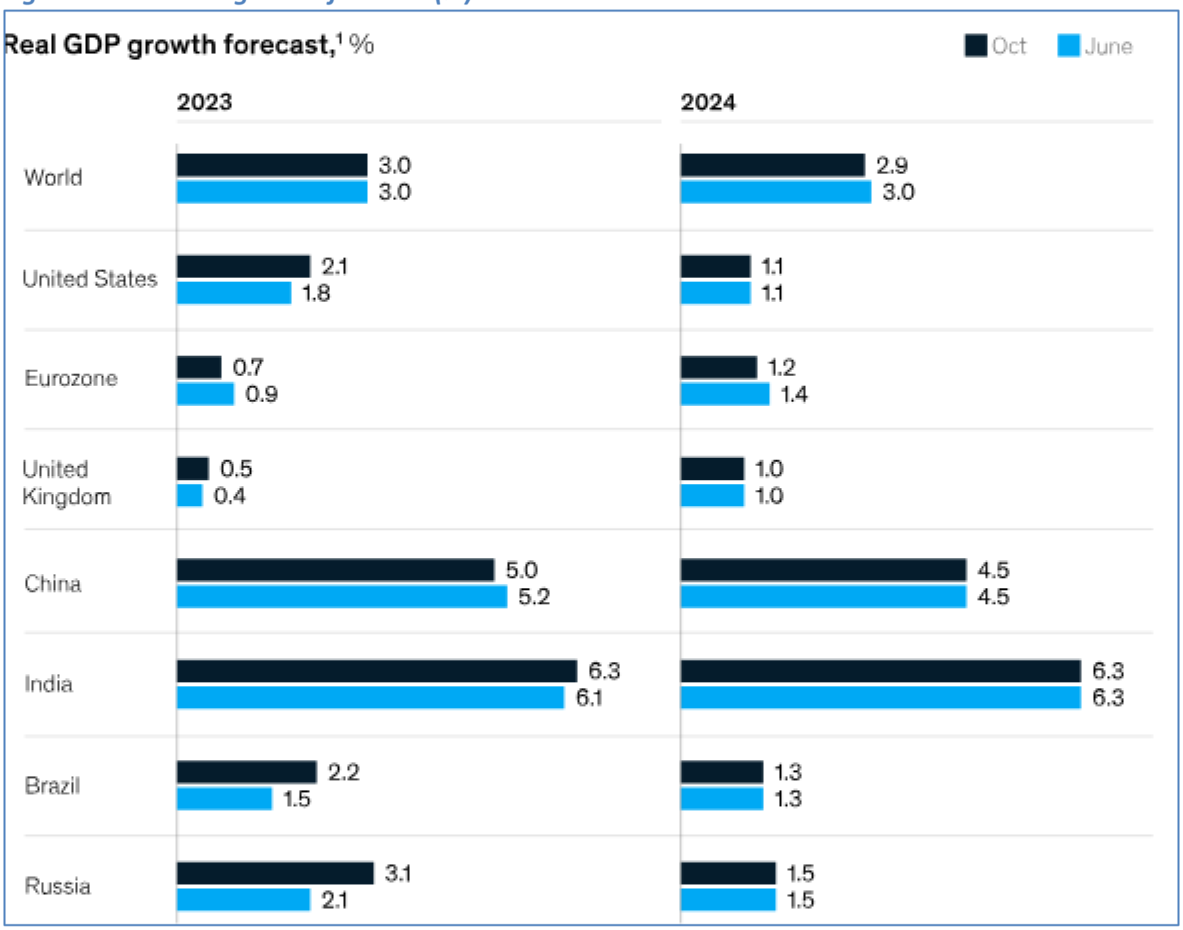
1. A snapshot of the global economy

Global economic growth

- According to IMF, the real GDP growth is expected to slow down from 3% in FY 2023-24 to 2.9% in FY 2024-25.

- The slowdown in growth in FY 2024-25 is attributed to high interest rates, increased energy prices along with geopolitical risk amid the Russian-Ukraine war crisis and war in the Middle East, that could further contribute to a weakening global financial outlook.

Figure 3: Real GDP growth forecast (%)



Source- IMF

- In the United States, real GDP growth is projected at 2.1 percent in 2023 and 1.1 percent in 2024. Strong domestic consumption along with increased investment has led to a high growth in FY 2023-24 in US. However rising inflation trends lowers the domestic consumption in FY 2024 which leads to lower projected economic growth.

- Real GDP Growth in the euro area is projected at 0.7 percent in 2023, before rising to 1.2 percent in 2024.

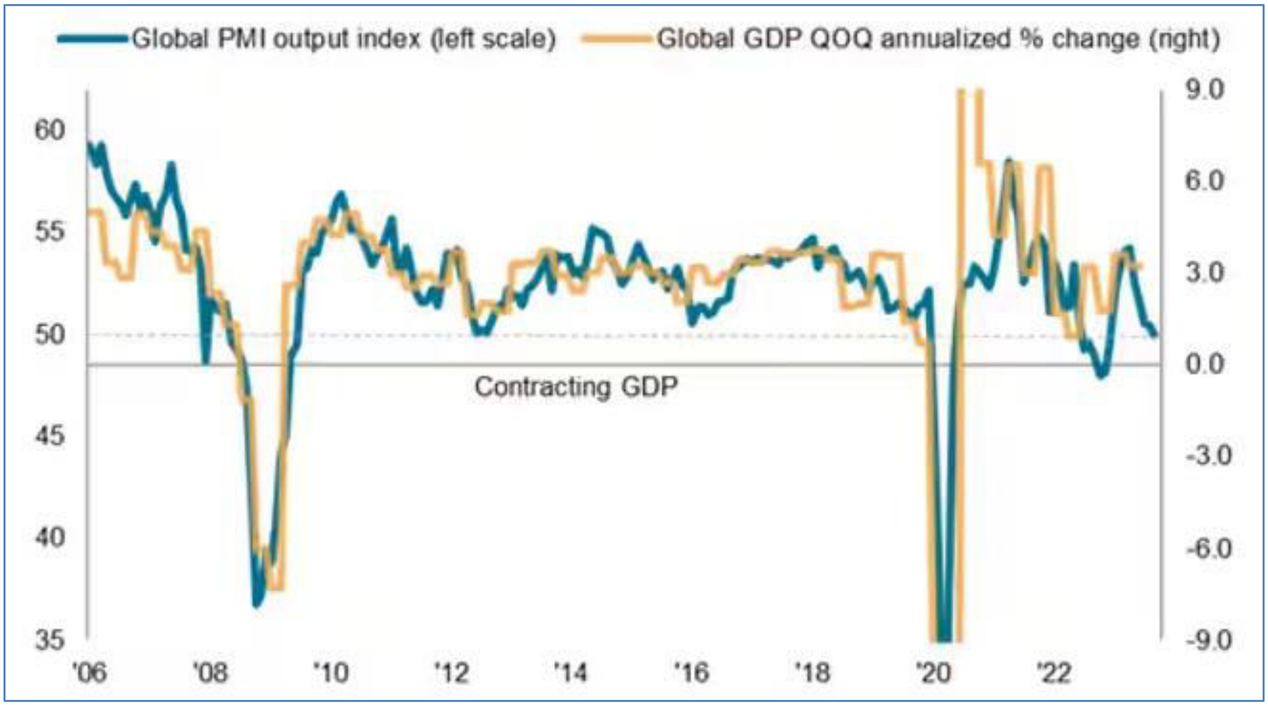
- Growth in the United Kingdom is projected at 0.5 percent in 2023 and thereon rise to 1% in FY 2024-25.

- Growth in India is projected to remain strong, at 6.3 percent in both 2023 and 2024, reflecting stronger-than-expected consumption.

Global PMI

- The JPMorgan Global PMI Composite Output Index - produced by S&P Global - fell to the neutral mark of 50.0 in October, down from 50.5 in September. This is broadly consistent with annualized quarterly global GDP growth of just under 1%, which is well below the pre-pandemic ten-year average of 3.0%.

Figure 4: Global PMI



Source- S&P Global

- The manufacturing sector continued to underperform relative to services. The PMI for manufacturing in the United States increased to 50 (47.9 in August) while in the United Kingdom the seasonally adjusted Manufacturing PMI index posted 44.3 in September, up slightly from August's 39-month low of 43.0. An absence of demand growth remained the key factor weighing on goods production. This was due to softening of economic conditions and high interest rates that limited purchases from clients.

- In case of services, in the United States, the services PMI decreased to 50.1 (50.5 in August) while in the United Kingdom, the Services PMI index posted 49.3 in September, down from 49.5 in August. In Brazil, the services PMI decreased to 48.7 in September from 50.6 in August, falling below the 50.0 mark for the first time since February. By contrast, the PMI for services in India expanded to 61.0 in September, among the highest over the past 13 years.

Global trade

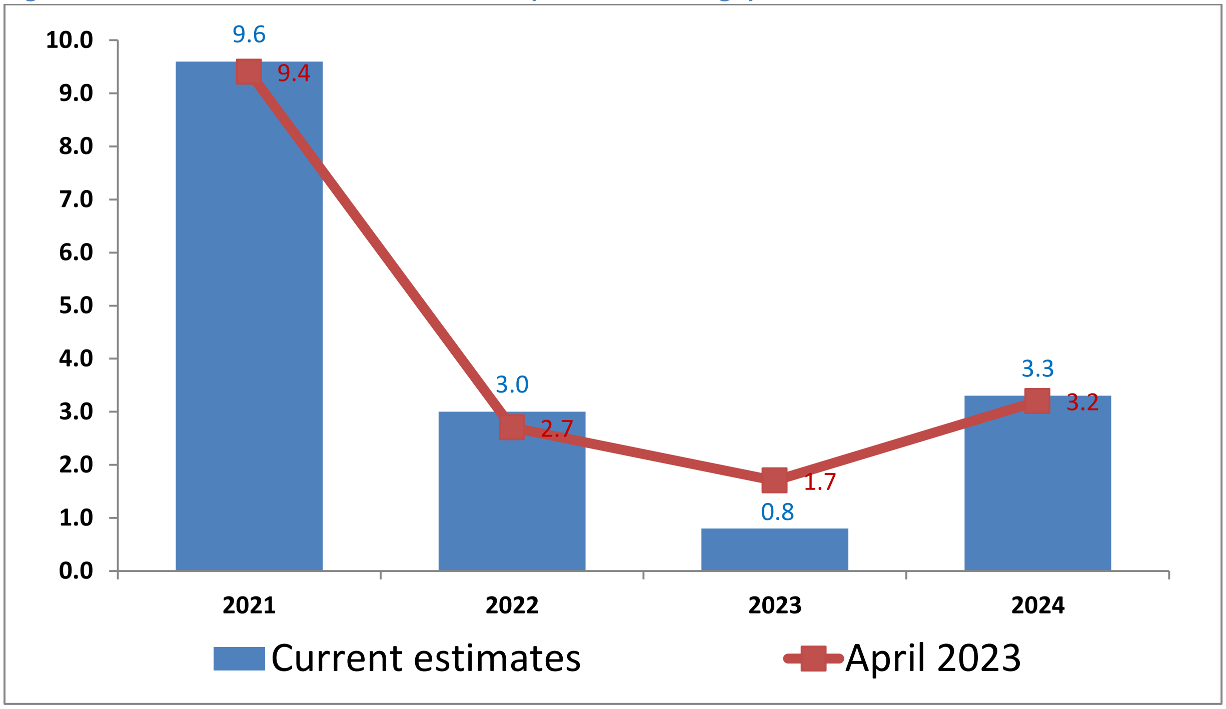
- According to World Trade Organization (WTO), world merchandise trade volume growth for 2023, has been forecasted to 0.8 per cent, and remains relatively strong to 3.3 per cent trade growth in 2024.

- The following are the reasons for lower % growth in 2023: -
    - The global economy has been grappling with rising inflation and high interest rates since the fourth quarter of 2022, particularly in the European Union and the United States.
    - The strained property markets have prevented a stronger recovery from taking root in China.

- The trade slowdown in the first half of 2023 appears to have involved many economies and a wide array of goods, specifically certain categories of manufactured goods such as iron and steel, office and telecom equipment, textiles, and clothing, although sales of passenger vehicles have surged in 2023.

- The stronger growth predicted for 2024 is likely to be driven by increased trade in goods closely linked to the business cycle, such as machinery and consumer durables, which tend to recover when economic growth stabilizes.

Figure 5: World merchandise trade volume (Annual % change)



Source- WTO

2. IEA forecasts 75% drop in global oil and gas demand needed by 2050 to meet 1.5°C target

Global demand for oil and gas needs to decline by over 75 percent by 2050 to limit global warming to 1.5 degrees Celsius, according to the International Energy Agency. According to an IEA report released in November 2023, the market for the fossil fuels is expected to peak by 2030.

However, it would drop by 45 percent below today's levels by 2050 if governments worldwide deliver in full on their national energy and climate pledges. The report, titled "The Oil and Gas Industry in Net Zero Transitions," explored the industry's potential to adopt a more responsible approach and actively contribute to the evolving energy landscape. It emphasized that the industry's contribution to clean energy investment is minimal, with only 1 percent from oil and gas companies globally.

The IEA underscored the considerable emissions potential for improvement, especially in methane reduction, which accounts for half of total oil and gas operations emissions. To align with a 1.5 degrees C scenario, emissions from the oil and gas sector need to be cut by more than 60% by 2030 and the emissions intensity of global oil and gas operations must reach near zero by the early 2040s.

Released ahead of the UN climate change conference in Dubai, or COP28, the report emphasized the urgent need for the fossil fuel industry, responsible for over half of the world's energy supply and employing nearly 12 million workers globally, to align its operations with the Paris Agreement goals.

Despite the challenges, the report identified opportunities for the oil and gas sector to play a significant role in clean energy transitions. Approximately 30 percent of the energy consumed in 2050 could come from technologies such as hydrogen, carbon capture, offshore wind, and liquid biofuels, leveraging the industry's skills and resources.

However, achieving this would require a substantial shift in financial resource allocation, with the report recommending that oil and gas producers invest 50 percent of their capital expenditures in clean energy projects by 2030.

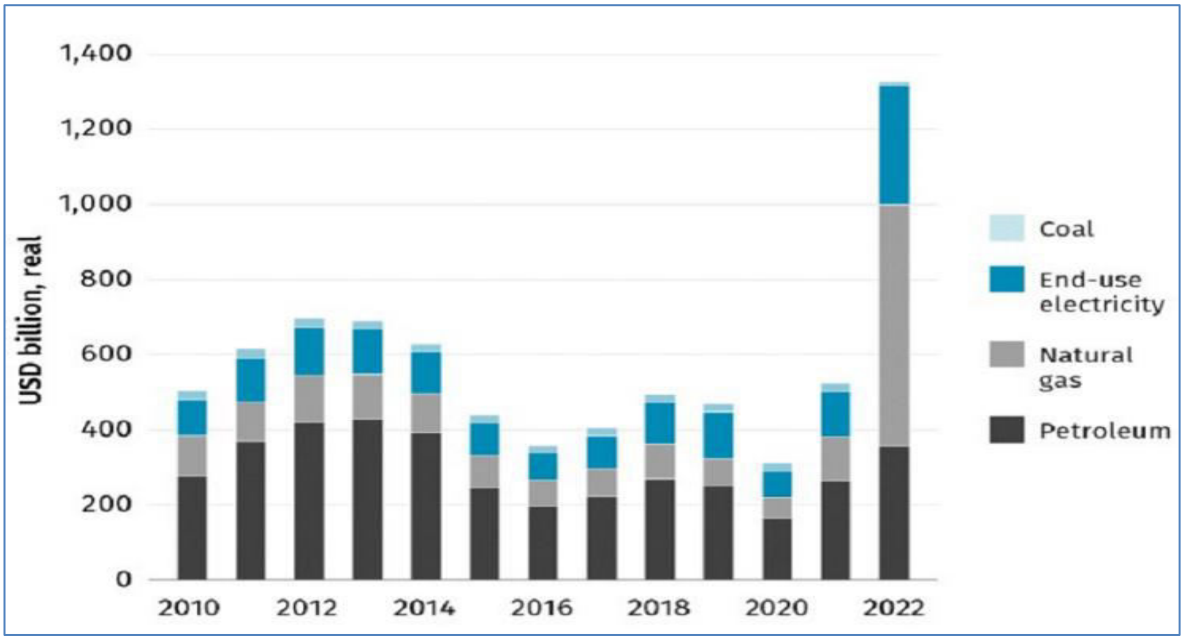
The report concluded that carbon capture, while a crucial transition strategy, cannot sustain the status quo and emphasizes the need for proactive decisions by the fossil fuel sector to navigate the journey to net-zero emissions.

3. Global subsidies for oil, gas and coal now reach $7 trillion: IMF

Fossil fuel subsidies have risen from $2 trillion to $7 trillion, according to the International Monetary Fund, as governments around the world try to protect consumers from rising energy prices.

At this year's climate gathering in Dubai, EU countries will be looking to harden the COP26 deal to phase out the subsidies by pushing for a deadline of 2030 to get it done. EU governments were among those that have increased support for fossil fuels since Glasgow, mainly as a response to energy security concerns following Russia's invasion of Ukraine.

Figure 6: Global fossil fuel subsidies by fuel type, 2010-2022



Source- Explicit Subsidies from the IMF Fossil Fuels Subsidies Data: 2023 Update

Some examples of how fossil fuels are subsidized around the world are as follows: -

- **China**- China's total fossil fuel subsidies were the highest in the world at $2.2 trillion in 2022, amounting to 12.5% of the country's total GDP, according to the IMF. The bulk of the subsidies are "implicit," a category which includes undercharging for environmental costs or forgoing tax revenues, the IMF said. Support offered to coal-fired power plants include direct funding, preferential loans, and power purchase guarantees. However, despite this, the country's transition to solar power is roaring ahead, with more than 140 GW installed so far this year, and speculation that emissions will begin to fall from 2024.

- **US**- US fossil fuel subsidies stretch across the US tax code, which makes detailing their costs complex. The IMF estimates that the subsidies stood at $760 billion in 2022, a figure topped only by China. One US tax break called intangible drilling costs allows producers to deduct most of their costs from drilling new oil wells. The Joint Committee on Taxation has estimated that eliminating it could generate $13 billion over a decade. Another, the percentage depletion tax break which allows independent producers to recover development costs of declining oil gas and coal reserves, could generate about $12.9 billion in revenue over 10 years.

- **Russia**- The world's top seaborne exporter of diesel and third largest producer of oil spent $420 billion on fossil fuel subsidies last year, according to the IMF. These include payments to oil refineries to compensate them for selling fuel on the domestic market instead of exporting it for a higher price. Russia's coal industry is supported by measures including preferential rail tariffs, direct budgetary transfers for coal exploration, and tax relief on some coal mining.

- **India**- Fossil fuel subsidies in India totaled $350 billion last year, according to the IMF. Coal dominates India's electricity production and the country is one of the world's top producers. Coal subsidies include exemption of customs duty on coal mining equipment, reduced haulage rates for long-distance rail, and low-interest loans for coal power plants, according to the International Institute for Sustainable Development.

- **EU**- European governments more than doubled fossil fuel subsidies to $310 billion in 2022 in response to the energy crisis, IMF data showed. At least 230 temporary subsidy measures were taken by governments across the EU last year, according to a European Commission report, after Russia cut gas supplies to the region.

4. UNCTAD's inclusive growth index underscores need to move beyond GDP

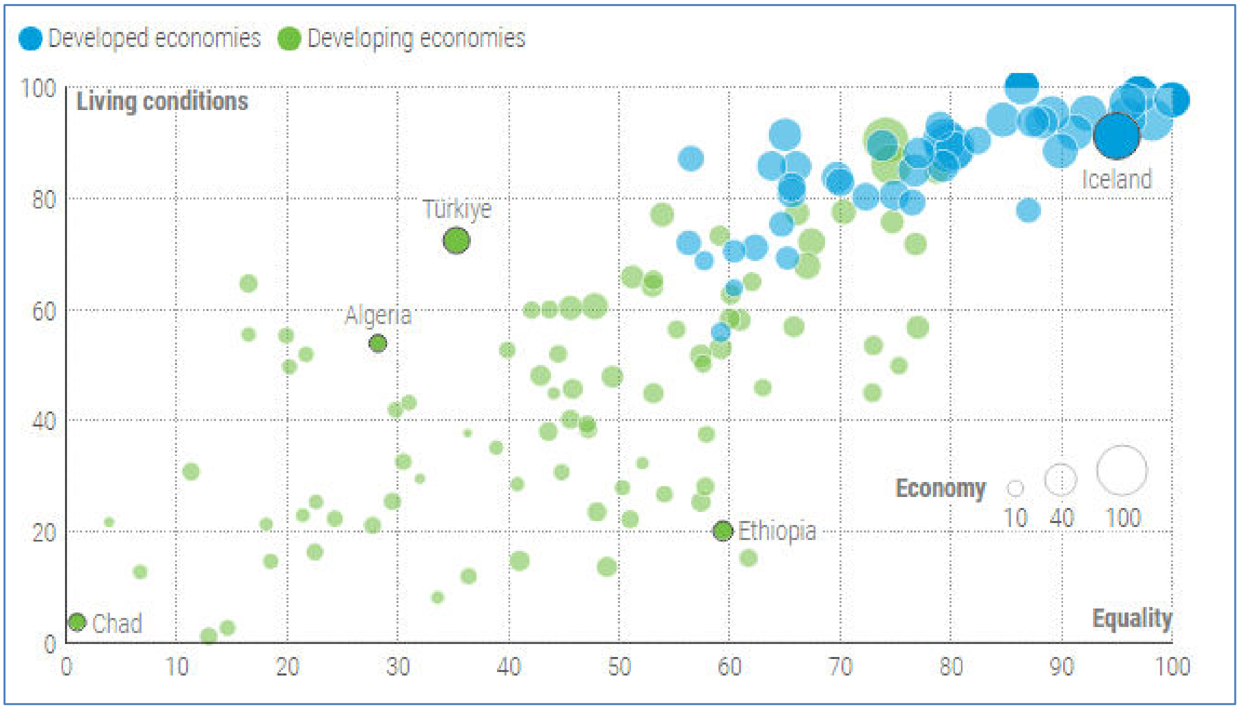
- According to UNCTAD, the limitations of Gross Domestic Product (GDP) persist as an all-encompassing metric for progress, underscoring that higher economic output does not equate to more inclusive and sustainable growth.

- The UN trade and development body's Inclusive Growth Index measures not only traditional economic metrics like GDP but also indicators of living conditions, equality, and environmental sustainability.

- It was expanded in 2023 to include large economies like China and India and now covers 129 countries representing 93% of the world's population and 96% of global GDP.
- Significant disparities remain among developed economies' and developing economies score. For example, in the environmental category, developed economies score an average of 42.5 out of 100, compared to 31.3 for developing countries – a less stark contrast than in the economic category, where the scores are 41.7 and 14.7, respectively.

- Hence, the UN Secretary general said that even though GDP is a strong measure of economic activity, it is equally important to measure who is benefiting from economic growth, whether it is improving people's living conditions and how it affects the environment.

Figure 7: Economic performance, living conditions & equality



Source- UNCTAD

- Developed economies like Luxembourg, Switzerland and Ireland continue to lead the overall index. Singapore and the United Arab Emirates (UAE) are the only developing economies in the top 30.

- Singapore, for instance, scores 90.4 in living conditions, outperforming many developed nations. Similarly, Argentina, Brazil, Chile, China, Costa Rica, Malaysia, Thailand, Türkiye, the UAE, and

Uruguay all score above 70, closer to the developed country average of 85.3 than the developing country average of 43.8.

- In terms of equality, China (78.7), Mexico (77), Argentina (76.8) and Namibia (75.3) match the developed world's average (77.2), far exceeding the developing world's 45.2.

- For the environmental category, developing countries like Singapore (58.6), Panama (48.3) and the Dominican Republic (48) are closing the gap with leading developed countries, such as Denmark (64.8), Ireland (63.6) and the United Kingdom (62.6), showcasing strides in energy efficiency and carbon management.

- As the world grapples with pressing challenges related to climate change and widening socioeconomic disparities, the index provides essential data for policymakers to pinpoint areas for improvement and craft more effective solutions.

5. Green innovation can stimulate economies and curb emissions- IMF

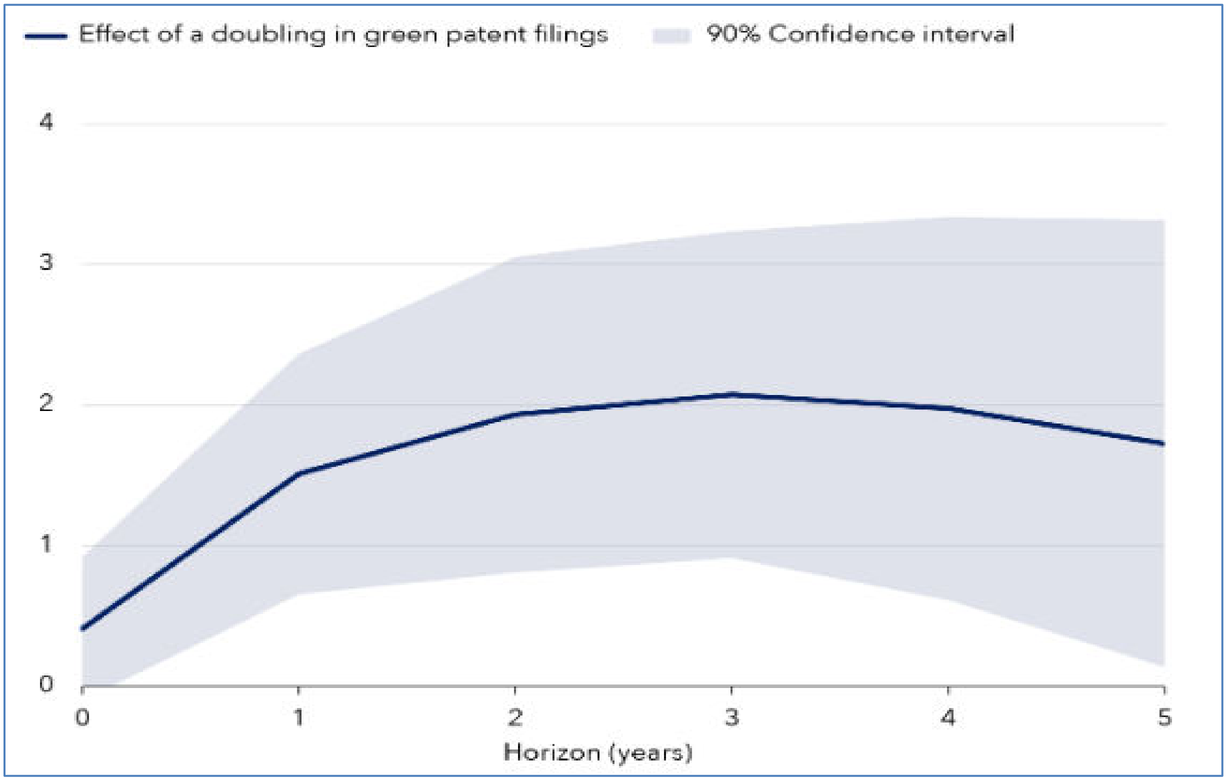
- Making low-carbon technologies cheaper and more widely available is crucial to reducing harmful emissions.

- Green innovation peaked at 10 percent of total patent filings in 2010 and has experienced a mild decline since.

- The slowdown reflects various factors, including hydraulic fracking that has lowered the price of oil and technological maturity in some initial technologies such as renewables, which slows the pace of innovation.

- According to IMF, doubling green patent filings can boost gross domestic product by 1.7 percent after five years compared with a baseline scenario.

Figure 8: Patently innovative



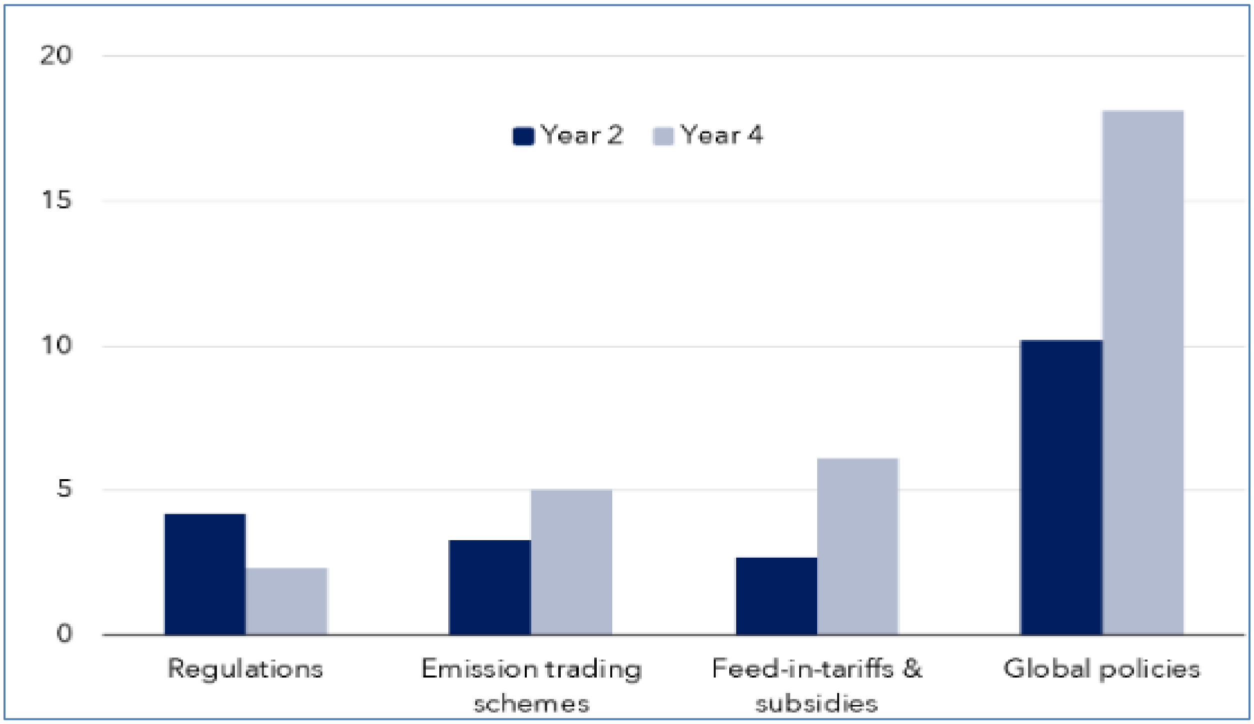
Source- European Patent Office Worldwide Patent Statistical Database

- The economic benefits of green innovation include the following: -
  - increased investment in the first few years.
  - further growth benefits come from cheaper energy and production processes that are more energy efficient.
  - less global warming and less frequent (and less costly) climate disasters.

- According to IMF, some of the most effective policies to stimulate green innovation include emissions-trading schemes that cap emissions, feed-in-tariffs, which guarantee a minimum price for renewable energy producers, and government spending, such as subsidies for research and development.

- Further, International pacts like the Kyoto Protocol and Paris Agreement amplify the impact of domestic policies on green innovation.

Figure 9: Global & domestic climate policies stimulate green innovation for years (change in green patent filing, %)



Source- European Patent Office Worldwide Patent Statistical Database

- Lowering tariffs on low-carbon technologies can further enhance trade and FDI in green technologies. This is especially important for middle- and low-income countries where such tariffs remain high.

6. Indian Economy

India's economic growth

- According to RBI, India's real GDP is expected to grow by 6.5% in both 2023-24 and 2024-25.

- The main reason for robust growth includes the monetary policies devised by RBI from time to time to control inflation and the government supply side measures for significant softening of headline inflation to 4.9% in October 2023.

India Q2 GDP performance –

According to the data released from Ministry of Statistics and Programme Implementation on November 30th, 2023, the Indian economy grew 7.6 per cent during the July-September quarter of the current financial year 2023-24 (Q2FY24), remaining the fastest-growing major economy in the world. It is also more than a percentage point above RBI's estimates of 6.5%. The major highlights are as follows: -

- The real GDP or GDP at constant (2011-12) prices in Q2 2023-24 is estimated to attain a level of ₹41.74 lakh crore, as against ₹38.78 lakh crore in Q2 2022-23, showing a growth of 7.6 per cent, compared to 6.2 per cent in Q2 2022-23.

- The nominal GDP is estimated at Rs 71.66 lakh crore in Q2 FY24 as against Rs 65.67 lakh crore in Q2 2022-23. This is a growth of 9.1% as compared to 17.2% in Q2 2022-23.

- Data from the Index of Industrial Production (IIP) up to September reveals a modest 3.7 percent year-on-year growth in the output of consumer goods in the first six months of the year.

- The sharply higher-than-expected growth rate in the last quarter was down to a jump in activity in the manufacturing and construction sector.

- While the manufacturing sector's gross value added (GVA) grew by 13.9 percent year-on-year in July-September, up from 4.7 percent in April-June, that of the construction sector rose by 13.3 percent, up from versus 7.9 percent in April-June.

- Mining and quarrying have also seen a robust growth of 10% versus -0.1% year-on-year.

- Agriculture, Livestock, Forestry & Fishing growth has slowed down to 1.2% versus 2.5 year-on-year.

- Trade, Hotels, Transport, Communication & Services related to Broadcasting growth has slowed to 4.3% versus 15.6% year-on-year.

- Electricity, Gas, Water Supply & Other Utility Services grew at 10.1% versus 6% year-on-year.

- On the expenditure side, growth in private final consumption expenditure declined to 3.1 percent from 6.0 percent in April-June and 8.3 percent a year ago, while gross fixed capital formation - a proxy for investments - rose 11.0 percent.

- Infrastructure output, consisting of eight sectors such as coal and electricity, contributes to around 40.27 per cent of industrial production which is measured by the Index of Industrial Production.

Table 1: Infrastructure output (data in % terms, yoy comparison)

SECTORS	OCT '23	SEPT '23	OCT '22
Coal	18.4	16.1	3.8
Crude Oil	1.3	-0.4	-2.2
Natural Gas	9.9	6.5	-4.2
Refinery Pdts	4.2	5.5	-3.1
Fertilisers	5.3	4.2	5.4
Steel	11	9.6	5.8
Cement	17.1	4.7	-4.2
Electricity	20.3	9.3	1.2

Source- Department for Promotion of Industry and Internal Trade (DPIIT)

India PMI

- According to S&P Global Manufacturing Purchasing Managers' Index, PMI for manufacturing production dropped to an eight-month low of 55.5 in October 2023 from 57.5 in September 2023.

- According to S&P Global, there was a slower increase in total new orders, production, exports, buying levels and stocks of purchases. The hiring activity and business confidence slipped to a five-month low in October. Meanwhile, cost pressures intensified, while output price inflation receded.

- The S&P Global India Services Purchasing Managers' Index (PMI) fell to 58.4 in October 2023 from 61.0 in September 2023.

- India’s services sector activity grew at the slowest pace in the last seven months in October. This was due to subdued demand for services and competitive conditions. Further, inflationary forces in the Indian service sector intensified, primarily because of surging food, fuel, and staff costs.

Inflation in India

- India's retail inflation eased to a four-month low of 4.87% in October 2023 from 5.02% in September 2023.

- Inflation rate in urban and rural areas stood at 4.62 per cent and 5.12 per cent, down from 6.50 per cent and 6.98 per cent seen in the same month a year ago.

- The rate of inflation in the Consumer Food Price Index (CFPI) stood at 6.61 per cent in October, against 6.62 per cent in September and 7.01 per cent in October 2022.

- The RBI's rate-setting panel Monetary Policy Committee (MPC) in its October 2023 meeting projected CPI inflation at 5.4 per cent for 2023-24, a moderation from 6.7 per cent in 2022-23.

- The central bank is expected to keep its key policy rate unchanged at 6.50 per cent for the current financial year 2023-24.

Unemployment in India

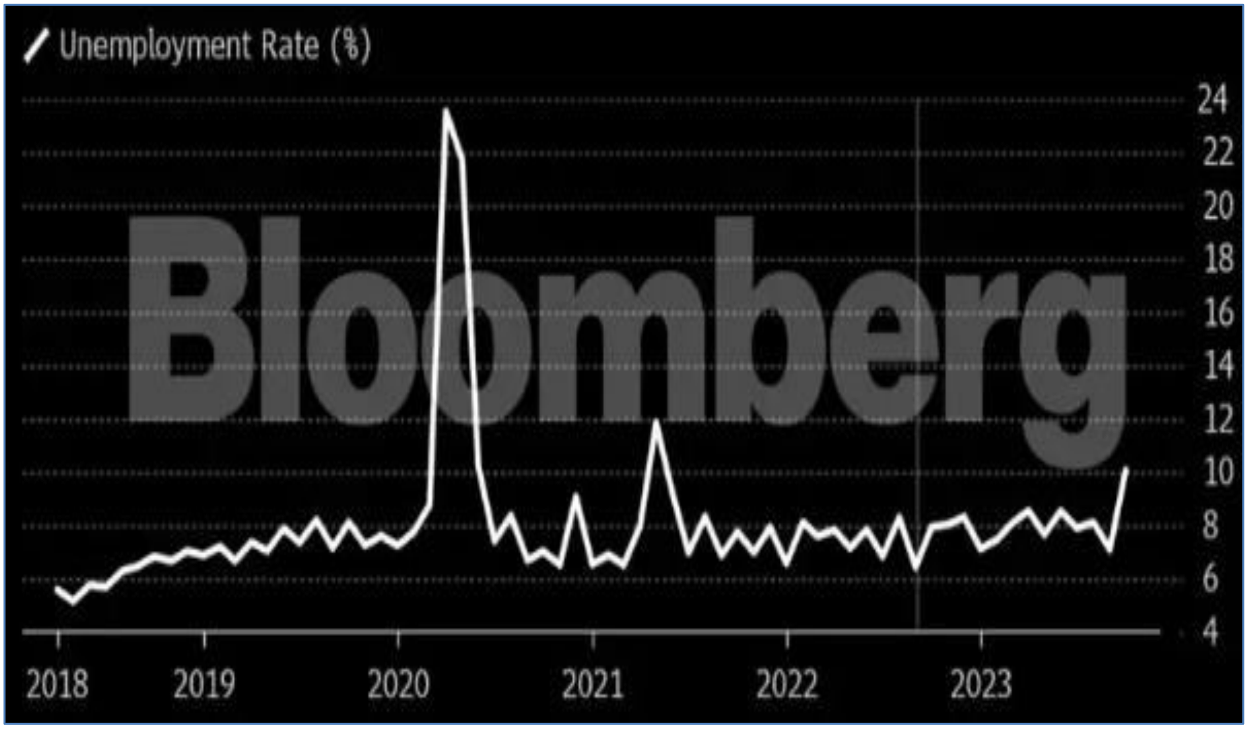
According to the Centre for Monitoring of Indian Economy (CMIE), India's unemployment rate increased to its highest level in over two years in October, primarily due to rising joblessness in rural areas.

- The overall unemployment rate rose to 10.05% in October 2023, up from 7.09% in September 2023, marking the highest rate since May 2021.

- Rural unemployment jumped to 10.82% from 6.2%, while the urban rate eased slightly to 8.44%.

- The weakest monsoon rains in five years are weighing on farming output in the world's second-biggest producer of rice, wheat, and sugar. In urban areas, economic activity has been relatively strong, with manufacturing and consumption expanding.

Figure 10: India's October jobless rate



Source- Bloomberg

India's external position

India's forex position

- According to RBI, India's forex reserves decreased by $462 million to $590.32 billion for the week ending November 10, 2023.
- The foreign currency assets increased by $108 million to $522 billion, according to the Weekly Statistical Supplement released by the RBI.
- During the week, gold reserves decreased by $608 million to $45.52 billion, while SDRs were up by $36 million to $18.01 billion. Reserve position in the IMF was up by $3 million to $4.79 billion.

India's foreign trade position

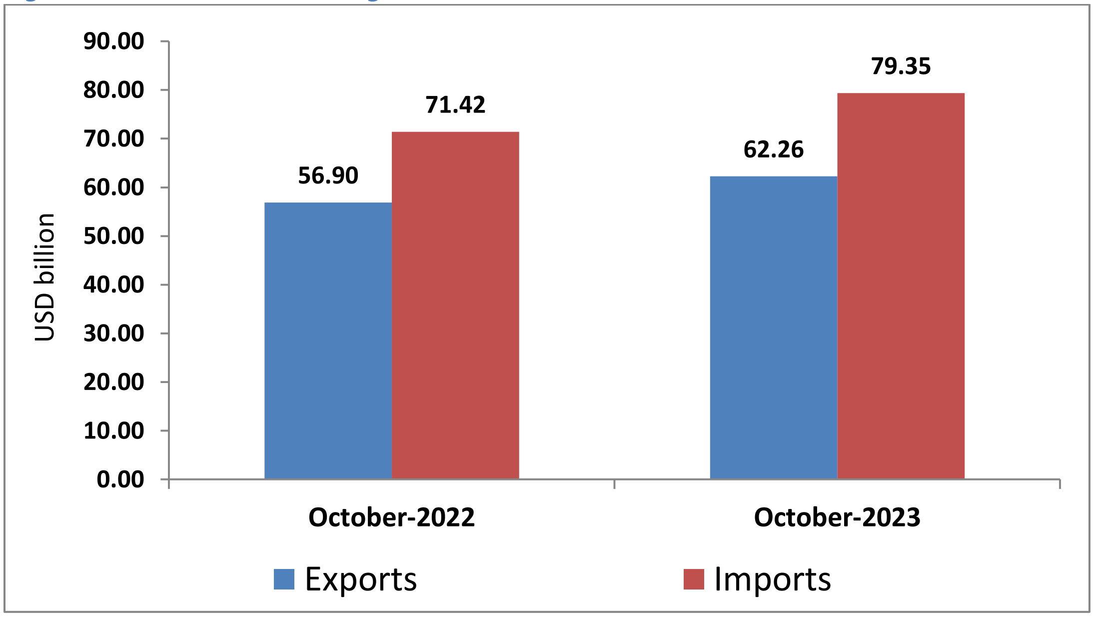
- India's overall exports (Merchandise and Services combined) in October 2023 is estimated to be USD 62.26 Billion, exhibiting a growth of 9.43 per cent over October 2022.
- Overall imports in October 2023 are estimated to be USD 79.35 Billion, exhibiting a growth of 11.10 per cent over October 2022.

Table 2: Trade during October 2023

		September 2023 (USD Billion)	September 2022 (USD Billion)
Merchandise	Exports	34.47	35.39
	Imports	53.84	63.37
Services*	Exports	29.37	29.22
	Imports	14.91	16.27
Overall Trade (Mechandise + Services)*	Exports	63.84	64.61
	Imports	68.75	79.64
	Trade Balance	-4.92	-15.03

Source- RBI

Figure 11: Overall Trade during October 2023



Source- RBI

- For the month of October 2023, under merchandise exports, 22 of the 30 key sectors exhibited growth in October 2023 as compared to same period last year (October 2022). These include Ceramic Products & Glassware (48.16%), Tobacco (47.6%), Cereal Preparations & Miscellaneous Processed Items (40.95%), Meat, Dairy & Poultry Products (38.57%), Cotton Yarn/Fabs./Made-Ups, Handloom Products Etc. (36.49%), Oil Seeds (29.7%), Drugs & Pharmaceuticals (29.31%), Electronic Goods (28.23%), Fruits & Vegetables (24.48%), Oil Meals (17.32%), Carpet (16.63%), Plastic & Linoleum (12.83%), Spices (10.78%), Man-Made Yarn/Fabs./Made-Ups Etc. (10.23%), Coffee (8.45%), Marine Products (8.16%), Engineering Goods (7.2%), Handicrafts Excl. Hand Made Carpet (4.72%), Tea (4.12%), Cashew (3.29%) and Jute Mfg. Including Floor Covering (0.42%).

- For April-October 2023, under merchandise exports, 14 of the 30 key sectors exhibited growth during April-October 2023 as compared to April-October 2022. These include Iron Ore (157.03%), Oil Meals (37.71%), Electronic Goods (27.7%), Oil Seeds (24.39%), Ceramic Products & Glassware (23.65%), Tobacco (12.99%), Fruits & Vegetables (12.82%), Drugs & Pharmaceuticals (8.14%), Cereal Preparations & Miscellaneous Processed Items (6.32%), Cotton Yarn/Fabs. /Made-Ups, Handloom Products Etc. (5.65%), Meat, Dairy & Poultry Products (4.54%), Coffee (4.02%), Spices (2.35%) and Cashew (0.72%). During April-October 2023 electronic goods exports were recorded at USD 15.48 Billion as compared to USD 12.13 Billion during April-October 2022, registering a growth of 27.70 percent.

- India's trade deficit has shown considerable decline in April-October 2023. Overall trade deficit for April-October 2023 is estimated at USD 57.64 Billion as compared to the deficit of USD 89.86 Billion during April-October 2022, registering a decline of (-) 35.86 percent. The merchandise trade deficit during April-October 2023 is USD 147.07 Billion compared to USD 167.14 Billion during April-October 2022, registering a decline of (-) 12.01 percent.

7. India's net oil, gas import bill down 25% in April-October amid lower international prices

- India's net oil and gas imports in value terms for April-October of 2023-24 (FY24) declined by nearly a fourth on a year-on-year basis to $68 billion due to relatively subdued prices of crude oil, natural gas, and petroleum products globally.

- This decline in the value of oil and gas imports came despite a rise in import volumes, suggesting that the fall in prices was significant enough to offset the volume growth.

- In the first seven months of the previous financial year—FY23—the country's net oil and gas import bill was $90.1 billion.

- The price of oil, natural gas, and refined petroleum products saw a hike last year following Russia's February 2022 invasion of Ukraine. In the initial few months of FY23, international prices of these commodities were overheated. Their prices in the current financial year have been relatively softer and less volatile. For instance, the average price of the Indian basket of crude for April-October of last year was almost $102 per barrel, but in the first seven months of FY24, it was $83.44.

- According to provisional data from the Petroleum Planning & Analysis Cell (PPAC) of the oil ministry, India imported crude oil worth $75.5 billion in April-October of the current financial year, against $101.2 billion a year ago.

- Apart from generally lower prices of crude oil globally, India has also benefited from ramping up imports of discounted Russian crude. Although the discounts are not as high as last year, the volume of oil imported from Russia has gone up significantly. Moscow now accounts for over 40 per cent of New Delhi's overall oil imports.

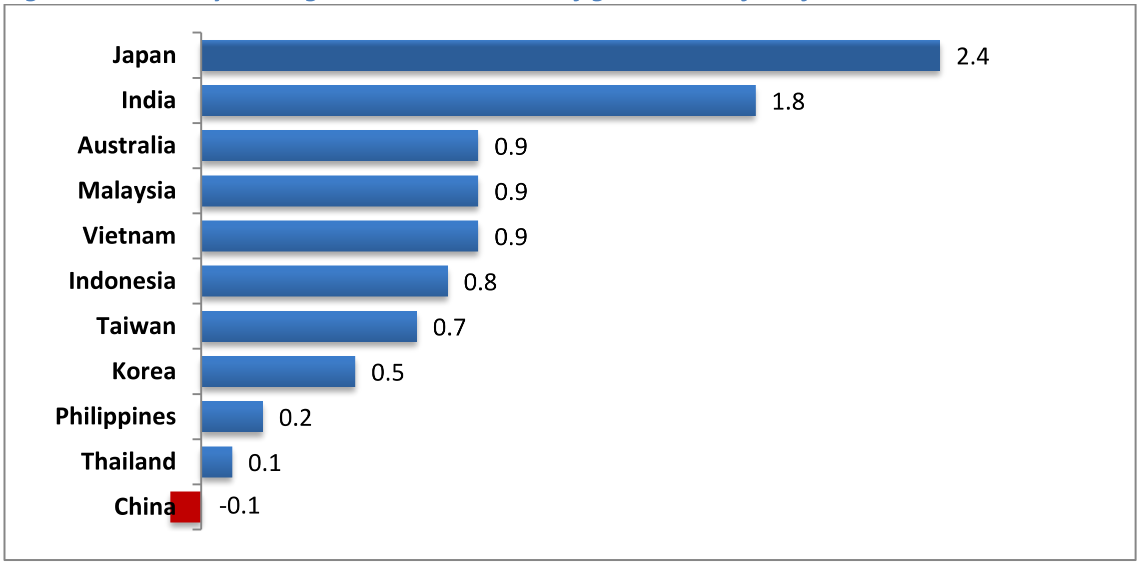
- As for natural gas, which is imported in the liquefied form, import value for the first seven months of FY24 was $6.6 billion, down nearly 30 per cent from a year ago.

8. India's share of global FDI inflow climbs to 4.2% in Q1 of FY23

- India's share gain of foreign direct investment (FDI) has been larger compared to competing countries in the region over the years, even though it has seen a fall in overall FDI in the financial year ended March 31, 2023 (FY23) over the previous financial year.

- The trend is reflected in the data from Morgan Stanley based on its own estimation for Q1, which shows that India's share of global inflow FDI went up from 2.4 per cent in Q4 FY17 to 4.2 per cent in Q1 of FY23.

Figure 12: Country -wise growth rate in share of global FDI inflow from Q4 FY 2017 to Q1 FY 2013 (%)



Source- Morgan Stanley, UNCTAD

- This represents a growth of 1.8 percentage points in FDI inflow share for India in this period.

- As a result, India's share gain in this period has been higher than most of the countries in the region such as Vietnam (0.9 percentage points), Malaysia (0.9), Australia (0.9), Indonesia (0.8), Taiwan (0.7), South Korea (0.5), Philippines (0.2), Thailand (0.1) and China (-0.1 percentage points). Only Japan has a higher share of FDI share growth of 2.4 percentage points in the same period.

- This growth is despite total FDI into India has fallen by 22 per cent from $58 billion in FY22 to $46 billion in FY23, according to the Reserve Bank of India. The slowdown in total FDI inflows into India has been not only due to global factors, but also due to the substantial slowing down of VC funds investing in startups.

9. S&P Global Ratings raises India's FY24 GDP growth projection but lowers it for FY25

- S&P Global Ratings has revised India's Gross Domestic Product (GDP) growth projection for financial year 2024 (April 2023 - March 2024) to 6.4% from 6% earlier. It has cited robust domestic momentum to have offsetted headwinds from high food inflation and weak exports.

- However, it has lowered the country's GDP growth projection for financial year 2025 (April 2024 - March 2025) to 6.4% from 6.9% earlier, as it expects growth to slow in the second half amid subdued global growth, a higher base, and a lagged impact of interest rate hikes from the Reserve Bank of India.

- Further, S&P Global forecasts interest rates to fall by 100 basis points by March 2024.

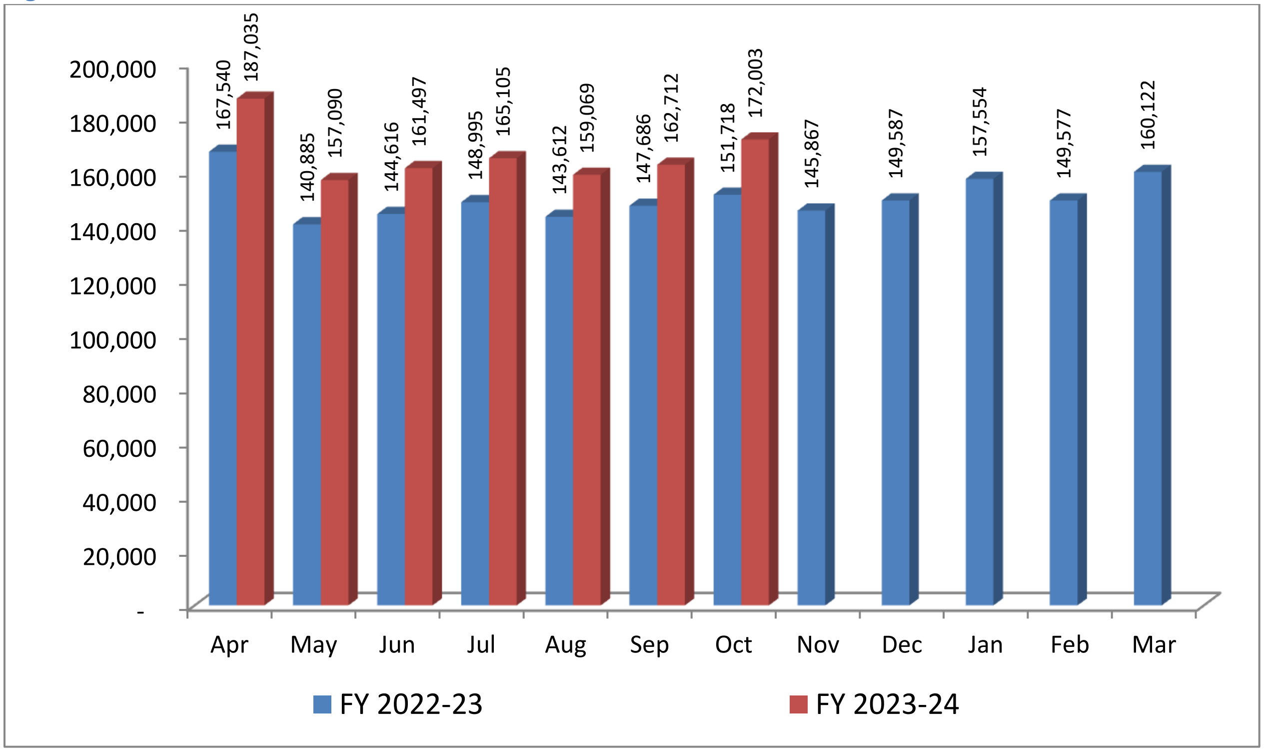
- For the US, the ratings agency expects a gradual decline in inflation towards the US Federal Reserve's target of 2%. However, it expects another rate hike in the December meeting and the first cut to take place only in mid-2024.

10. GST revenue collection for October 2023 is second highest ever, next only to April 2023, at ₹1.72 lakh crore; records increase of 13% Y-o-Y

- The gross GST revenue collected in the month of October, 2023 is ₹ 1,72,003 crore out of which ₹ 30,062 crore is CGST, ₹ 38,171 crore is SGST, ₹ 91,315 crore (including ₹ 42,127 crore collected on import of goods) is IGST and ₹ 12,456 crore (including ₹ 1,294 crore collected on import of goods) is cess.

- The government has settled ₹ 42,873 crore to CGST and ₹ 36,614 crore to SGST from IGST. The total revenue of Centre and the States in the month of October, 2023 after regular settlement is ₹72,934 crore for CGST and ₹ 74,785 crore for SGST.

Figure 13: Trend in GST collection



Source- Ministry of Finance

- The gross GST revenue for the month of October, 2023 is 13% higher than that in the same month last year. During the month, revenue from domestic transactions (including import of services) is also 13% higher than the revenues from these sources during the same month last year. The average gross monthly GST collection in the FY 2023-24 now stands at Rs. 1.66 lakh crore and is 11% per cent more than that in the same period in the previous financial year.

Lessons from Economics

Economic Integration

Economic integration is an arrangement among nations that typically includes the reduction or elimination of trade barriers and the coordination of monetary and fiscal policies. Economic integration aims to reduce costs for both consumers and producers and to increase trade between the countries involved in the agreement.

When regional economies agree on integration, trade barriers fall and economic and political coordination increases. Seven stages of economic integration are: a preferential trading area, a free trade area, a customs union, a common market, an economic union, an economic and monetary union, and complete economic integration. The final stage represents a total harmonization of fiscal policy and a complete monetary union.

The European Union, for example, represents a complete economic integration.

Advantages of Economic Integration

- The advantages of economic integration fall into three categories: trade creation, employment opportunities, and consensus and cooperation.
- More specifically, economic integration typically leads to a reduction in the cost of trade, improved availability of goods and services and a wider selection of them, and gains in efficiency that lead to greater purchasing power.
- Employment opportunities tend to improve because trade liberalization leads to market expansion, technology sharing, and cross-border investment.
- Political cooperation among countries also can improve because of stronger economic ties, which provide an incentive to resolve conflicts peacefully and lead to greater stability.

The Costs of Economic Integration

- Diversion of trade- Trade can be diverted from nonmembers to members, even if it is economically detrimental for the member state.
- Erosion of national sovereignty- Members of economic unions typically are required to adhere to rules on trade, monetary policy, and fiscal policies established by an unelected external policymaking body.

Example of Economic Integration

- The European Union (EU) was created in 1993 and included 27 member states in 2022. Since 1999, 19 of those nations have adopted the euro as a shared currency.

- nAccording to data from The World Bank, the EU accounted for roughly 18% of the world's gross domestic product in 2020.

- The United Kingdom voted in 2016 to leave the EU. In January 2020 British lawmakers and the European Parliament voted to accept the United Kingdom's withdrawal. The UK officially split from the EU on January 1, 2021.

Oil Market

Crude oil price – Monthly Review

The market rally that pushed benchmark oil prices towards triple digits in September reversed sharply in October, despite continued tight crude supplies and an intensifying conflict in the Middle East. Beginning November, ICE Brent futures plunged to a four-month low around $80/bbl. The abrupt sell-off came as market concerns shifted from supply risks to the global economy and oil demand. Crude oil futures prices sharply declined in the first week of October, fuelled by investors engaging in profit taking, reacting to the significant price surge from September. This came amid a market narrative on concerns about the macroeconomic outlook and weaker-than-expected US consumer spending data for August. Additionally, investors anticipated that the Fed might keep borrowing rates high for an extended period. This sentiment led to the US dollar gaining strength against other major currencies, a factor that exerts downward pressure on oil prices. The US dollar index rose to nearly a year high. Further declines in prices were driven by heavy sell-offs in futures and options long positions from hedge funds and other money managers.

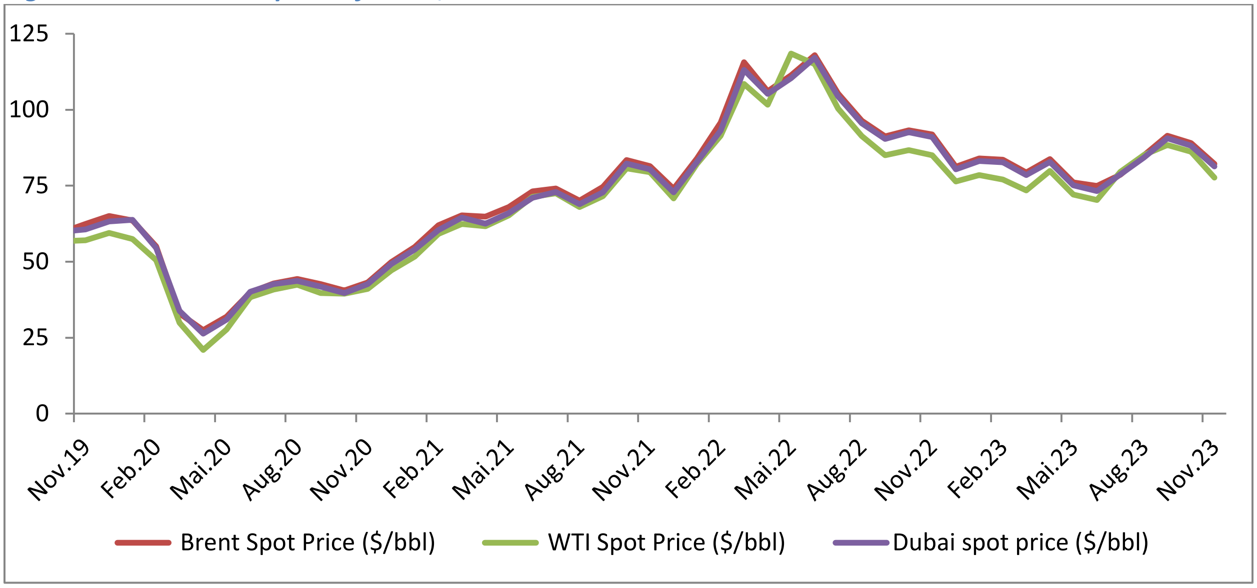
However, geopolitical developments in the Middle East added risk premiums to oil prices and fuelled volatility. Coupled with the Fed's optimistic remarks hinting at a more cautious approach to rate hikes, this limited the oil price decline. Oil prices resumed their downward trend in the last week of October as investors shifted their focus to broader macroeconomic concerns, amid soft economic data from China that heightened concerns about slowing oil demand.

Hedge funds and other money managers turned less bullish on oil and heavily cut their bullish positions in October after they were net buyers in September. This fuelled price volatility and contributed to a drop in futures prices. Speculators sharply reduced net long positions over October, particularly in the NYMEX WTI futures and options contracts. They were net sellers in both ICE Brent and NYMEX WTI contracts. Money managers liquidated long positions built the month before, amid a weakening in the broader financial market, and uncertainty about the Fed's policy and expectations that borrowing rates will remain high for an extended period.

In November, top oil exporters Saudi Arabia and Russia confirmed to continue with their additional voluntary output cuts until the end of the year. Those cuts look set to keep the oil market in a significant deficit through year-end, with the OPEC+ alliance pumping 900 kb/d below the demand for its crude. Global observed crude oil inventories fell by a massive 140 mb over the third quarter to a fresh low, as refineries boosted activity ahead of seasonal maintenance. With demand growth set to slow, the market could shift into surplus at the start of 2024. According to the current situation, with demand still exceeding available supplies heading into the Northern Hemisphere winter, market balances will remain vulnerable to heightened economic and geopolitical risks and further volatility ahead.

Brent crude ranged an average to $82.23 a barrel and WTI ranged to $77.61 per barrel in the month of November.

Figure 14: Benchmark price of Brent, WTI and Dubai crude



Source- World Bank

- Brent crude price averaged $82.23 per bbl in November 2023, down by 7.6% on a month on month (MoM) and 10.5% on year on year (YoY) basis, respectively.

- WTI crude price averaged $77.61 per bbl in November 2023, down by 10.0% on a month on month (MoM) and 8.7% on year on year (YoY) basis, respectively.

- Dubai crude price averaged $81.33 per bbl in November 2023, down by 7.7% on a month on month (MoM) and 10.6% on year on year (YoY) basis, respectively.

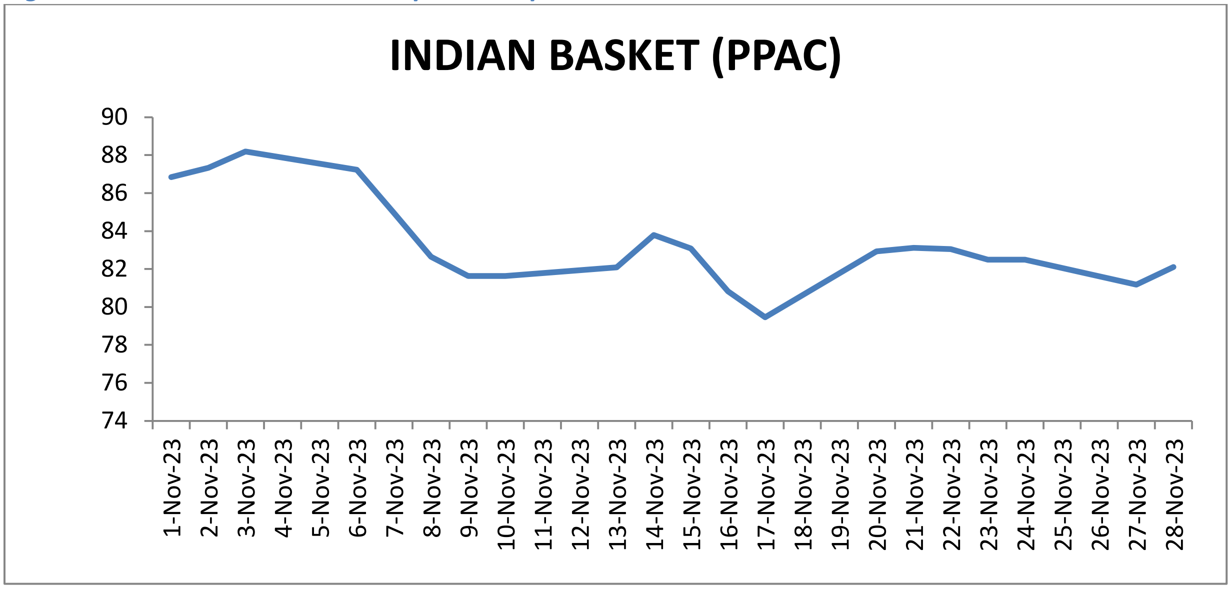
Table 3: Crude oil price in November, 2023

Crude oil	Price ($/bbl)	MoM (%) change	YoY (%) change
Brent	82.23	-7.6%	-10.5%
WTI	77.61	-10.0%	-8.7%
Dubai	81.33	-7.7%	-10.6%

Source- World Bank

Indian Basket Crude oil price

Figure 15: Indian crude oil basket price in $ per bbl



Source- PPAC

- Indian crude basket price averaged $83.35 per barrel in November 2023, down by 7.5% on Month on Month (M-o-M) and 6.9% on a year on year (Y-o-Y) basis, respectively.

Oil production situation

- Non-OPEC liquids supply growth forecast is revised up to 1.8 mb/d in 2023. Main drivers of liquids supply growth for 2023 include the US, Brazil, Kazakhstan, Norway, Guyana, Mexico and China. For 2024, non-OPEC liquids production is expected to grow by 1.4 mb/d, broadly unchanged from the previous month's assessment. Main drivers for liquids supply growth next year are set to be the US, Canada, Guyana, Brazil, Norway and Kazakhstan.

- OPEC NGLs and non-conventional liquids are forecast to grow by around 50 tb/d in 2023 to average 5.4 mb/d and by another 65 tb/d to average 5.5 mb/d in 2024. OPEC-13 crude oil production in October increased by 80 tb/d m-o-m to average 27.90 mb/d.

Table 4: Non-OPEC liquids production in 2023, mb/d

Non-OPEC liquids production	2022	1Q23	2Q23	3Q23	4Q23	2023
Americas	26.91	27.90	28.18	28.86	28.36	28.33
of which US	*19.28*	*20.10*	*20.70*	*21.05*	*20.44*	*20.58*
Europe	3.58	3.69	3.65	3.52	3.73	3.65
Asia Pacific	0.48	0.45	0.45	0.45	0.47	0.46
Total OECD	**30.97**	**32.04**	**32.27**	**32.84**	**32.56**	**32.43**
China	4.48	4.63	4.63	4.49	4.49	4.56
India	0.77	0.76	0.78	0.78	0.78	0.78
Other Asia	2.30	2.31	2.26	2.24	2.38	2.30
Latin America	6.34	6.69	6.76	7.06	6.92	6.86
Middle East	3.29	3.27	3.29	3.27	3.30	3.28
Africa	1.29	1.24	1.27	1.27	1.30	1.27
Russia	11.03	11.19	10.86	10.77	9.63	10.61
Other Eurasia	2.83	2.99	2.93	2.82	2.99	2.93
Other Europe	0.11	0.11	0.10	0.10	0.10	0.10
Total Non-OECD	**32.44**	**33.21**	**32.89**	**32.80**	**31.89**	**32.69**
Total Non-OPEC production	63.41	65.25	65.16	65.64	64.45	65.12
Processing gains	2.40	2.47	2.47	2.47	2.47	2.47
Total Non-OPEC liquids production	**65.81**	**67.72**	**67.63**	**68.11**	**66.92**	**67.59**
Previous estimate	**65.81**	**67.72**	**67.61**	**67.77**	**66.88**	**67.49**
Revision	0.00	0.00	0.02	0.34	0.04	0.10

Source- OPEC

- From the above table, it can be inferred, that the total non-OPEC liquids production is expected to reach 67.59 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.
- OPEC-13 crude oil production averaged 27.90 mb/d in October 2023, higher by 80 tb/d m-o-m.

Oil demand situation

- The world oil demand growth forecast for 2023 is revised up marginally from the previous month's assessment to 2.5 mb/d. Revisions to data for the OECD countries throughout the first three quarters largely offset each other. In the non-OECD, the upward revisions to China's oil demand in both 3Q23 and 4Q23 outpaced the downward revisions in the non-OECD region in 3Q23. In 2023, OECD oil demand is expected to rise by around 0.1 mb/d, while non-OECD oil demand is expected to increase by 2.4 mb/d.
- For 2024, world oil demand is expected to grow by a healthy 2.2 mb/d, unchanged from the previous month's assessment. The OECD is expected to expand by about 0.2 mb/d in 2024, with OECD Americas contributing the largest increase. The non-OECD is set to drive next year's growth,

increasing by about 2.0 mb/d, with China, the Middle East, Other Asia and India contributing the most.

Table 5: World Oil demand, mb/d

	2022	1Q23	2Q23	3Q23	4Q23	2023	Growth	%
Total OECD	**45.75**	**45.43**	**45.71**	**46.23**	**45.96**	**45.84**	**0.08**	**0.18**
~ of which US	*20.16*	*19.92*	*20.50*	*20.47*	*20.05*	*20.24*	*0.08*	*0.37*
Total Non-OECD	**53.90**	**56.15**	**55.76**	**55.88**	**57.32**	**56.28**	**2.37**	**4.40**
~ 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	16.29	16.09	1.14	7.61
Total world	**99.66**	**101.58**	**101.47**	**102.11**	**103.28**	**102.11**	**2.46**	**2.47**

Source- OPEC monthly report, November 2023

Note: 2023 = Forecast. Totals may not add up due to independent rounding*

Global petroleum product prices

USGC refining margins against WTI moved lower, showing a decline for the second consecutive month. This decline is notably influenced by the challenges in the gasoline sector, attributed to reduced demand following the conclusion of the driving season. Gasoline crack spreads fell 28%, m-o-m, and 46% relative to the y-t-d high registered in August. On the other hand, over the month, naphtha markets exhibited solid improvement due to localized naphtha tightness amid lower output due to heavy turnarounds. However, this positive development proved insufficient to offset the downturn in gasoline, coupled with comparatively smaller losses associated with jet fuel and gasoil. US refiners are expected to shift focus on diesel production to increase heating oil production, while gasoline will likely continue to experience further stock builds, contributing to sustained pressure on margins.

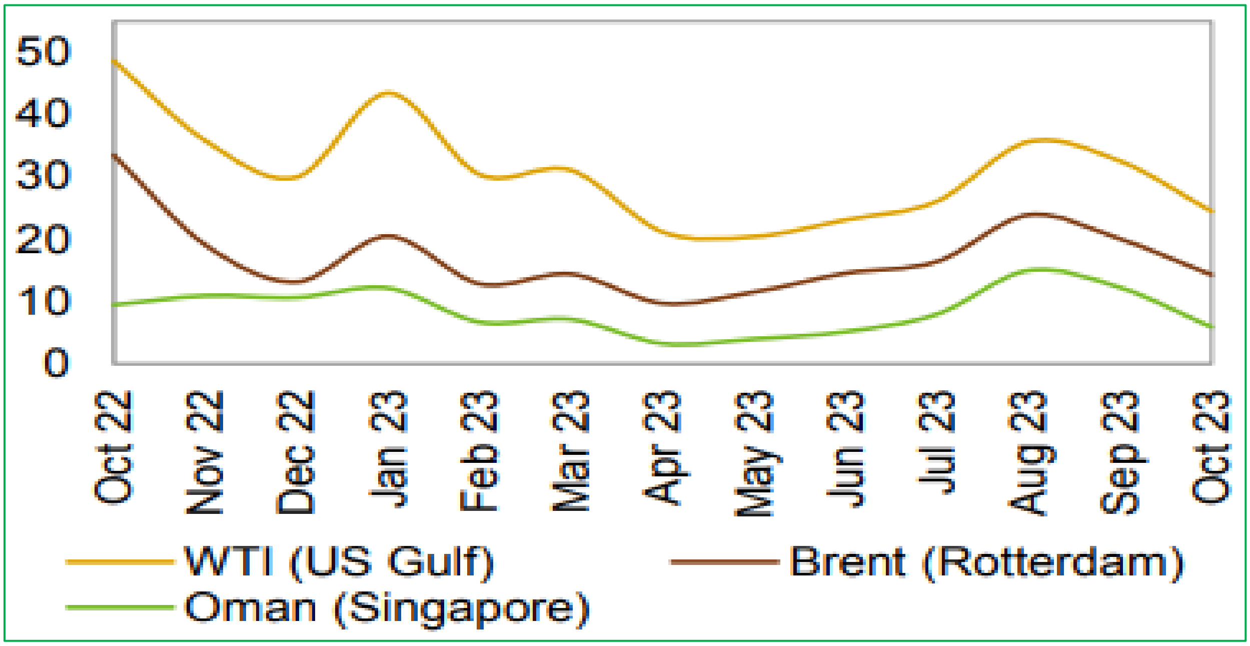
Recent reports of declining refinery run in South America due to plant aging, unplanned incidents and consequently a considerable increase in refinery offline capacities will likely provide partial support to US product markets through exports in the near term.

In terms of operations, US refinery intake declined further with the continuation of heavy maintenance works, resulting in a monthly loss of 970 tb/d, bringing the average to 15.64 mb/d in October. USGC margins against WTI averaged $24.52/b, down by $8.05, m-o-m, and $24.09 y-o-y.

Refinery margins in Rotterdam against Brent lost ground, although the decline was less pronounced compared to what was observed in the USGC and Singapore. A poor performance was evident all across the barrel, particularly gasoline. Lower gasoline exports to the US amplified the product's weakness, extending its influence to Europe. This situation exacerbated the existing pressure in the NWE market, compounded by subdued gasoline exports to Nigeria following the fuel subsidy removal and subsequent increase in Nigerian gasoline retail prices in early 2H23. Moreover, ongoing limitations to access foreign exchange in Nigeria further weighed on the fuels imports. Moreover, the recent relaxation of the diesel export ban implemented in Russia on September 21 alleviated concerns about diesel availability. The measure likely contributed to a downward correction from the eight-month high observed in the previous month.

Refinery throughput in Europe experienced a reversal, trending downward. According to preliminary data, it was 80 tb/d lower, at an average of 9.29 mb/d. Refinery margins against Brent in Europe averaged $14.30/b in October, $5.76 lower, m-o-m, and $19.20 lower y-o-y.

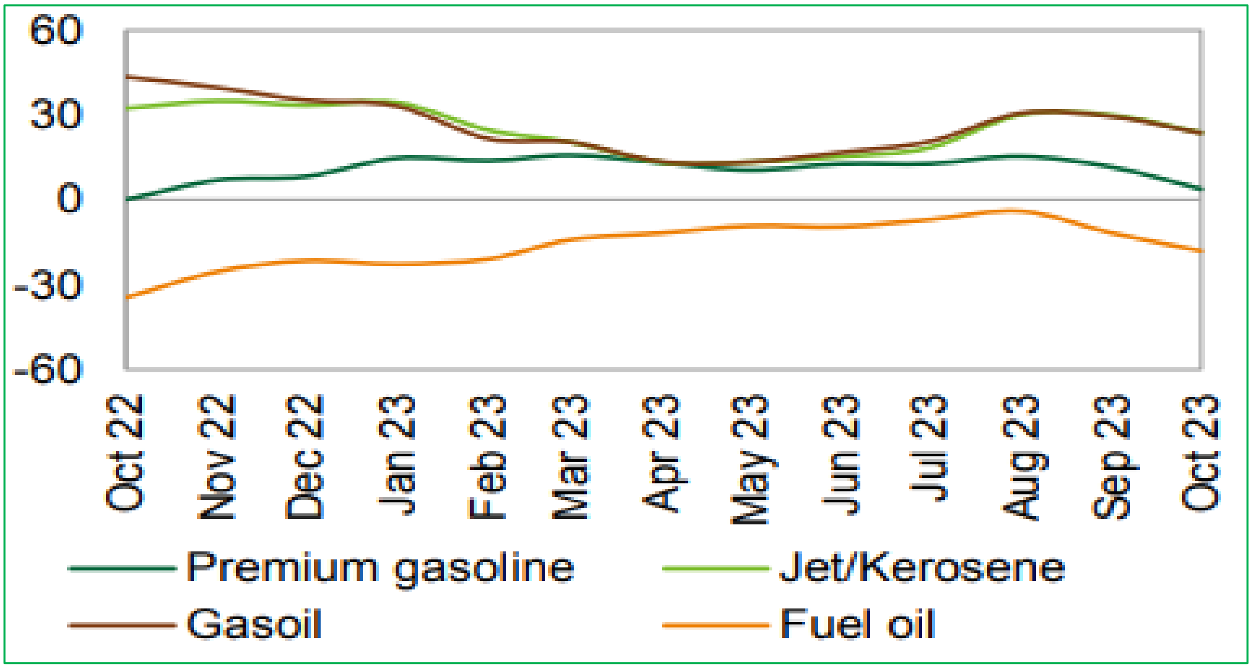
Figure 16: Refining Margins ($/bbl)



Source- Argus and OPEC

The Asian gasoline 92 crack declined to single digits, reaching a 12-month low in October, although the loss was comparatively less than that observed for the same product in the USGC and NWE. The conclusion of the summer season and, consequently, the end of peak travel and driving transport fuel demand contributed to increased gasoline availability in the Atlantic Basin. As a result, gasoline exports to Europe and the US faced pressure. Recent reports indicating a temporary restraint in the release of the last batch of Chinese product export quotas could potentially limit the upside potential for gasoline surplus in the near term. However, the uncertainty surrounding the final decision of the measure and its durability is expected to become clearer going forward. The Singapore gasoline crack spread against Dubai in October averaged $3.90/b. This was down $7.64, m-o-m, but $3.78 higher, y-o-y.

Figure 17: Singapore crack Spreads vs. Dubai ($/bbl)



Source- Argus and OPEC

The Singapore gasoil crack spread weakened along with that of jet/kerosene. The end of the heavy turnaround season in the Atlantic Basin, points to pressure on East-to-West gasoil outflows going forward which may increase the supply-side pressures in Asian gasoil markets in the near term, unless refiners in the region decide to reduce runs. The Singapore gasoil crack spread against Oman averaged $23.67/b, down by $5.84 m-o-m and by $19.90 y-o-y.

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

Singapore product prices	Price ($/b)	MoM (%) change	YoY (%) change
Naphtha	70.80	-5.3%	-1.5%
Premium gasoline (unleaded 95)	98.91	-10.0%	4.4%
Regular gasoline (unleaded 92)	93.71	-10.3%	2.8%
Jet/Kerosene	113.58	-7.5%	-8.0%
Gasoil/Diesel (50 ppm)	117.06	-6.3%	-14.4%
Fuel oil (180 cst 2.0% S)	112.78	-7.1%	-15.8%
Fuel oil (380 cst 3.5% S)	71.86	-11.5%	27.0%

Source- OPEC

Petroleum products consumption in India

Monthly Review:

- Overall consumption of all petroleum products in October 2023 with a volume of 19.26 MMT registered a growth of 4.65% on volume of 18.40 MMT in October 2022.
- MS (Petrol) consumption during the month of October 2023 with a volume of 3.14 MMT recorded a growth of 4.80% on volume of 2.99 MMT in October 2022.
- HSD (Diesel) consumption during the month of October 2023 with a volume of 7.63 MMT recorded a growth of 9.35% on volume of 6.98 MMT in the month of October 2022.
- LPG consumption during the month of October 2023 with a volume of 2.49 MMT registered growth of 3.97% over the volume of 2.4 MMT in the month of October 2022.
- ATF consumption during October 2023 with a volume of 0.691 MMT registered a growth of 12.27% over the volume of 0.616 MMT in October 2022.
- Bitumen consumption during October 2023 with a volume of 0.711 MMT registered growth of 21.12% over volume of 0.587 MMT in the month of October 2022.
- Kerosene consumption registered growth of 0.12% during the month of October 2023 as compared to October 2022.

Table 7: Petroleum products consumption in India, October 2023

Consumption of Petroleum Products (P)	Consumption in '000 MT	MoM (%) change	YoY (%) change
LPG	2,496	-2.2%	4.0%
Naphtha	1,115	11.7%	16.4%
MS	3,140	2.7%	4.8%
ATF	691	5.2%	12.3%
SKO	34	6.0%	0.1%
HSD	7,635	17.6%	9.4%
LDO	67	7.5%	1.2%
Lubricants & Greases	307	-5.5%	-25.1%
FO & LSHS	532	-0.6%	-6.9%
Bitumen	711	29.9%	21.1%
Petroleum coke	1,545	1.8%	15.0%
Others	986	-33.6%	-31.4%
TOTAL	19,260	5.5%	4.7%

Source- PPAC

Natural Gas Market

Natural Gas Price – Monthly Review

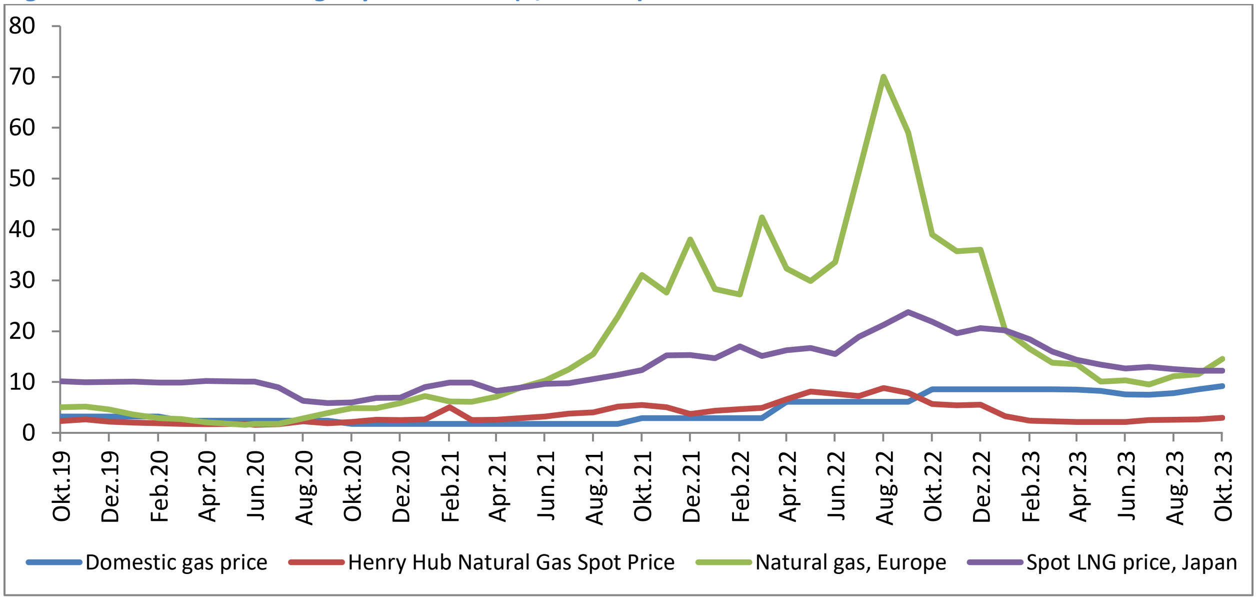
- Natural gas spot prices at the US Henry Hub benchmark averaged $2.98 per million British thermal units (MMBtu) in October 2023. Henry Hub's natural gas prices increased for a fifth consecutive month against a backdrop of strong production, rising by 13.2% m-o-m in October. Prices rallied on the back of increased demand for residential heating amid colder weather across the US. Prices were further supported by solid US LNG exports amid higher prices in Asia and Europe.

- The natural gas spot price at the Title Transfer Facility (TTF) in the Netherlands in Europe traded at an average of $14.57 per MMBtu. Natural gas prices in Europe rose for a third consecutive month. The average Title Transfer Facility (TTF) price went from $11.5/mmbtu in September to $14.6/mmbtu in October, a 26.2% increase m-o-m. Data from Gas Infrastructure Europe shows EU storage almost at full capacity as of the end of October. However, prices were impacted by geopolitical developments in the Middle East, underscoring the increased susceptibility of TTF prices to global dynamics. Prices were down by 62.7%, y-o-y.
- Japan Liquefied Natural Gas Import Price averaged at $12.21 per MMBtu for October 2023, prices remained same in September 2023. The government of Japan is in talks with liquefied natural gas (LNG) importers to secure new decades long supply deals under efforts to boost energy security. The Ministry of Economy, Trade and Industry (METI) has been meeting with Japanese buyers, as well as overseas suppliers, to urge the signing of more long-term LNG contracts. The push is meant to insulate Japan from future supply shocks, as well as potentially harsher sanctions against Russian fuel exports. The move is another step by Japan, the world's biggest LNG importer last year, to ensure that power producers and industries have enough gas amid the transition to cleaner sources.

- 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 18: Global natural gas price trends ($/mmbtu)



Source- EIA, World Bank

Table 8: Gas price, October 2023

Natural Gas	Price ($/MMBTU)	MoM (%) change	YoY (%) change
India, Domestic gas price (Nov'23)	9.12	-0.87%	6.42%
India, Gas price ceiling – difficult areas (Oct'23-Mar'24)	9.96	-17.82%	-20.06%
Henry Hub	2.98	12.9%	-47.3%
Natural Gas, Europe	14.57	26.1%	-62.7%
Liquefied Natural Gas, Japan	12.21	0.0%	-44.1%

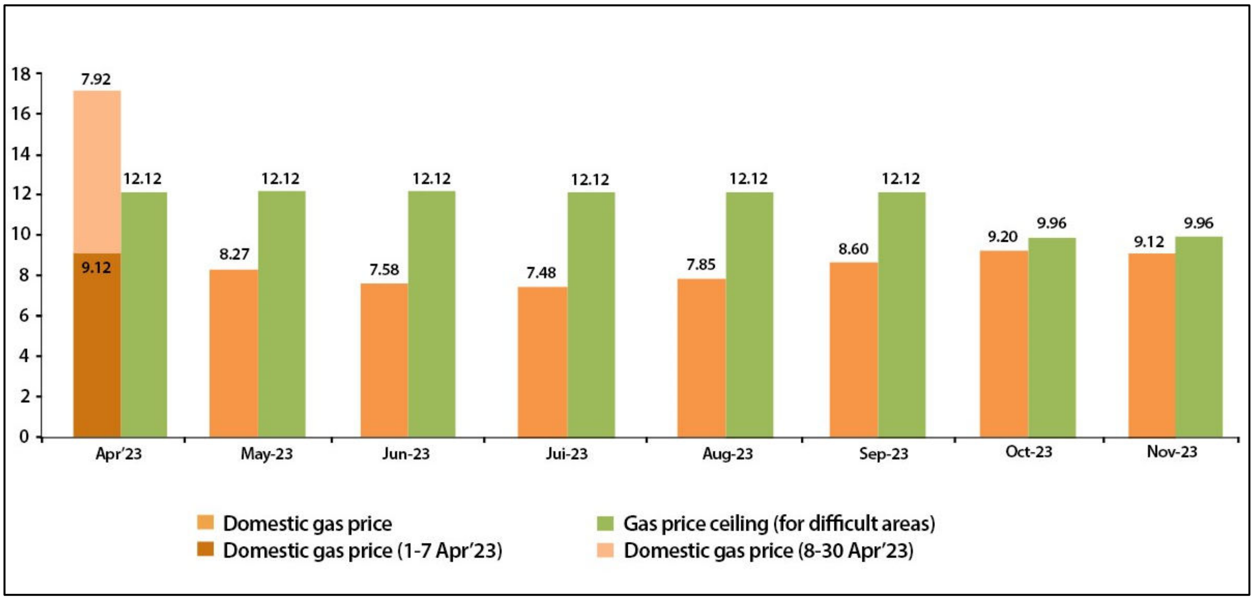
Source- EIA, PPAC, World Bank

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

Source- PPAC

Figure 19: Domestic natural gas price April – November 2023 ($/mmbtu)



Source- PPAC

Indian Gas Market

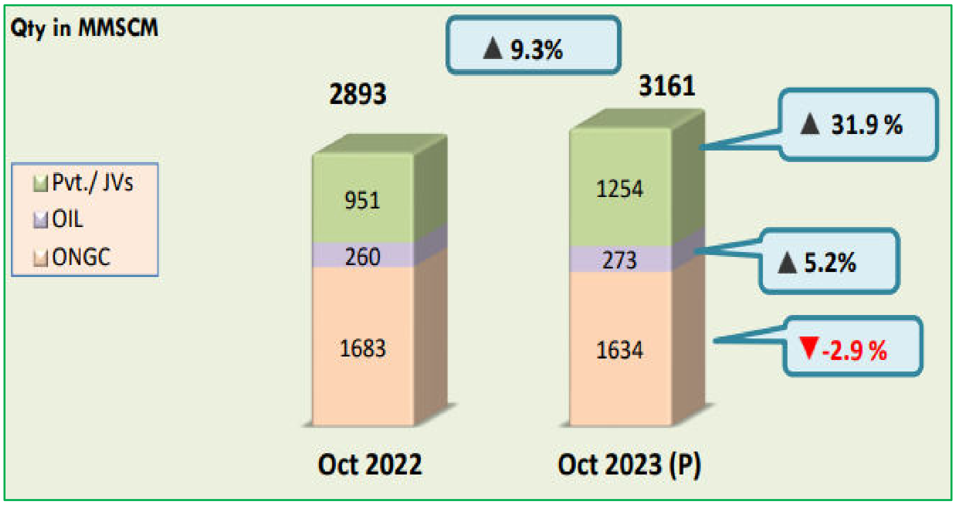
- Gross production of natural gas for the month of October 2023 was 3161 MMSCM which was higher by 9.3% compared with the corresponding month of the previous year.
- Total imports of LNG (provisional) during the month of October 2023 was 2337(P) (increase of 18.2 % over the corresponding month of the previous year).
- Natural gas available for sale during October 2023 was 4987 MMSCM (increase of 14.5% over the corresponding month of the previous year).
- Total consumption during October 2023 was 6140 MMSCM (provisional). Major consumers were fertilizer (31%), City Gas Distribution (CGD) (19%), Power (14%), Refinery (8%) and Petrochemicals (4%).

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

1. Domestic Natural Gas Gross Production:

Domestic natural gas gross production for the month of October 2023 was 3,161 MMSCM (increase of 9.3% over the corresponding month of the previous year).

Figure 20: Domestic natural gas Gross production (Qty in MMSCM)

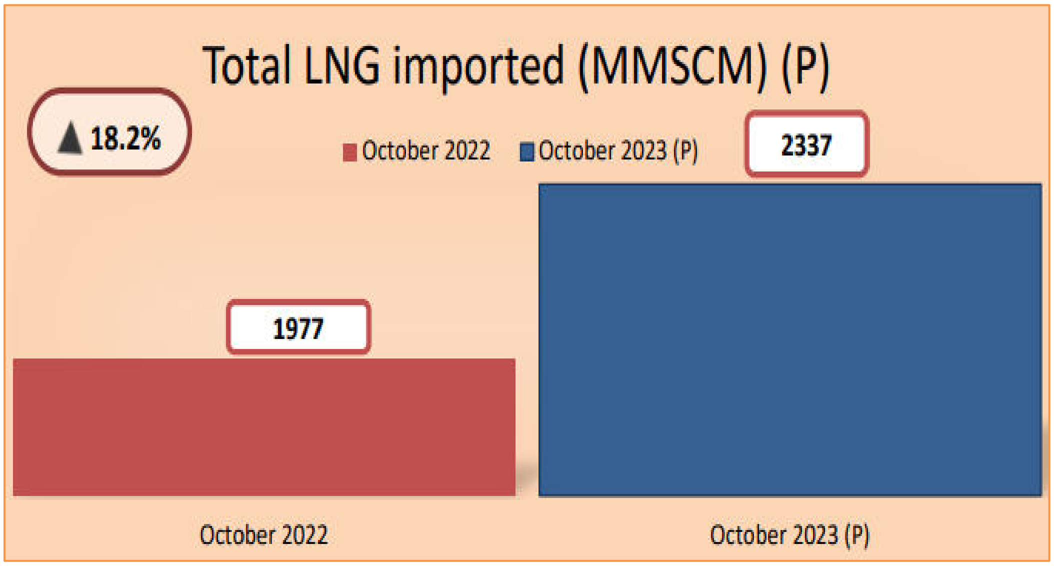


Source- PPAC

2. LNG imports:

Total imports of LNG (provisional) during the month of October 2023 were 2,337 MMSCM (increase of 18.2%) over the corresponding month of the previous year 1,977 MMSCM.

Figure 21: LNG imports (Qty in MMSCM)

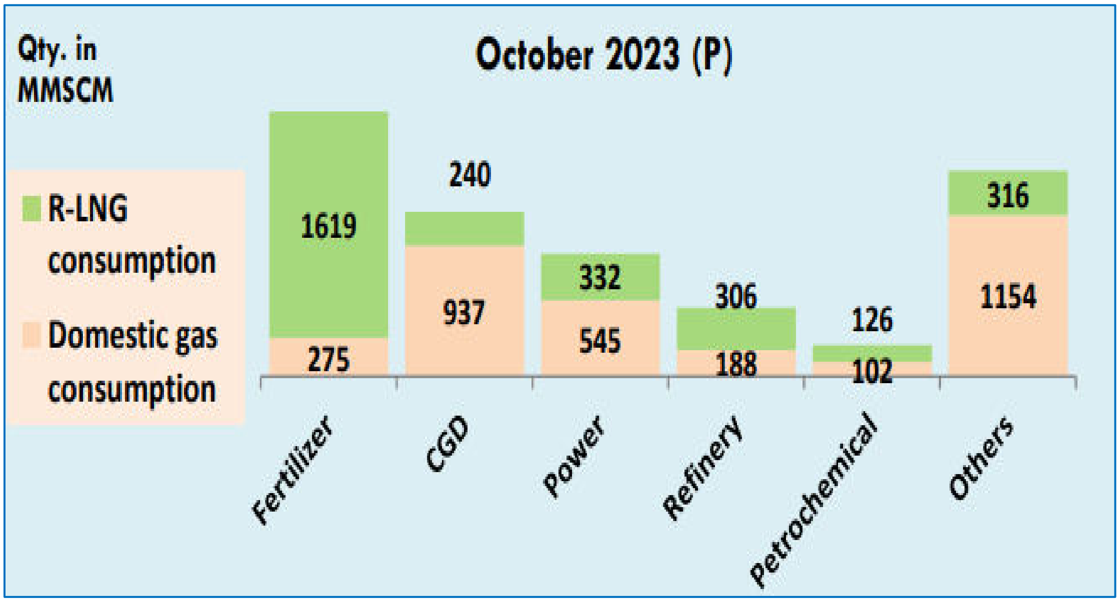


Source- PPAC

3. Sectoral Consumption of Natural Gas:

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

Figure 22: Sectoral Consumption of Natural Gas (Qty in MMSCM) in October 2023



Source- PPAC

Key developments in Oil & Gas sector

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

1. Production of Crude Oil

Indigenous crude oil and condensate production during October 2023 was 2.5 MMT. OIL registered a production of 0.3 MMT, ONGC registered a production of 1.6 MMT whereas PSC registered production of 0.6 MMT during October 2023. There is a growth of 1.3% in crude oil and condensate production during October 2023 as compared to October 2022.

2. Production of Natural Gas

Gross production of natural gas for the month of October 2023 (P) was 3161 MMSCM which was higher by 9.3% compared with the corresponding month of the previous year. The cumulative gross production of natural gas of 21040 MMSCM for the current financial year till October 2023 was higher by 4.8% compared with the corresponding period of the previous year.

3. Crude Oil Processed (Crude Throughput)

Total Crude oil processed during October 2023 was 20.6 MMT which is 0.7% higher than October 2022, where PSU/JV refiners processed 14.3 MMT and Private refiners processed 6.2 MMT of crude oil. Total indigenous crude oil processed was 2.3 MMT and total imported crude oil processed was 18.3 MMT by all Indian Refineries (PSU+JV+PVT). There was a growth of 2.5% in total crude oil processed in April October FY 2023 – 24 as compared to same period of FY 2022 – 23.

4. Production of Petroleum Products

Production of petroleum products was 21.8 MMT during October 2023 which is 4.2% higher than October 2022. Out of 21.8 MMT, 21.5 MMT was from refinery production & 0.3 MMT was from fractionator. There was a growth of 4.0 % in production of petroleum products in April October FY 2023 – 24 as compared to same period of FY 2022 – 23. Out of total POL production, in October 2023, share of HSD is 43.1%, MS 15.1%, naphtha 6.6%, ATF 5.9%, petcoke 5.0%, LPG 4.4% 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 reduced on diesel; Petrol and ATF to remain zero

The Indian government decreased the windfall tax on crude petroleum to Rs 6,300 per ton from Rs 9,800 per ton with effect from November 16, 2023. Special Additional Excise Duty (SAED) on diesel was reduced to Rs 1 per litre from Rs 2 per litre. The windfall tax on petrol and ATF will remain 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 a 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.

Government announced mandatory blending of Compressed Bio-Gas in CNG (Transport) & PNG (Domestic) segments of CGD Sector

CBG Blending Obligation (CBO) will promote production and consumption of Compressed Bio-Gas (CBG) in the country, said Shri Hardeep Singh Puri, Minister of Petroleum & Natural Gas and Housing & Urban Affairs. In a major step towards enhancing use and adoption of CBG, the National Biofuels Coordination Committee (NBCC), chaired by Union Petroleum Minister announced the introduction of phase wise mandatory blending of CBG in CNG (Transport) & PNG (Domestic) segments of CGD sector.

The key objectives of the CBO are to stimulate demand for CBG in CGD sector, import substitution for Liquefied Natural Gas (LNG), saving in Forex, promoting circular economy and to assist in achieving the target of net zero emission etc. Highlighting the key outcomes of the CBO, Shri Puri Said that it will encourage investment of around Rs. 37500 crores and facilitate establishment of 750 CBG projects by 2028-29.

It was, inter-alia, decided that:

a. CBO will be voluntary till FY 2024-2025 and mandatory blending obligation would start from FY 2025-26.

b. CBO shall be kept as 1%, 3% and 4% of total CNG/PNG consumption for FY 2025-26, 2026-27 and 2027-28 respectively. From 2028-29 onwards CBO will be 5%.

c. A Central Repository Body (CRB) shall monitor and implement the blending mandate based on the operational guidelines approved by Minister, PNG.

Discussions also took place for promoting production of ethanol from maize with all stake holders especially with Department of Agriculture and Department Food and Public distribution (DFPD) to make it a prominent feedstock in coming years. It was discussed that the last few years there is increase in Maize cultivation area, yield per hectare and production. Work has been initiated by this ministry in consultation with Department of Agriculture and DFPD to further develop high starch yielding varieties, improve quality of maize DDGS (Dried Distillers Grain Solids) by removing aflatoxins, faster registration of new seed varieties with high starch. To further promote maize training program for distillers with seed companies has also been initiated.

Another important announcement was made for promoting biofuels in the country. Sustainable Aviation Fuel (SAF/Bio- ATF) initial indicative blending percentage targets were set by the committee. Based on the comments received from the stakeholders, like MoCA, Niti Aayog, OMCs, etc., the capacities of Sustainable Aviation Fuel plants coming up in the country and projected ATF sales, the following initial indicative blending percentages of SAF in ATF are approved:

- 1% SAF indicative blending target in 2027 (Initially for International flights)
- 2% SAF blending target in 2028 (Initially for International flights)

Petroleum Minister Hardeep Puri inaugurated floating re-fueling CNG station for boats at Ravidas Ghat

In a significant step towards a pollution free Varanasi, the city’s second floating Compressed Natural Gas (CNG) Mobile Refueling Unit (MRU) station at Ravidas Ghat was inaugurated by Minister of Petroleum and Natural Gas & Housing and Urban Affairs Shri Hardeep Singh Puri. This is the country’s second such station built to fill CNG in boats, after the Namo Ghat CNG station here.

Both the stations have been developed by GAIL (India) Limited, a Maharatna PSU under the Ministry of Petroleum & Natural Gas. GAIL Chairman & Managing Director Shri Sandeep Kumar Gupta, Director

(Human Resources) Shri Ayush Gupta, Director (Marketing) Shri Sanjay Kumar and a host of dignitaries were present on the occasion.

With this, floating CNG stations for boats are now operational on both sides of the main Ghats of Varanasi. The floating stations have been developed by GAIL at a cost of approx. Rs 17.5 crore.

In a world grappling with environmental challenges and the urgent need to transition to cleaner, more sustainable energy sources, the inauguration of the second floating infrastructure in Varanasi is a significant step towards viable sustainable energy solutions, Shri Puri said.

"The decision to set-up this floating CNG station is a testament to our belief in the transformative power of clean energy," the Minister said.

Speaking about the significance of CNG station at Ravidas Ghat, Shri Puri noted that this will provide great convenience to boatmen as they will not have to go all the way to NaMo Ghat for refueling, thus saving time and money. "On an average, it is estimated that each boatman can potentially save over Rs.36,000 per year by using CNG as fuel", said the Minister.

For many years, the boatmen at Varanasi Ghats have been using old and less efficient petrol and diesel engines which are now being replaced by new CNG engines along with kits leading to improved fuel efficiency. Under its Corporate Social Responsibility (CSR) initiative, GAIL has entered into an agreement with Varanasi Nagar Nigam (VNN) for conversion of boats to the environment-friendly fuel CNG.

Till date, 735 such boats out of 890 registered with VNN have been converted to CNG under GAIL's CSR program at a cost of Rs 18 crore.

The floating CNG Mother station at Namo Ghat, the first of its kind in the world, has been operational since December 2021. The compression capacity of this station is around 15,000 kg/day of CNG which can fill approximately 1,000 – 1,500 boats per day. Boats presently plying in Varanasi have a seating capacity of 15 to 80 persons with engine power 5 to 20 HP. GAIL recently won the prestigious 'Midstream Project of the Year - India' award at the Asian Oil and Gas Awards event for this project.

The new station at Ravidas Ghat is a CNG Mobile Refueling Unit (MRU), i.e., CNG will be filled in cascades from Namo Ghat and transported by water ways to Ravidas Ghat for fueling boats. This is also first of its kind in the world. It has a capacity of 4,000 kg/day, which can cater to 300 to 400 boats per day.

National Efficient Cooking Programme launched, to promote affordable and energy-efficient induction cookers

Energy Efficiency Services Limited (EESL), a joint venture of Public Sector Undertakings under Ministry of Power, launched its groundbreaking National Efficient Cooking Programme (NECP) and Energy Efficient Fans Programme (EEFP), unveiled by the Union Minister for Power and New & Renewable Energy Shri R. K. Singh, at an event held in New Delhi on November 2, 2023. These initiatives are aimed at revolutionizing cooking practices in India and emphasizing on the importance and urgency of energy efficient fans. As part of these programmes, EESL will distribute 1 crore efficient BLDC fans and 20 Lakh energy-efficient induction cook stoves nationwide.

The National Efficient Cooking Programme (NECP) introduces induction-based cook-stoves, offering a cost advantage of 25-30% over traditional cooking methods, promising both energy savings and cost-effective cooking solutions. By deploying 20 Lakh Induction cook-stoves across India, EESL seeks to reduce the environmental impact of cooking methods, ensuring cleaner air and improved health for citizens. EESL has also partnered with Modern Energy Cooking Services (MECS) for the large-scale deployment of induction cooktops. The deployment is expected to accelerate the acceptance and large-scale adoption of modern electric cooking devices in Indian kitchens.

The Energy Efficient Fans Programme (EEFP) focuses on deploying energy-efficient BLDC fans, with the goal of distributing 1 crore ceiling fans. These initiatives not only reduce energy consumption and environmental impact, but also enhances consumer comfort while lowering electricity bills, creating a win-win situation for all. The program for deploying one crore ceiling fans was initiated during the G20 Energy Transitions Working Group in Goa in July 2023. In continuation of this, EESL is inviting the first bid of 20 lakh fans, under a programme titled Energy Efficient Fans Programme (EEFP).

6th High-Level Meeting of the India-OPEC Energy Dialogue

The 6th High-Level Meeting of the India-OPEC Energy Dialogue took place on 9 November 2023, at the OPEC Secretariat in Vienna, Austria

The Meeting was co-chaired by HE Haitham Al Ghais, Secretary General of OPEC and HE Hardeep Singh Puri, Honorable Minister of Petroleum and Natural Gas and Minister of Housing and Urban Affairs of the Republic of India.

The open and candid discussions at the Meeting focused on key issues related to oil and energy markets with a specific emphasis on ensuring availability, affordability and sustainability, which are necessary in ensuring the stability of energy markets. The two sides discussed the short, medium and long-term outlooks for the industry and recognized the important role of India in global economic growth and energy demand.

The sides noted the World Oil Outlook 2023, which forecasted that India would be the fastest-growing major developing economy, averaging long-term growth of 6.1% between 2022-2045 and to account for over 28% of incremental global energy demand during the same period. The sides also noted the need for continued cooperation and dialogue in the interest of both producers and consumers while also exploring further areas for future cooperation.

In his remarks, HE Haitham Al Ghais said: “The excellent state of the OPEC-India Dialogue also extends to the development of positive relationships between OPEC, its Member Countries and major Indian oil companies,” noting that “OPEC’s relationship with India has continued to go from strength to strength.” He appreciated India’s balanced, realistic and pragmatic approach towards energy issues.

"The relationship between India and OPEC will be pivotal in the years to come, as the world seeks to foster global energy security, deliver energy affordability and reduce emissions," the Secretary General added.

HE Haitham Al Ghais also praised India's G20 Presidency, the remarkable Chandrayan mission, and highlighted its leadership role in addressing global issues of great importance. "India's heading of the G20 was impressive, with India's able leadership steering this year's G20 discussions to a successful outcome, including on key energy issues," the Secretary General stated.

HE Hardeep S. Puri highlighted that, as the third-largest energy consumer, crude oil importer and the fourth-largest global refiner, close ties between India and OPEC are not only essential but also natural. He added that as India remains on a trajectory of stable and robust economic growth, fostering deeper collaboration for the mutual benefit of both parties has the potential to contribute significantly to the long-term prosperity and stability of the global oil markets. In this context, he called on OPEC to continue playing its key role in maintaining and ensuring market stability for the benefits of consumers, producers and global economy.

The Meeting noted the remarkable progress achieved to date in the framework of the dialogue, including at the technical and research levels. Last month, experts from both India and OPEC met under the umbrella of the 5th Technical Meeting of the India-OPEC Energy Dialogue on 27 October 2023 via videoconference.

The 6th High-Level Meeting of the India-OPEC Energy Dialogue concluded with both parties underscoring the importance of fostering enhanced cooperation between India and OPEC moving forward.

It was agreed to hold the next High-Level Meeting of the India-OPEC Energy Dialogue during the course of 2024 in India.

Power Ministry held interaction with industry stakeholders to review 80 GW Thermal Power Capacity addition by 2031-32

The Union Minister for Power and New & Renewable Energy Shri R. K. Singh held an interaction with stakeholders in the power sector in New Delhi on 21st November, 2023 to review thermal power capacity addition and facilitate the industry to overcome any problems being faced by them. Officers of the Ministry of Power, state governments, Central Electricity Authority, Public Sector Enterprises under the Ministry such as NTPC, REC, PFC, as well as other PSUs such as BHEL, and industry participants including independent power producers and vendors joined the meeting.

Addressing the PSUs and industry, the Power Minister informed everyone about the government's decision to add 80 GW thermal power capacity by the year 2031-32, and why this is crucial for meeting the nation's power requirements. "Power demand of the country has increased at an unprecedented rate due to rapid growth of the economy. India needs 24x7 availability of power for its economic growth; and we are not going to compromise on availability of power for our growth. This power cannot be achieved by renewable energy sources alone. Since nuclear capacity cannot be added at a rapid pace, we have to add coal-based thermal capacity for meeting our energy needs. We have 27 GW under construction, and we had thought that we will add another 25 GW. But we have decided that we will start work on at least 55 GW – 60 GW of thermal capacity. As demand keeps accelerating, we will keep adding this capacity."

As per the projections of National Electricity Plan for the period 2022-32, the required coal and lignite based installed capacity will be 283 GW by 2031-2032 as against the present installed capacity of 214 GW.

Shri Singh said that states which have thermal capacity must make sure that it is available and that any renovation, modernization or life extension for the thermal plants is done in time. "If you do not maintain your thermal capacity and instead expect us to give power from central reserve, that is not going to happen. We will allocate additional power to those states which are maintaining and running their capacities. Further, those who want to add capacities may do so."

The Power and New & Renewable Energy Minister urged the industry to plan for addition of thermal capacity. "Given the power needs, the industry will keep getting orders for thermal capacity addition for the next 5 – 7 years. Thermal energy was written off a few years ago, which was premature. Thermal cannot be written off until energy storage becomes viable. So, thermal is going to stay until energy storage becomes cost-effective for Round-the-Clock supply through Renewable Energy. Hence, industry needs to ramp up thermal capacity," the Minister said. Shri Singh stressed that assistance from outside world may be limited, so the industry must be ready for indigenous development and take this opportunity as a challenge to evolve and grow.

The Minister told the industry that those in the power business will miss out if they are not adding capacity. "Demand will continue to grow at a rapid pace. Prices in exchange are going to remain high. Those who add capacity will gain and those who don't will miss out on a golden opportunity."

Shri Singh said that the business environment in the power sector is excellent. "We have put in place a payment security mechanism which does not have any parallel anywhere in the world. Payment is guaranteed within 75 days; current dues are 100% up to date. Even the legacy dues are also being paid." The Minister added that the demand and supply balance for the next 20 – 25 years will be such that it will be a suppliers' market. He advised the industry to ramp up manufacturing capacities in order to meet demand, so that they are ready for the huge capacity which is coming up.

The EPC vendors such as GE & L&T voiced their concerns regarding bidding process. They were assured that their concerns shall be looked into. Other equipment suppliers also raised issues like shortage of credit in the market, Bank Guarantees, Qualifying Requirements and Technical Specifications.

The Minister asked the vendors and contractors to submit their concerns and suggestions so that workable solutions may be devised. He assured them DISCOMs' future power requirements will be collated and shared with the power developers and asked them in turn to share as to how much capacity they can ramp up.

Echoing the Minister's statements, Power Secretary Shri Pankaj Agarwal said in his opening remarks that based on National Electricity Plan projections and other analysis done by the Ministry, thermal energy is going to stay very relevant even in the year 2047. "The country absolutely needs at least 80,000 MW of capacity addition from today till 2031-32, which is essential to meet our base load requirements. Non-solar-hours are going to be a serious challenge, in light of growing power demand and considering weather events like what we faced in August this year. Equipment providers must gear up their requirements, vendors should be strengthened and states and central entities may plan their projects." The Secretary exhorted the private sector to seize the opportunity and add capacities proactively.

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