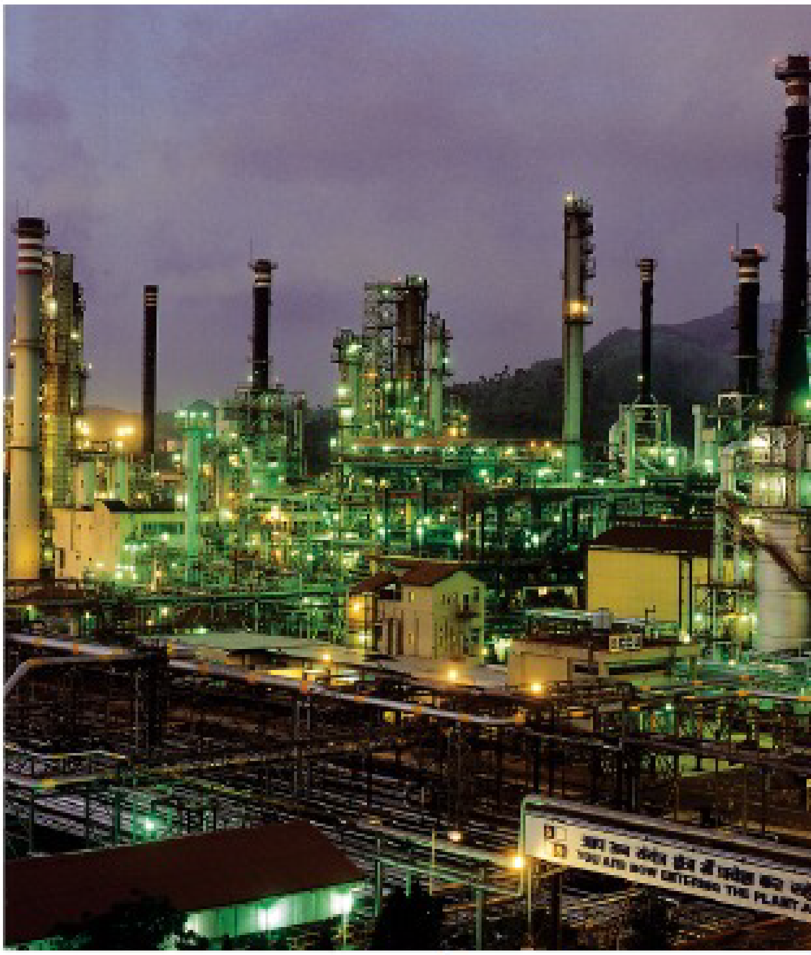
FIPI

Federation of Indian Petroleum Industry



POLICY & ECONOMIC REPORT
OIL & GAS MARKET

OCTOBER 2023

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Executive Summary

According to IMF, global growth is expected to slow from 3.5 percent in 2022 to 3.0 percent in 2023 and 2.9 percent in 2024, well below the historical (2000–19) average of 3.8 percent. Advanced economies are expected to slow from 2.6 percent in 2022 to 1.5 percent in 2023 and 1.4 percent in 2024 as policy tightening starts to restrict the economic growth. Emerging market and developing economies are projected to have a modest decline in growth from 4.1 percent in 2022 to 4.0 percent in both 2023 and 2024.

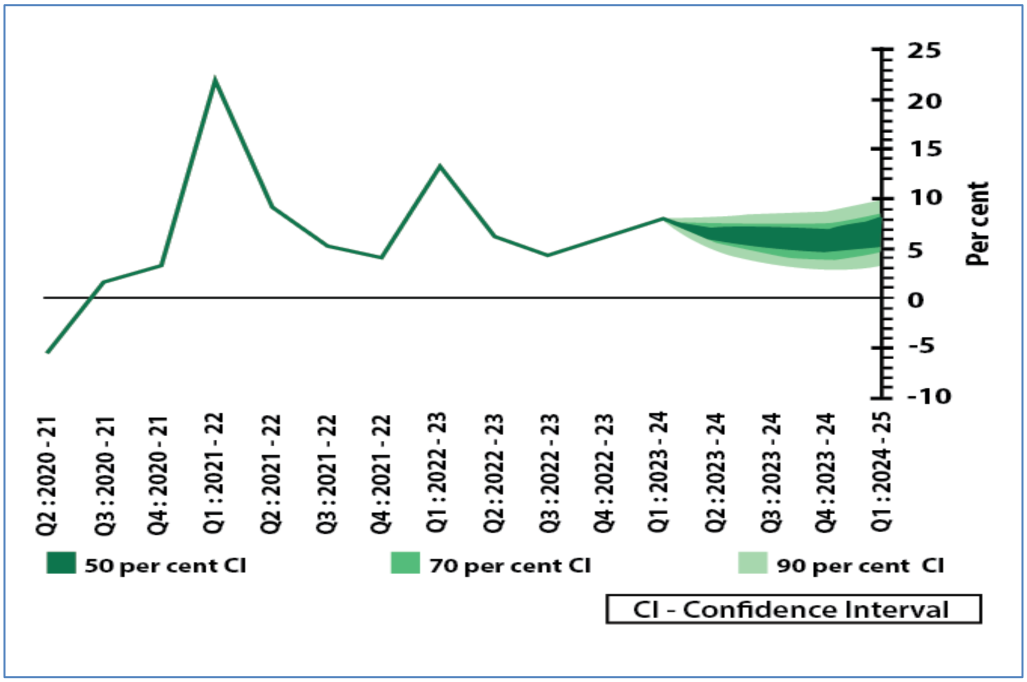
Figure- Growth outlook

Source- IMF

As far as India is concerned, according to Reserve Bank of India (RBI) in its Monetary Policy Committee (MPC) meeting held on October 20th, 2023, India's real gross domestic product (GDP) growth is projected at 6.5% for 2023-24.

According to RBI, the country's domestic demand conditions are expected to benefit from the sustained buoyancy in services, revival in rural demand, consumer and business optimism, the government's thrust on capex, and healthy balance sheets of banks and corporates. Taking all these factors into consideration, real gross domestic product (GDP) growth for 2023-24 is projected at 6.5 per cent, with Q2 at 6.5 per cent, Q3 at 6.0 per cent, and Q4 at 5.7 per cent. Real GDP growth for Q1:2024-25 is projected at 6.6 per cent.

Figure- Real GDP growth projection



Source- RBI; National Statistical Office

India's retail inflation eased from 6.83% in August 2023 to 5.02% in September 2023, breaking a two-month streak over the tolerance threshold of the Reserve Bank of India (RBI), with the rise in food prices easing to 6.6% from almost 10%. Rural inflation stood at 5.33% in September 2023, compared to 7% in August 2023, while the price rise faced by urban consumers moderated sharply to 4.65% in September 2023 from 6.6% in August 2023.

RBI forecast the average CPI inflation for the current fiscal year FY24 at 5.4%. The projections for Q2, Q3 and Q4 are at 6.4, 5.6 and 5.2 per cent, respectively. However, the RBI raised its headline inflation projection for the second quarter to 6.4%. The RBI Governor stressed the commitment to the 4% inflation target and highlighted the importance of being prepared to take timely actions to prevent spillovers from food and fuel price shocks to underlying inflation trends.

The S&P Global India Manufacturing PMI slipped to 57.5 in September 2023 from 58.6 in August 2023. It was observed that the output expanded the least in five months amid a slowdown in new orders. On prices, input cost inflation eased to its lowest mark in over three years, mainly due to lower costs for aluminum and oil.

According to the Centre for Monitoring of Indian Economy (CMIE), the unemployment rate in India fell to 7.1% in September 2023 from 8.1% in August 2023. The decline in the unemployment rate is attributed to buoyant economic indicators that lead to more labor-market opportunities.

IN case of foreign trade position, according to RBI, India's forex reserves increased by $1.15 billion to $585.89 billion for the week ended October 13, 2023. India's overall exports (Merchandise and Services combined) in September 2023 is estimated to be USD 63.84 Billion, exhibiting a negative growth of (-) 1.20 per cent over September 2022. Overall imports in September 2023 is estimated to be USD 68.75 Billion, exhibiting a negative growth of (-) 13.67 per cent over September 2022.

As far as oil and gas industry is concerned, oil prices surged to almost $98/bbl in mid-September after Saudi Arabia and Russia extended their voluntary production cuts through year-end and as crude oil and distillate inventories drew to exceptionally low levels. Rising prices focused the market's attention on the prospect that 'higher for longer' interest rates could slow economic and demand growth. Brent futures tumbled by more than $12/bbl to $84/bbl as supply fears gave way to deteriorating macroeconomic indicators and signs of demand destruction in the US, where gasoline deliveries plunged to two-decade lows.

Crude spot prices extended their previous monthly gains, boosted by the rally in futures prices and higher financial flows in futures markets. Spot prices were also buoyed by further improvements in the physical market and strong crude buying from refiners in Europe and the Asia Pacific.

Crude oil futures prices extended their rally in September with the ICE Brent front-month contract averaging nearly 9% higher compared to the previous month. Oil futures remained predominantly buoyed by bullish investor sentiment fuelled by signs of robust oil market outlooks.

Hedge funds and other money managers boosted bullish wagers and continued to close out more bearish positions last month, with combined futures and options net long positions in ICE Brent and NYMEX WTI rising to their highest levels since January 2022. Speculators' bets on higher oil prices increased significantly on expectations of stronger global oil market fundamentals for the remainder of this year. Between end August and September last, hedge funds and other money managers purchased an equivalent of a substantial 168 million barrels.

Natural gas spot prices at the U.S. Henry Hub benchmark averaged $2.64 per million British thermal units (MMBtu) in September 2023. Henry Hub's natural gas prices increased for a fourth consecutive month, rising by ~2.1% m-o-m in September. Prices remained pressured by the combination of strong production and healthy inventories.

Economy in Focus

1. A snapshot of the global economy

Global economic growth

- According to IMF, global growth is expected to slow from 3.5 percent in 2022 to 3.0 percent in 2023 and 2.9 percent in 2024, well below the historical (2000–19) average of 3.8 percent.

- Advanced economies are expected to slow from 2.6 percent in 2022 to 1.5 percent in 2023 and 1.4 percent in 2024 as policy tightening starts to restrict the economic growth.

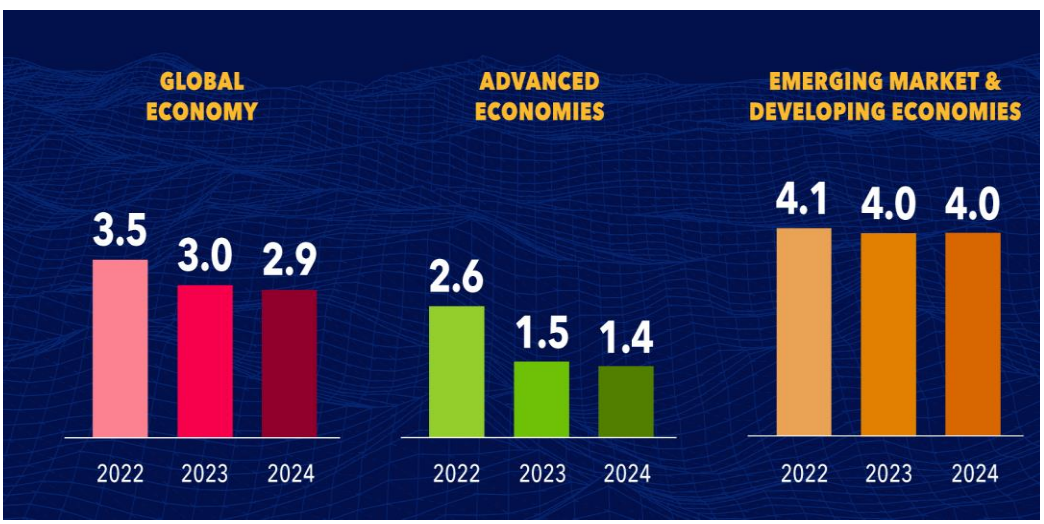
    - In the United States, growth is projected at 2.1 percent in 2023 and 1.5 percent in 2024. The growth in 2023 is attributed to stronger business investment in the second quarter and resilient consumption growth.

    - Growth in the euro area is projected to fall from 3.3 percent in 2022 to 0.7 percent in 2023, before rising to 1.2 percent in 2024.

    - Growth in the United Kingdom is projected to decline from 4.1 percent in 2022 to 0.5 percent in 2023. The decline in growth reflects tighter monetary policies to curb high inflation and lingering impacts of the terms-of-trade shock from high energy prices.

    - In Japan, growth is projected to rise from 1.0 percent in 2022 to 2.0 percent in 2023, buoyed by pent-up demand, a surge in inbound tourism, and accommodative policies, as well as by a rebound in auto exports.

Figure- Growth outlook



Source- IMF

- Emerging market and developing economies are projected to have a modest decline in growth from 4.1 percent in 2022 to 4.0 percent in both 2023 and 2024.
    - Growth in emerging and developing Asia is projected to rise from 4.5 percent in 2022 to 5.2 percent in 2023, then to decline to 4.8 percent in 2024. Growth in India is projected to remain strong, at 6.3 percent in both 2023 and 2024, reflecting stronger-than-expected consumption.
    - The forecast for Russia is for a rise from –2.1 percent in 2022 to 2.2 percent in 2023. The rise in growth reflects a substantial fiscal stimulus, strong investment, and resilient consumption in the context of a tight labor market.
    - Latin America and the Caribbean is expected to see growth decline from 4.1 percent in 2022 to 2.3 percent in both 2023 and 2024. The decline for 2023 reflects a normalization of growth along with the effect of tighter policies, a weaker external environment, and lower commodity prices.

Figure- Real GDP growth (annual % change)

	2022	2023	2024
World Output	3.5	3.0	2.9
Advanced Economies	2.6	1.5	1.4
United States	2.1	2.1	1.5
Euro Area	3.3	0.7	1.2
Germany	1.8	–0.5	0.9
France	2.5	1.0	1.3
Italy	3.7	0.7	0.7
Spain	5.8	2.5	1.7
Japan	1.0	2.0	1.0
United Kingdom	4.1	0.5	0.6
Canada	3.4	1.3	1.6
Other Advanced Economies	2.6	1.8	2.2
Emerging Market and Developing Economies	4.1	4.0	4.0
Emerging and Developing Asia	4.5	5.2	4.8
China	3.0	5.0	4.2
India	7.2	6.3	6.3
Emerging and Developing Europe	0.8	2.4	2.2
Russia	–2.1	2.2	1.1
Latin America and the Caribbean	4.1	2.3	2.3
Brazil	2.9	3.1	1.5
Mexico	3.9	3.2	2.1
Middle East and Central Asia	5.6	2.0	3.4
Saudi Arabia	8.7	0.8	4.0
Sub-Saharan Africa	4.0	3.3	4.0
Nigeria	3.3	2.9	3.1
South Africa	1.9	0.9	1.8
Emerging Market and Middle-Income Economies	4.0	4.0	3.9
Low-Income Developing Countries	5.2	4.0	5.1

Source- IMF

Global inflation

- Global inflation is forecast to decline steadily, from 8.7 percent in 2022 to 6.9 percent in 2023 and 5.8 percent in 2024, due to tighter monetary policy aided by lower international commodity prices.

- Headline inflation continues to decelerate, from 9.2 percent in 2022, on a year-over-year basis, to 5.9 percent this year and 4.8 percent in 2024. Core inflation, excluding food and energy prices, is set to decline modestly, from 6.4 percent in 2022 to 6.3 percent in 2023 and 5.3 percent in 2024.

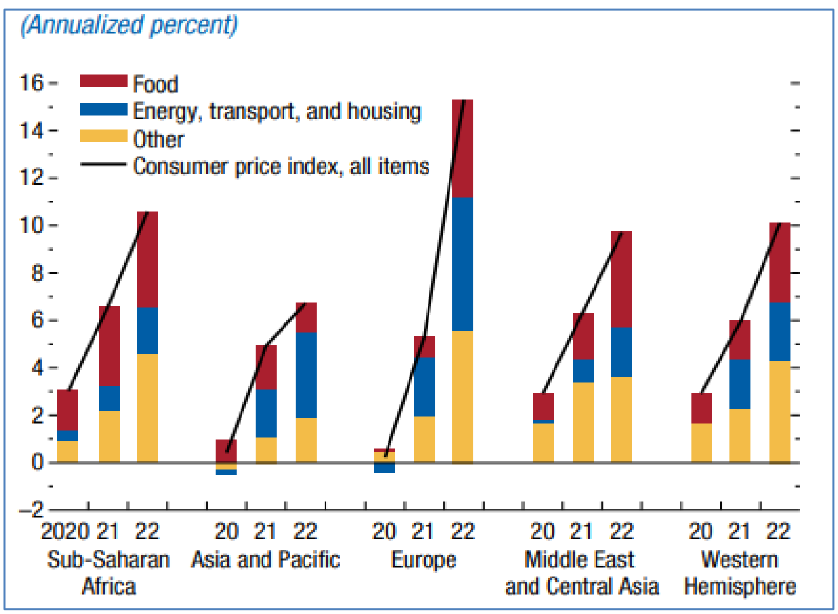
- In the United States, the forecast is set for a fall, from 7.1 percent in the fourth quarter of 2022 to 3.2 percent in the fourth quarter of 2023.

- In China, where inflation declined to near zero in the second quarter of 2023, a gradual rise—to still-low levels is projected for the second half of 2023 as the drag from lower commodity prices wanes.

- The euro area is expected to see sharp fall in inflation in 2023 from 9.9 percent in the fourth quarter of 2022 to 3.3 percent in the fourth quarter of 2023, with the fall reflecting in part the decrease in energy prices.

- Although volatile headline shocks to items such as energy and food prices still account for much of inflation, they are no longer the overwhelmingly dominant drivers. Instead, underlying inflation has increased reflecting the pass-through of energy prices, supply chain cost pressure, and tight labor markets, especially in advanced economies.

Figure- Inflation driven by food and fuel



Source- IMF

Global trade

- According to IMF, global trade growth is slowing sharply: from 10.1 percent in 2021 to a projected 4.3 percent in 2022 and 2.5 percent in 2023.

- The slowdown mainly reflects the decline in global output growth owing to supply chain constraints along with dollar's appreciation in 2022—by about 13 percent in nominal effective terms as of September compared with the 2021 average which is likely to have further slowed world trade growth, considering the dollar's dominant role in trade invoicing.

2. **Channeling net-zero finance to support the energy transition in developing economies- United Nations Conference on Trade & Development (UNCTAD)**

- According to UNCTAD, there is an increased efforts required to channel net-zero finance towards developing economies. The call emphasizes the crucial need for capital in these countries, where significant opportunities for growth lie.

- UNCTAD Secretary-General Rebeca Grynspan said the energy transition, a critical element in addressing climate change, requires substantial investment. "The investment needs are much higher in developing than in developed economies, relative to their existing asset bases," she said.
- To limit global warming to 1.5° Celsius above pre-industrial levels, the world needs investment equivalent to one and a half times today's global GDP by 2050.
- The forum, taking place in Abu Dhabi from 16 to 20 October, brings together governments, global institutions, investors, stock exchanges, investment promotion agencies and sovereign wealth funds to discuss the challenges of financing global sustainable development and the energy transition.

Foreign direct investment critical to energy transition

- Foreign direct investment (FDI) will be key to the transition, especially in the renewable energy sector. International project finance constitutes 55% of total project finance values, rising to over 75% in the least developed countries (LDCs). However, the high cost of capital, particularly in countries facing debt distress, poses a significant hurdle.

- Africa, burdened by interest rates four to eight times higher than developed countries, struggles to attract the necessary investment.
- Having received only 3.5% of global FDI, and even less in renewable energy investment, 31 developing countries, including 11 LDCs, have not registered a single utility-scale power-plant-sized international investment project in the energy transition sector since the Paris Agreement in 2015.
- Small island developing states are particularly affected, attracting only 0.6% of global FDI in 2022, concentrated in a handful of countries. Structural impediments, including logistical

challenges, modest market size, elevated risk ratings, and vulnerability to natural disasters, contribute to this disparity.

International investors have a vital role

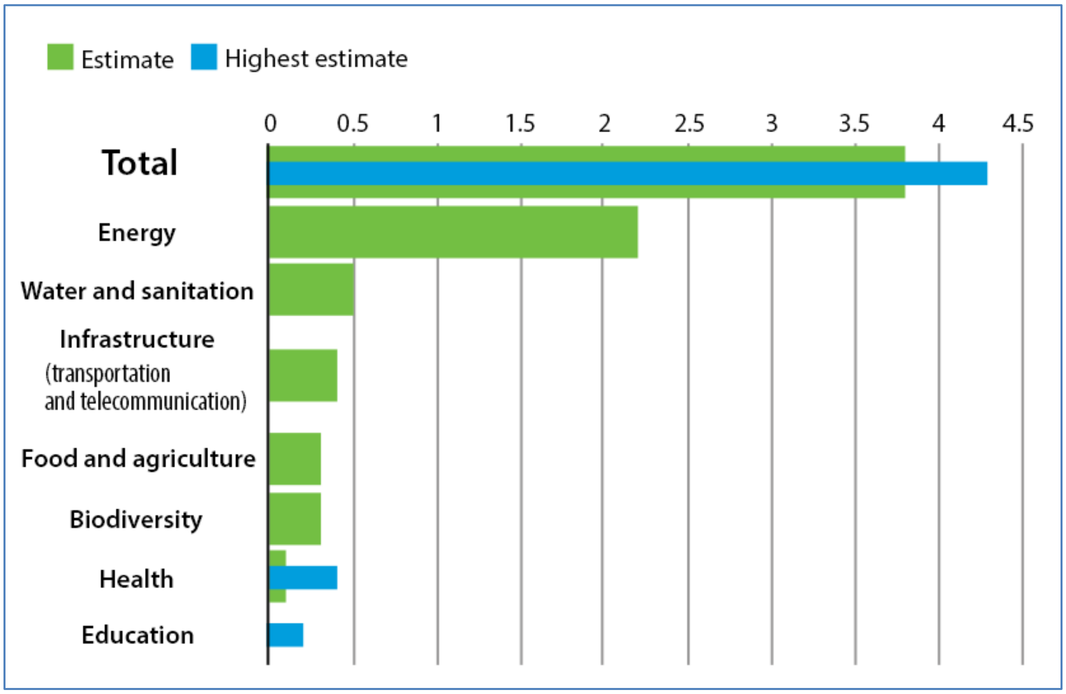
- UNCTAD underscores the role of international investors in providing more affordable finance to reduce the cost of capital for projects. On average, bringing in international investors lowers the spread on debt finance by 8% in developing countries. Collaboration with multilateral development banks and government stakes in public-private partnerships can further decrease the spread by 40%.
- UNCTAD emphasizes the need for collaboration among parliamentarians, policymakers, and business leaders for a collaborative approach to address the challenges of the sweeping global economic transformation that a transition to a net-zero economy will require.
- The International Organization of Securities Commissions, International Finance Corporation (World Bank Group), International Financial Reporting Standards and the UN Supported Principles for Sustainable Investment highlighted that clear frameworks and transparent sustainability reporting are prerequisites for sustainable finance and investment.
- UNCTAD is committed to supporting investors and financial markets to embed sustainability in their investments, improve disclosure and transparency, and commit to sustainable investment, especially in developing economies.

3. World Investment Forum 2023: Global leaders urge action for sustainable development

- UNCTAD's 8th World Investment Forum opened on 16 October in Abu Dhabi, United Arab Emirates, focusing on the investment challenges faced by the world's developing countries amid today's global crises.

- UN Secretary-General António Guterres, in a statement, urged participants – heads of state, business leaders, sustainable stock exchanges, sovereign wealth funds and experts – to put the Sustainable Development Goals (SDGs) Stimulus Package into effect and work towards delivering $500 billion annual investment for developing countries.
- He also called on governments to establish a fair price on carbon and companies to implement credible net-zero plans, aligning with the recommendations of the High-Level Expert Group on the Net-Zero Emissions Commitments of Non-State Entities.
- The opening ceremony featured the Crown Prince of Abu Dhabi, Sheikh Khaled bin Mohamed bin Zayed Al Nahyan, the Secretary-General of UNCTAD, Rebeca Grynspan, the Deputy Ruler of Dubai, Sheikh Maktoum bin Mohammed bin Rashid Al Maktoum, the President of Timor-Leste and Nobel laureate, José Ramos-Horta, and the President of Togo, Faure Essozimna Gnassingbé, setting the stage for the weeklong event.
- The opening-day Global Leaders' Summit addressed the $4 trillion SDG investment gap, as only 15% of the goals are on target to be met by 2030, with the investment gap in the developing world growing from $2.5 trillion per year in 2015 to $4 trillion today.

Figure- Sustainable development goals (Estimated annual investment gap to reach the SDG by 2030, total and per sector, capital expenditure, trillions of US dollars)



Source- UNCTAD

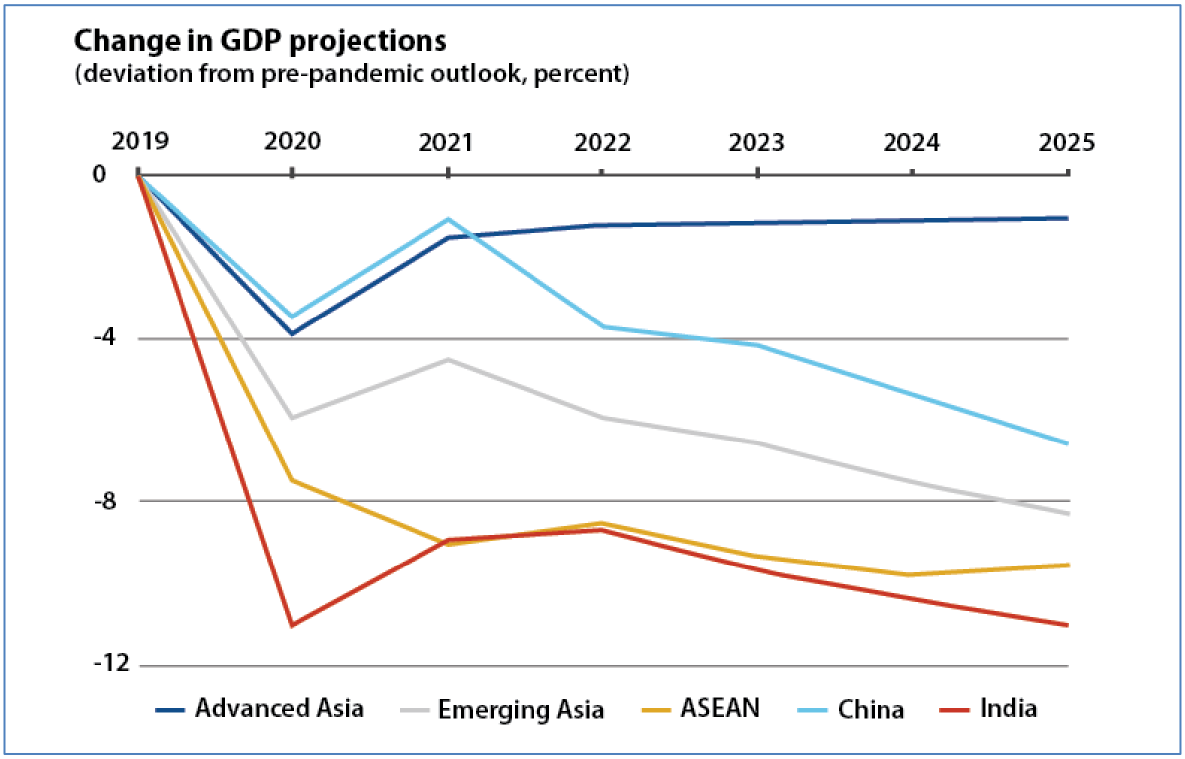
The summit revealed a staggering $6 trillion valuation for the sustainable finance market. Leaders, including German Vice Chancellor Robert Habeck, discussed ways to close the SDG investment gap, mobilize sustainable finance in global capital markets, ensure sustainability standards in sustainable finance and channel more funds to where they are needed most. The discussion emphasized the key need for international coordination given the scale of the investment needs and blended finance involving both public and private sectors including new actors such as sovereign wealth funds.

4. Asia Continues to Fuel Global Growth, but Economic Momentum is Slowing- IMF

IMF projects growth in Asia and the Pacific to accelerate from 3.9 percent in 2022 to 4.6 percent this year, unchanged from the projection from last April. This is largely explained by the post-reopening recovery in China and stronger-than-expected growth in the first half of the year in Japan and India. With pandemic restrictions lifted, demand in these economies was bolstered by consumers running down savings accumulated during the pandemic, leading to notable strength in the services sector.

IMF further projects growth next year to 4.2 percent, from the 4.4 percent projected in April. This is based on signs of slowing growth and investment in the third quarter, in part reflecting weaker external demand as the global economy slows, such as in Southeast Asia and Japan, and faltering real estate investment in China.

Figure- GDP projections (in %)

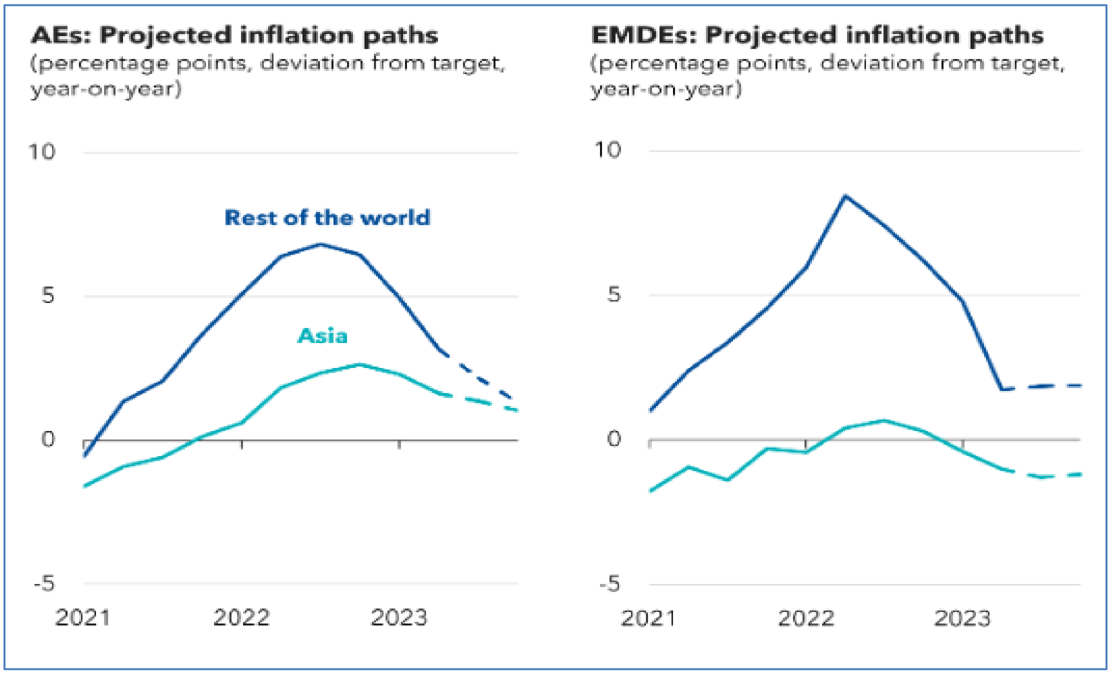


Source- IMF

IMF projects that in the near term, the sharp adjustment in China's heavily indebted property sector and the resulting slowdown in economic activity will likely spill over to the region, particularly to commodity exporters with close trade links to China. Beyond this, an aging population and slowing productivity growth will further temper growth over the medium-term in China.

A welcome development is that disinflation is on track in Asia, with inflation now expected to return to central bank target ranges next year in most countries. This process is well ahead of most other regions, where inflation remains high and is expected fall within target only in 2025.

Figure- Inflation in Asia



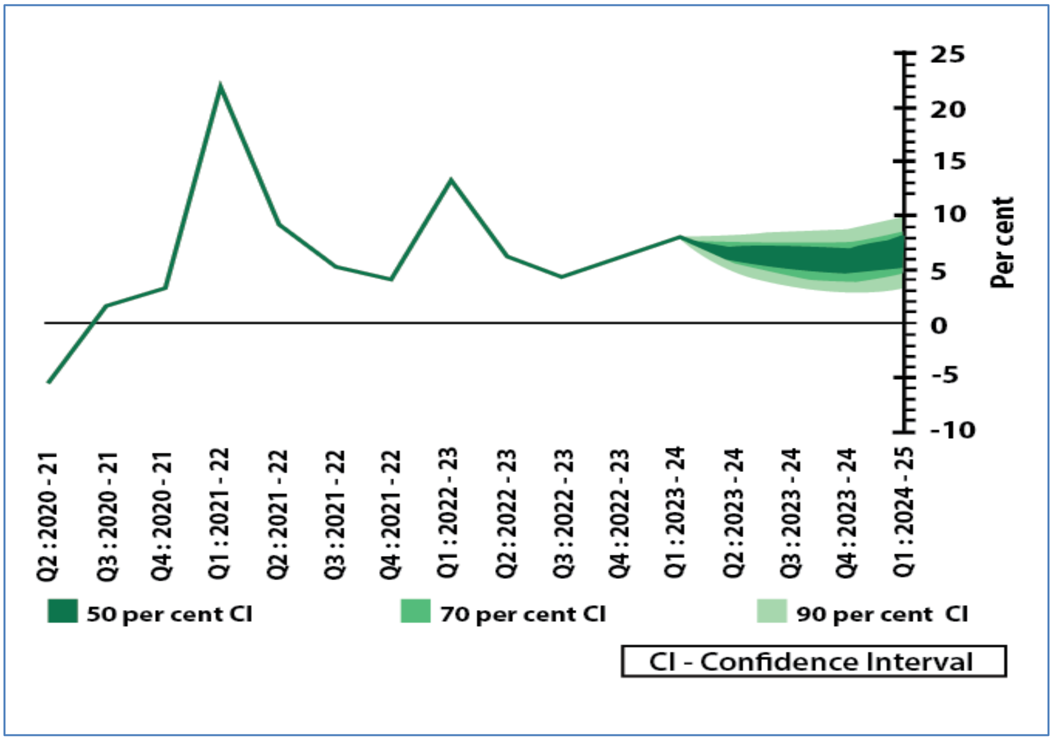
Source- IMF

5. Indian Economy

India's economic growth

- According to Reserve Bank of India (RBI) in its Monetary Policy Committee (MPC) meeting held on October 20th, 2023, India's real gross domestic product (GDP) growth is projected at 6.5% for 2023-24.
- According to RBI, the country's domestic demand conditions are expected to benefit from the sustained buoyancy in services, revival in rural demand, consumer and business optimism, the government's thrust on capex, and healthy balance sheets of banks and corporates.
- Taking all these factors into consideration, real gross domestic product (GDP) growth for 2023-24 is projected at 6.5 per cent, with Q2 at 6.5 per cent, Q3 at 6.0 per cent, and Q4 at 5.7 per cent. Real GDP growth for Q1:2024-25 is projected at 6.6 per cent.

Figure- Real GDP growth projection



Source- RBI; National Statistical Office

Inflation

- India's retail inflation eased from 6.83% in August 2023 to 5.02% in September 2023, breaking a two-month streak over the tolerance threshold of the Reserve Bank of India (RBI), with the rise in food prices easing to 6.6% from almost 10%.

- Rural inflation stood at 5.33% in September 2023, compared to 7% in August 2023, while the price rise faced by urban consumers moderated sharply to 4.65% in September 2023 from 6.6% in August 2023.

- Inflation in vegetables fell from 26.1% in August 2023 to 3.4% in September 2023. But inflation in cereals remained sticky at 11% and the pace of price rise in pulses accelerated from 13% in August 2023 to 16.4% in September 2023.

- Food inflation, which accounts for nearly half of the overall consumer price basket, rose 6.56% in September as compared with 9.94% in August.

- The LPG cylinder price cuts unveiled by the Centre last month pushed the year-on-year inflation in fuel and light prices for households from 4.3% in August to -0.1% in September.

- RBI forecast the average CPI inflation for the current fiscal year FY24 at 5.4%. The projections for Q2, Q3 and Q4 are at 6.4, 5.6 and 5.2 per cent, respectively. However, the RBI raised its headline inflation projection for the second quarter to 6.4%.

- The RBI Governor stressed the commitment to the 4% inflation target and highlighted the importance of being prepared to take timely actions to prevent spillovers from food and fuel price shocks to underlying inflation trends.

- To stabilize the economy, the Reserve Bank of India (RBI) has kept the repo rate unchanged during the Monetary Policy Committee (MPC) meeting concluded on October 6, 2023. The repo rate remains 6.50 percent. RBI has hiked the repo rate six times since April 2022.

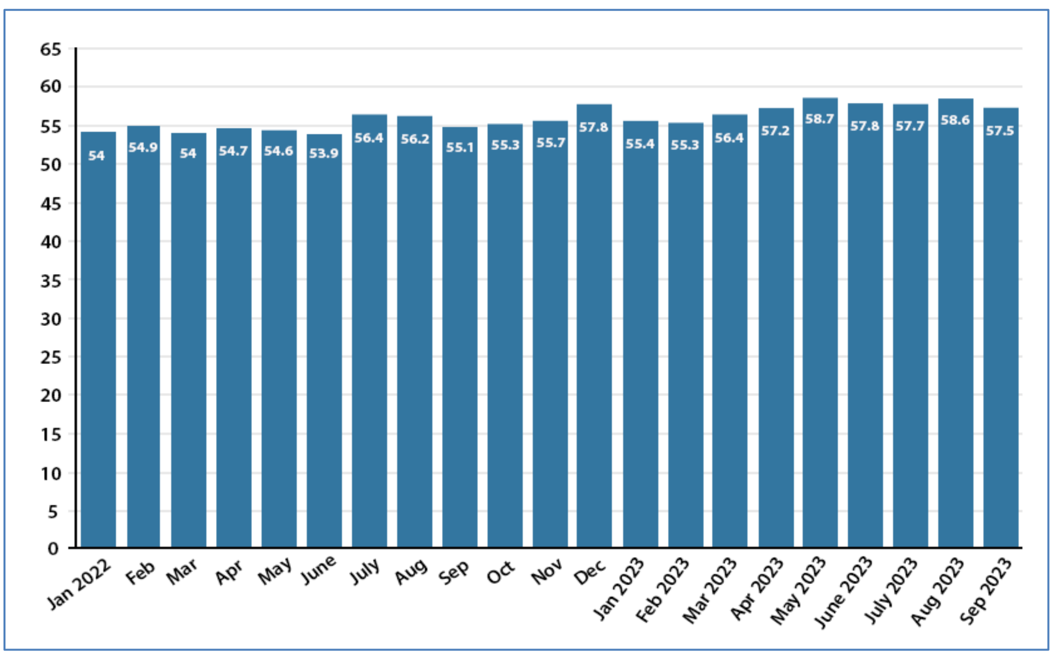
India PMI

- The S&P Global India Manufacturing PMI slipped to 57.5 in September 2023 from 58.6 in August 2023.

- It was observed that the output expanded the least in five months amid a slowdown in new orders.

- On prices, input cost inflation eased to its lowest mark in over three years, mainly due to lower costs for aluminum and oil.

Figure- India manufacturing PMI



Source- S&P Global

Unemployment in India

- According to the Centre for Monitoring of Indian Economy (CMIE), the unemployment rate in India fell to 7.1% in September 2023 from 8.1% in August 2023.
- The decline in the unemployment rate is attributed to buoyant economic indicators that lead to more labor-market opportunities.
- The unemployment rate eased in both rural and urban India. The total labor participation rate (LPR) went down from 41.2% in August 2023 to 40.9% in September 2023.
- While LPR for rural India increased marginally from 41.6% to 41.8%, urban LPR fell from 40.2% to 39%.

India's external position

India's forex position

- According to RBI, India's forex reserves increased by $1.15 billion to $585.89 billion for the week ended October 13, 2023.
- For the week ended October 13, 2023 the foreign currency assets decreased by USD 178 million to USD 519.351 billion, according to the Weekly Statistical Supplement released by the RBI.
- During the week, country's gold reserves increased by $1.27 billion to $43.58 billion, and the Special Drawing Rights (SDRs) increased by $72 million to $18 billion. Reserve position in the IMF decreased by $8 million to $4.98 billion.

India's foreign trade position

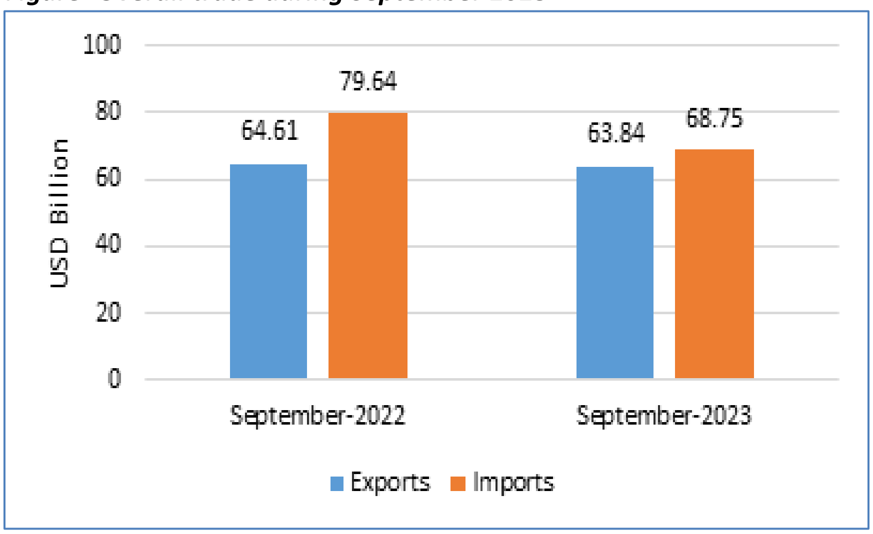
- India's overall exports (Merchandise and Services combined) in September 2023 is estimated to be USD 63.84 Billion, exhibiting a negative growth of (-) 1.20 per cent over September 2022.
- Overall imports in September 2023 is estimated to be USD 68.75 Billion, exhibiting a negative growth of (-) 13.67 per cent over September 2022.

Figure- Trade during September 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 (Merchandise +Services) *	Exports	63.84	64.61
	Imports	68.75	79.64
	Trade Balance	-4.92	-15.03

Source- RBI

Figure- Overall trade during September 2023



Source- RBI

- For the month of September 2023, under merchandise exports, 12 of the 30 key sectors exhibited growth in September 2023 as compared to same period last year (September 2022). These include Oil Meals (72.66%), Ceramic Products & Glassware (50.49%), Cotton Yarn/Fabs. /Made-Ups, Handloom Products Etc. (27.39%), Meat, Dairy & Poultry Products (19.4%), Cereal Preparations &

Miscellaneous Processed Items (17.65%), Tobacco (9.18%), Drugs & Pharmaceuticals (9.01%), Oil Seeds (8.77%), Carpet (7.51%), Engineering Goods (6.79%) and Marine Products (4.66%).

- During April-September 2023 electronic goods exports were recorded at USD 13.11 Billion as compared to USD 10.27 Billion during April-September 2022, registering a growth of 27.62 percent.
- Under merchandise imports, 20 out of 30 key sectors exhibited negative growth in September 2023. These include Silver (-89.94%), Cotton Raw & Waste (-87.68%), Fertilisers, Crude & Manufactured (-61.89%), Sulphur & Unroasted Iron Pyrites (-56.96%), Transport Equipment (-53.15%), Coal, Coke & Briquettes, Etc. (-33.39%), Vegetable Oil (-24.11%), Project Goods (-23.53%), Pearls, Precious & Semi-Precious Stones (-22.49%), Newsprint (-22.4%), Leather & Leather Products (-21.72%), Petroleum, Crude & Products (-20.32%), Wood & Wood Products (-14.71%), Organic & Inorganic Chemicals (-12.89%), Chemical Material & Products (-12.04%), Textile Yarn Fabric, Made-Up Articles (-8.29%), Metaliferrous Ores & Other Minerals (-4.44%), Iron & Steel (-3.25%), Machine Tools (-1.6%) and Pulp And Waste Paper (-0.83%).
- For April-September 2023, under merchandise exports, 13 of the 30 key sectors exhibited positive growth during April-September 2023 as compared to April-September 2022. These include Iron Ore (128.04%), Oil Meals (41.16%), Electronic Goods (27.62%), Oil Seeds (23.47%), Ceramic Products & Glassware (20.25%), Fruits & Vegetables (10.67%), Tobacco (7.6%), Drugs & Pharmaceuticals (5.02%), Coffee (3.43%), Cereal Preparations & Miscellaneous Processed Items (1.89%), Cotton Yarn/Fabs./Made-Ups, Handloom Products Etc. (1.83%), Spices (1.35%) and Cashew (0.31%).
- India's trade deficit has shown considerable decline in April-September 2023. Overall trade deficit for April-September 2023 is estimated at USD 39.91 Billion as compared to the deficit of USD 75.34 Billion during April-September 2022, registering a decline of (-) 47.03 percent. The merchandise trade deficit during April-September 2023 is USD 115.58 Billion compared to USD 140.83 Billion during April-September 2022, registering a decline of (-) 17.93 percent.

6. India to outpace Japan as second-largest economy in Asia by 2030: S&P Global Market Intelligence

- India's gross domestic product (GDP) is expected to rise from USD 3.5 trillion in 2022 to USD 7.3 trillion by 2030 and it will surpass Japan to become the second largest economy in the Asia-Pacific region, S&P Global Market Intelligence said in a recent article.
- By 2030, India's GDP is also forecast to surpass Germany. At the end of 2022, the size of Indian GDP had already become larger than the GDP of the UK and France, it said.
- India is now the third-largest economy in the Asia-Pacific region and the fifth-largest in the world.
- According to S&P Global Market Intelligence, India is expected to continue to be one of the world's fastest growing economies over the next decade, which will make it one of the most important

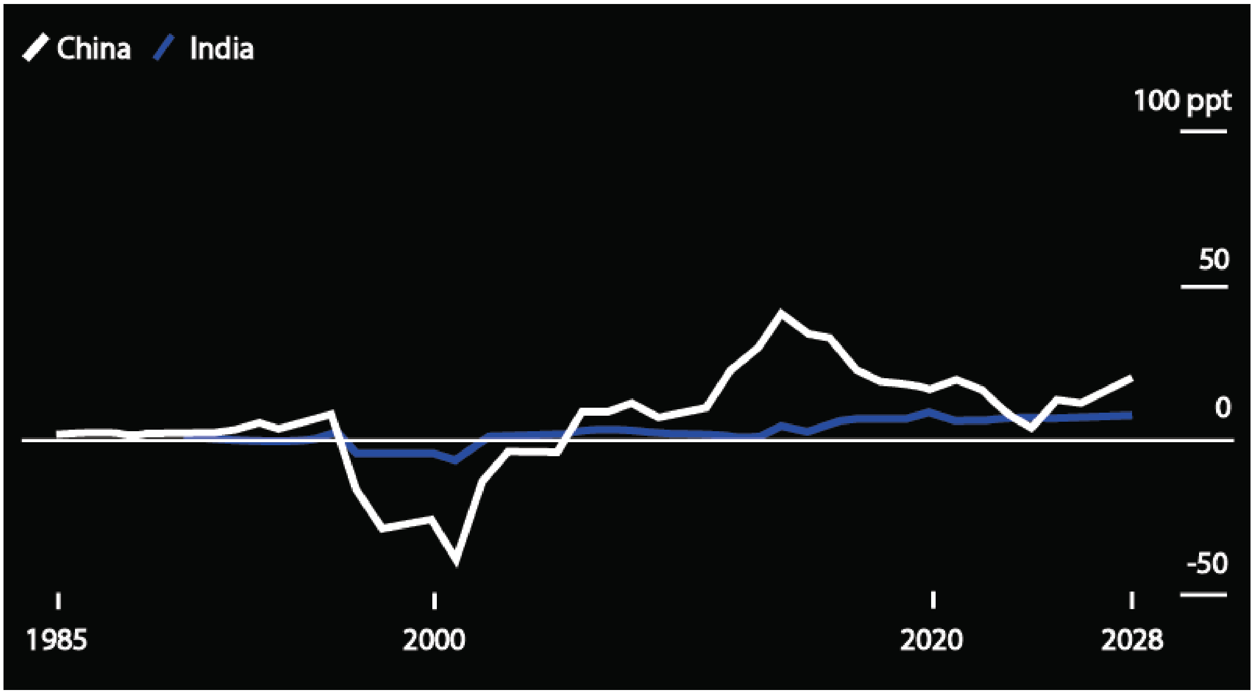
long-term growth markets for multinationals in a wide range of industries, including manufacturing industries such as autos, electronics, and chemicals to services industries such as banking, insurance, asset management, health care and information technology.

- Further, the acceleration of foreign direct investment (FDI) inflows into India over the past decade reflects the favorable long-term growth outlook for the Indian economy, helped by a youthful demographic profile and rapidly rising urban household incomes.
- The long-term outlook for the Indian economy is supported by several key growth drivers, with its large and fast-growing middle class being an important factor which is helping to drive consumer spending.
- It also highlighted that the digital transformation of India that is currently underway is expected to accelerate the growth of e-commerce, changing the retail consumer market landscape over the next decade. This is attracting leading global multinationals in technology and e-commerce to the domestic market.

7. India will account for 18% of global growth by 2028, to play key role: IMF

- The International Monetary Fund expects India to increase its contribution to global growth over the next five years as the economy continues to grow rapidly.
- According to IMF, India will likely account for 18 per cent of world growth by 2028, up from 16 per cent currently.
- India’s faster growth compared with China’s economic slowdown could see the South Asian nation make a bigger contribution to global growth.
- However, in terms of the size of their economies, China remains dominant. Based on the latest estimates from the IMF, China’s nominal gross domestic product will increase to $23.61 trillion by 2028, while India’s will reach $5.94 trillion.
- China and India will jointly contribute about half of world growth in both 2023 and 2024, IMF figures show.

Figure- Contribution to Global GDP growth



Source- IMF

- According to the IMF estimates, India's economy will expand 6.3 per cent in both this year and next year. It expects Asia Pacific to remain the most dynamic region this year, with growth of 4.6 per cent, although the expansion is expected to slow to 4.2 per cent in 2024.

8. India will see largest energy demand growth and Substantial cut likely in India's CO2 emissions by 2050: IEA

- According to International Energy Agency, India will record the highest growth in demand for energy among countries over the next three decades.
- According to IEA, India's demand for electricity for running household air conditioners is estimated to expand nine-fold by 2050 and will exceed total power consumption in the whole of Africa today.
- IEA projected India's oil demand to rise from 5.2 million barrels per day (bpd) in 2022 to 6.8 million bpd in 2030 and 7.8 million bpd in 2050 under the stated policy scenario. Under the announced pledges, this demand seeks 6.2 million bpd in 2030 and 4.7 million bpd in 2050.
- The growth in ownership and use of air conditioners and other cooling equipment is one of the key drivers of the increase in peak electricity demand in India.

- In its World Energy Outlook-2023, the agency said India's industry will spew 30% less CO2 (carbon dioxide) and each km driven on Indian roads by a passenger car will emit 25% less CO2 – the main contributor to global warming – by 2030 than it does today.
- The projections can be seen as acknowledgement of current government policies leading to millions coming out of poverty and an improved quality of life for an aspirational population.
- The projections also underline the success of the multi-pronged policy approach towards meeting India's climate commitments without sacrificing growth through increased efficiency and injecting new technologies.

Lessons from Economics

Positive & Normative Economics

Positive economics and normative economics are two standard branches of modern economics. Positive economics describes and explains various economic phenomena, while normative economics focuses on the value of economic fairness or what the economy should be.

Positive economics was popularized by the economist Milton Friedman, who said that economic science should objectively analyze data without any bias or agenda.

- Positive economics is a stream of economics that focuses on the description, quantification, and explanation of economic developments, expectations, and associated phenomena. It relies on objective data analysis, relevant facts, and associated figures.
- It attempts to establish any cause-and-effect relationships which can help ascertain and test the development of economic theories. These statements can be measured against tangible evidence or historical instances.

Normative economics focuses on value-based judgments aimed at improving economic development, investment projects, and the distribution of wealth.

- Its goal is to summarize the desirability of various economic developments, situations, and programs by asking what should happen or what ought to be.
- Example of Normative Economics- Any economic agenda that promotes some sort of social or policy agenda could be said to be normative. For instance, arguing for a higher minimum wage for the benefit of workers would be an example of a normative argument, in that this argument is based on subjective values. However, an assertion that higher minimum wages would lead to a higher GDP would be considered positive economics.

Importance of Positive economics and normative economics

Even though normative economics is a subjective study, it acts as a base or a platform for out-of-the-box thinking. These concepts will provide a foundation for the innovative ideas that will ignite to reform an economy. However, it cannot be the only basis for making decisions on important economic issues, and here the positive economics come into action thus complementing each other.
Positive economic theory can help the economic policymakers to implement the normative value judgments. For example - it can describe how the government is taking measures to impact inflation or restructuring the banking reforms, this economics can support that statement with strong facts and analysis with relationships between inflation and growth in the money supply of an economy.

Integrating positive and normative economic statements together is thus required in order to create the policies of a country, region, industrial sector, institution, or business.

Oil Market

Crude oil price – Monthly Review

Oil prices surged to almost $98/bbl in mid-September after Saudi Arabia and Russia extended their voluntary production cuts through year-end and as crude oil and distillate inventories drew to exceptionally low levels. Rising prices focused the market's attention on the prospect that 'higher for longer' interest rates could slow economic and demand growth.

Brent futures tumbled by more than $12/bbl to $84/bbl as supply fears gave way to deteriorating macroeconomic indicators and signs of demand destruction in the US, where gasoline deliveries plunged to two-decade lows. Demand destruction has hit emerging markets even harder, as currency effects and the removal of subsidies have amplified the rise in fuel prices. However, growth continues apace in China, India and Brazil, underpinning forecast global oil demand gains for this year at around 2.3 mb/d, of which China accounts for 77%.

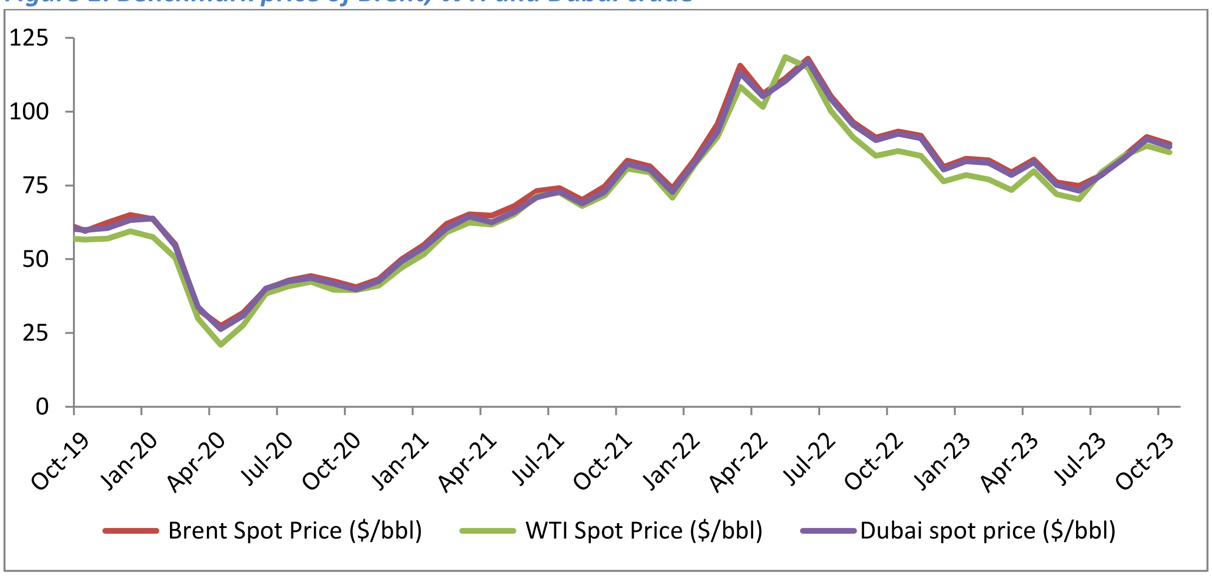
Crude spot prices extended their previous monthly gains, boosted by the rally in futures prices and higher financial flows in futures markets. Spot prices were also buoyed by further improvements in the physical market and strong crude buying from refiners in Europe and the Asia Pacific. In September, the OPEC Reference Basket (ORB) value increased, rising by $7.27, or 8.3%, m-o-m to average $94.60/bbl.

Crude oil futures prices extended their rally in September with the ICE Brent front-month contract averaging nearly 9% higher compared to the previous month. Oil futures remained predominantly buoyed by bullish investor sentiment fuelled by signs of robust oil market outlooks. This optimism was further supported by resilient economic growth in both OECD and non-OECD regions, and positive 3Q23 output trends. Simultaneously, hedge funds and other money managers substantially increased their net long positions to levels not observed since March 2022, a move spurred by short covering, which contributed to pushing oil futures prices higher.

Hedge funds and other money managers boosted bullish wagers and continued to close out more bearish positions last month, with combined futures and options net long positions in ICE Brent and NYMEX WTI rising to their highest levels since January 2022. Speculators' bets on higher oil prices increased significantly on expectations of stronger global oil market fundamentals for the remainder of this year. End August and September last, hedge funds and other money managers purchased an equivalent of a substantial 168 million barrels.

Brent crude ranged an average to $88.70 a barrel and WTI ranged to $86.64 per barrel in the month of October.

Figure 1: Benchmark price of Brent, WTI and Dubai crude



Source: World Bank

- Brent crude price averaged $91.49 per bbl in October 2023, increase by 7.6% on a month on month (MoM) and 0.3% on year on year (YoY) basis, respectively.
- WTI crude price averaged $88.42 per bbl in October 2023, increase by 3.9% on a month on month (MoM) and 4% on year on year (YoY) basis, respectively.
- Dubai crude price averaged $90.63 per bbl in October 2023, increase by 7.6% on a month on month (MoM) and 0.3% on year on year (YoY) basis, respectively.

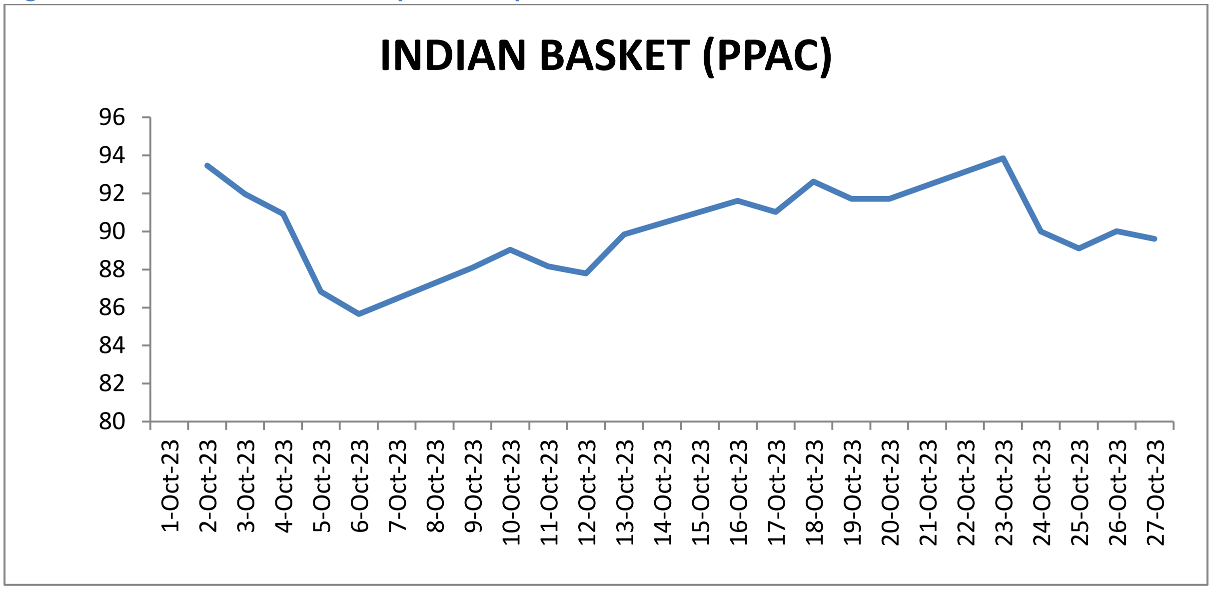
Table 1: Crude oil price in October, 2023

Crude oil	Price ($/bbl)	MoM (%) change	YoY (%) change
Brent	91.49	7.6%	0.3%
WTI	88.42	3.9%	4.0%
Dubai	90.63	7.6%	0.3%

Source: World Bank

Indian Basket Crude oil price

Figure 2: Indian crude oil basket price in $ per bbl



Source: PPAC

- Indian crude basket price averaged $90.15 per barrel in October 2023, down by 2.4% on Month on Month (M-o-M) and 1.7% on a year on year (Y-o-Y) basis, respectively.

Oil production situation

- Non-OPEC liquids supply growth forecast for 2023 is revised up to 1.7 mb/d. Main drivers of liquids supply growth for 2023 include the US, Brazil, Norway, Kazakhstan, Guyana and China. For 2024, non-OPEC liquids supply is expected to grow by 1.4 mb/d. Main drivers for liquids supply growth next year are set to be the US, Canada, Guyana, Brazil, Norway and Kazakhstan.
- The largest declines are anticipated in Mexico and Malaysia. 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 September increased by 273 tb/d m-o-m to an average 27.75 mb/d.
- Global supply growth is expected to be dominated by non-OPEC+ producers. As for the OPEC+ bloc, the supply story this year is one of contraction, although Iran is on course to rank as the world's second biggest source of growth after the US. Voluntary cuts are expected to keep the oil market in deficit as OPEC+ could pump 1.3 mb/d below the call on its crude in 4Q23.

Table 2: Non-OPEC liquids production in 2023, mb/d

Non-OPEC liquids production	2022	1Q23	2Q23	3Q23	4Q23	2023
Americas	26.92	27.90	28.15	28.59	28.52	28.29
of which US	*19.28*	*20.10*	*20.70*	*20.79*	*20.50*	*20.53*
Europe	3.58	3.69	3.65	3.59	3.74	3.67
Asia Pacific	0.48	0.45	0.45	0.46	0.47	0.46
Total OECD	**30.97**	**32.04**	**32.24**	**32.64**	**32.74**	**32.42**
China	4.48	4.63	4.63	4.50	4.50	4.56
India	0.77	0.76	0.78	0.78	0.78	0.78
Other Asia	2.30	2.31	2.27	2.29	2.37	2.31
Latin America	6.34	6.69	6.77	6.99	6.88	6.83
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	10.62	9.47	10.53
Other Eurasia	2.83	2.99	2.93	2.85	2.97	2.94
Other Europe	0.11	0.11	0.10	0.10	0.10	0.10
Total Non-OECD	**32.44**	**33.21**	**32.90**	**32.66**	**31.68**	**32.61**
Total Non-OPEC production	63.42	65.25	65.14	65.30	64.41	65.02
Processing gains	2.40	2.47	2.47	2.47	2.47	2.47
Total Non-OPEC liquids production	**65.81**	**67.72**	**67.61**	**67.77**	**66.88**	**67.49**
Previous estimate	**65.81**	**67.72**	**67.43**	**67.39**	**67.04**	**67.39**
Revision	0.00	0.00	0.18	0.39	-0.15	0.10

Source: OPEC

- From the above table, it can be inferred, that the total non-OPEC liquids production is expected to reach 67.49 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 27.75 mb/d in September 2023, higher by 273 tb/d m-o-m.

Oil demand situation

- The world oil demand growth forecast for 2023 remains unchanged at 2.4 mb/d. Downward revisions in the OECD took place in the first three quarters, while upward revisions in non-OECD in the 2Q23 and 3Q23 are due to higher-than-expected growth, mainly from China. In the OECD, oil demand in 2023 is expected to rise by around 0.1 mb/d, while oil demand in non-OECD is expected to increase slightly to above 2.3 mb/d.
- For 2024, world oil demand is expected to grow by a healthy 2.2 mb/d. The OECD is expected to grow 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, India, the Middle East, and Other Asia contributing the most.

Table 3: World Oil demand, mb/d

	2022	1Q23	2Q23	3Q23	4Q23	2023	Growth	%
Total OECD	**45.72**	**45.44**	**45.59**	**46.33**	**45.89**	**45.81**	**0.09**	**0.20**
~ of which US	*20.16*	*19.92*	*20.45*	*20.47*	*20.05*	*20.22*	*0.06*	*0.31*
Total Non-OECD	**53.90**	**56.15**	**55.76**	**55.85**	**57.24**	**56.25**	**2.35**	**4.35**
~ of which India#	*5.14*	*5.40*	*5.40*	*5.21*	*5.50*	*5.38*	*0.24*	*4.69*
~ of which China	14.95	15.73	16.06	16.07	16.21	16.02	1.07	7.14
Total world	**99.63**	**101.59**	**101.35**	**102.17**	**103.13**	**102.06**	**2.44**	**2.45**

Source: OPEC monthly report, October 2023

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

Global petroleum product prices

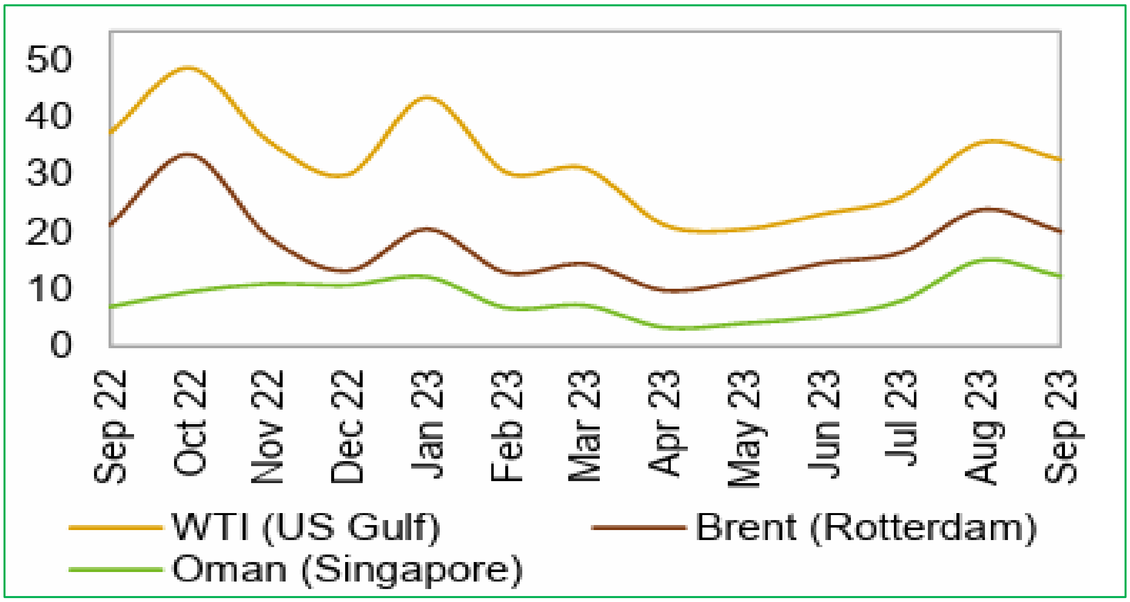
USGC refining margins against WTI retracted following three consecutive months of solid growth but still managed to stay at healthy levels. The counter seasonal downturn in the US refining economics was contrary to previous expectations, given the start of heavy maintenance works and rising offline capacities in the region. A sharp rise in crude prices registered in September led to a narrower product-to-crude premium m-o-m, as the monthly product price rise was outpaced by the price increase seen on the crude side. Additionally, weakening gasoline crack spreads due to slower consumption requirements attributed to both stronger pricing signals and the end of the summer season added to the downside. Consequently, unlike all other products that showed a price rise m-o-m due to lower refinery output, gasoline was the only one in the USGC to show a solid decline in line with the observed stock builds.

In terms of operations, the US refinery intake decreased with the start of heavy maintenance works and lost 550 tb/d m-o-m to an average of 16.61 mb/d in September. USGC margins against WTI averaged $32.57/bbl, down by $3.10 m-o-m, but this was down $4.75 y-o-y.

Refinery margins in Rotterdam against Brent stepped down from the y-t-d high recorded in the previous month and following four consecutive months of gains. The weakness derived from all across the barrel, except diesel, with gasoline in the region representing the most pronounced source of loss, followed by fuel oil. Declining gasoline requirements in the Atlantic Basin likely exacerbated the lingering demand side pressures linked to subdued exports to West Africa after the subsidy removal and the subsequent hike in Nigerian retail prices early in 2H23. On the other hand, the diesel export ban implemented in Russia on September 21 to avert domestic shortage and stabilize domestic prices has likely affected the market sentiment regarding limited diesel availability within the region, which may have contributed to upward pressure on prices and consequently on crack spreads regionally.

Refinery throughput in Europe reversed course and trended downwards. According to preliminary data, it was 260 tb/d lower, at an average of 9.14 mb/d. Refinery margins against Brent in Europe averaged $20.06/b in September, $3.84 lower compared with a month earlier and $1.16 lower y-o-y.

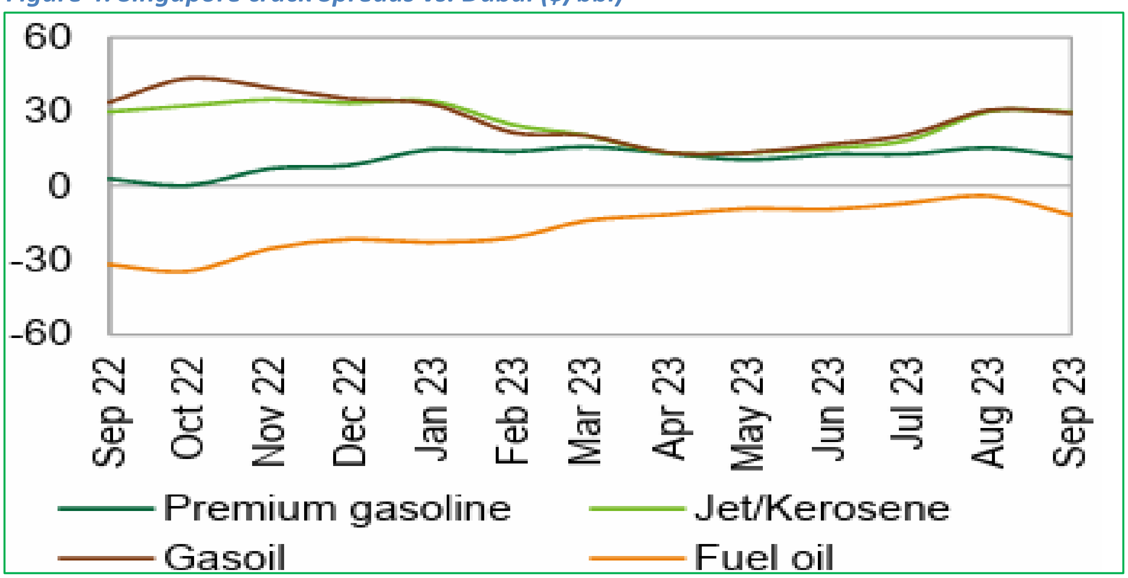
Figure 3: Refining Margins ($/bbl)



Source: Argus and OPEC

The Asian gasoline 92 crack declined but faired better compared to the products' performance in the USGC and NWE. Similarly, to what was observed in the aforementioned trading hubs, the combination of stronger crude prices and the conclusion of the summer season contributed to increased gasoline availability in Asia. The release of Chinese product export quotas towards the end of the previous month likely added to the already bearish market sentiment, as the action signalled continued supplies from China. The Singapore gasoline crack spread against Dubai in September averaged $11.54/b. This was down $3.84 m-o-m but $2.58 higher y-o-y.

Figure 4: Singapore crack Spreads vs. Dubai ($/bbl)



Source: Argus and OPEC

The Singapore gasoil crack spread weakened and was outperformed by jet/kerosene but retained most of its strength. The heavy refinery maintenance season will most likely incentivize exports to OECD Europe and Americas and provide support to the regional market. The Singapore gasoil crack spread against Oman averaged $29.51/b, down by $1.18 m-o-m but up by $10.00 y-o-y.

Table 4: Singapore FOB, refined product prices ($/bbl) in September 2023

Singapore product prices	Price ($/b)	MoM (%) change	YoY (%) change
Naphtha	74.73	5.7%	9.8%
Premium gasoline (unleaded 95)	109.92	2.5%	12.8%
Regular gasoline (unleaded 92)	104.47	2.6%	11.4%
Jet/Kerosene	122.77	5.3%	1.5%
Gasoil/Diesel (50 ppm)	124.92	5.1%	-2.8%
Fuel oil (180 cst 2.0% S)	121.42	4.7%	-2.5%
Fuel oil (380 cst 3.5% S)	81.18	-1.6%	37.1%

Source: OPEC

Petroleum products consumption in India

Monthly Review:

- Overall consumption of all petroleum products in September 2023 with a volume of 18.18 MMT registered a growth of 5.82% on volume of 17.18 MMT in September 2022.
- MS (Petrol) consumption during the month of September 2023 with a volume of 3.06 MMT recorded a growth of 8.19% on volume of 2.82 MMT in September 2022.
- HSD (Diesel) consumption during the month of September 2023 with a volume of 6.49 MMT recorded a growth of 3.79% on volume of 6.25 MMT in the month of September 2022.
- LPG consumption during the month of September 2023 with a volume of 2.551 MMT registered growth of 4.26% over the volume of 2.447 MMT in the month of September 2022.
- ATF consumption during September 2023 with a volume of 0.657 MMT registered a growth of 11.00% over the volume of 0.592 MMT in September 2022.
- Bitumen consumption during September 2023 with a volume of 0.527 MMT registered growth of 11.38% over volume of 0.473 MMT in the month of September 2022.
- Kerosene consumption registered de-growth of 22.59% during the month of September 2023 as compared to September 2022.

Table 5: Petroleum products consumption in India, September 2023

Consumption of Petroleum Products (P)	Consumption in '000 MT	MoM (%) change	YoY (%) change
LPG	2,551	3.7%	4.3%
Naphtha	1,001	-11.2%	-7.0%
MS	3,058	-1.1%	8.2%
ATF	657	-2.9%	11.0%
SKO	32	-39.0%	-22.6%
HSD	6,493	-2.7%	3.8%
LDO	63	-17.3%	0.2%
Lubricants & Greases	319	-1.5%	-17.1%
FO & LSHS	536	1.7%	-9.6%
Bitumen	527	-4.8%	11.4%
Petroleum coke	1,472	-2.4%	11.6%
Others	1,471	-2.0%	32.7%
TOTAL	18,179	-2.1%	5.8%

Source: PPAC

Natural Gas Market

Natural Gas Price – Monthly Review

- Natural gas spot prices at the US Henry Hub benchmark averaged $2.64 per million British thermal units (MMBtu) in September 2023. Henry Hub's natural gas prices increased for a fourth consecutive month, rising by ~2.1% m-o-m in September. Prices remained pressured by the combination of strong production and healthy inventories.

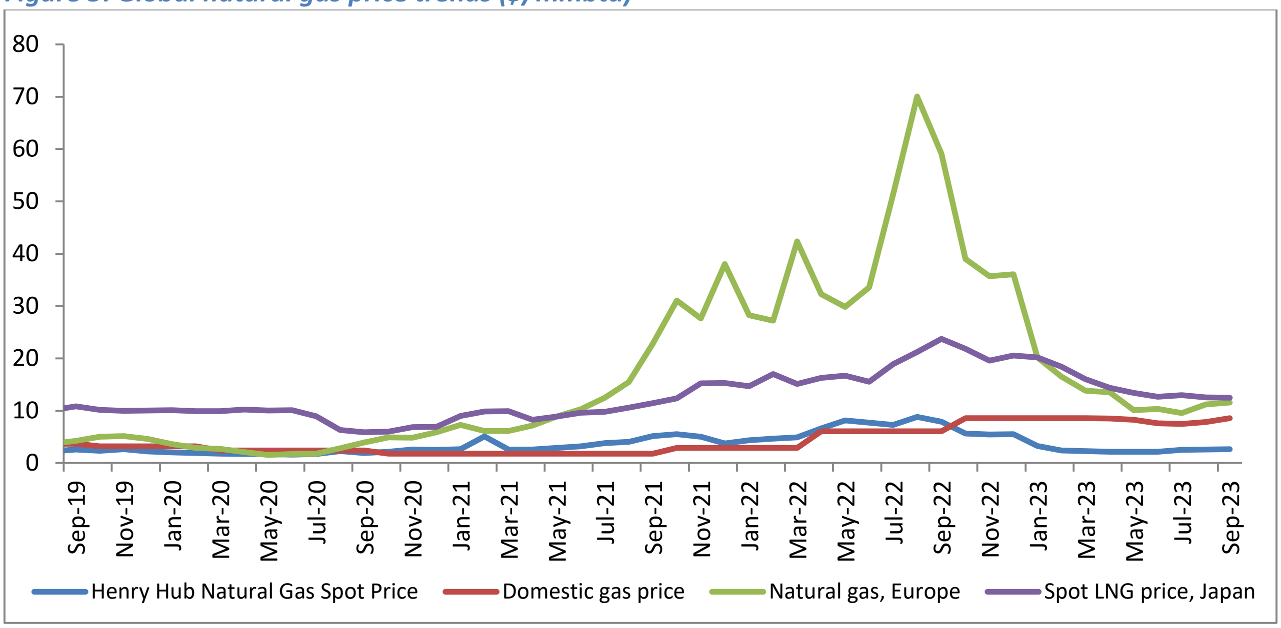
- The natural gas spot price at the Title Transfer Facility (TTF) in the Netherlands in Europe traded at an average of $11.55 per MMBtu. Natural gas prices in Europe experienced a consecutive-monthly increase against a backdrop of robust inventories. According to data from Gas Infrastructure Europe, EU storage was above 95% at the end of September. However, the average Title Transfer Facility (TTF) price went from $11.2/mmbtu in August to $11.5/mmbtu in September, a 3.2% increase m-o-m. Prices advanced at a much lower rate compared with the previous month as concerns of supply disruptions ebbed following a halt of labour strikes at Australian LNG facilities. However, the extension of ongoing maintenance activities at key Norwegian facilities continued to sustain upward pressure on prices. Y-o-y, prices were down by 67.9%.

- Japan Liquefied Natural Gas Import Price averaged at $12.50 per MMBtu for September 2023, down from $12.54 per MMBtu in August 2023. Japan's liquefied natural gas imports started decreasing as more efforts were paved in to save energy and boost nuclear power, thereby reducing the need for the fossil fuel. The drop in LNG deliveries to Japan, a top importer, is helping to ease the global fuel shortage.

- 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.

Figure 5: Global natural gas price trends ($/mmbtu)



Source: EIA, World Bank

Table 6: Gas price, September 2023

Natural Gas	Price ($/MMBTU)	MoM (%) change	YoY (%) change
India, Domestic gas price (Oct'23)	9.20	6.98	7.35
India, Gas price ceiling – difficult areas (Oct'23-Mar'24)	9.66	-17.82%	-20.06%
Henry Hub	2.64	2.3%	-66.5%
Natural Gas, Europe	11.55	3.2%	-80.5%
Liquefied Natural Gas, Japan	12.50	-0.3%	-47.3%

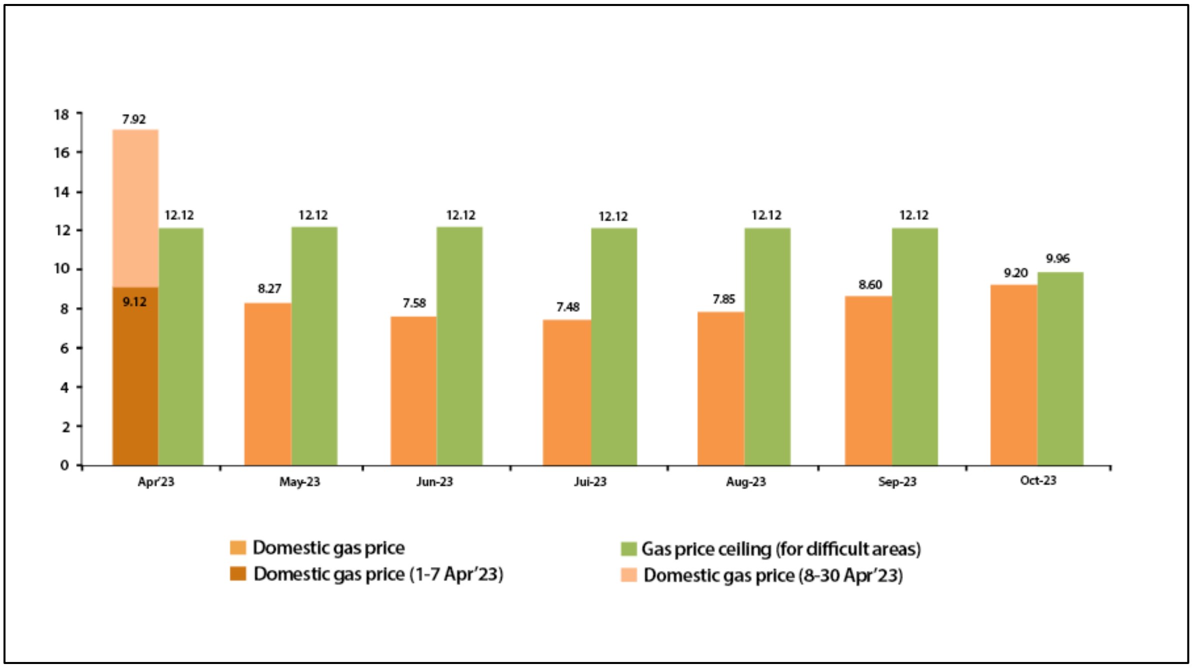
Source: EIA, PPAC, World Bank

Table 7: 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

Source: PPAC

Figure 7: Domestic natural gas price April – October 2023 ($/mmbtu)



Source: PPAC

Indian Gas Market

- Gross production of natural gas for the month of September 2023 was 3,027 MMSCM (increase of 6.1% over the corresponding month of the previous year).
- Total imports of LNG (provisional) during the month of September 2023 were 2,278 MMSCM (P) (increase of 21.3% over the corresponding month of the previous year).
- Natural gas available for sale during September 2023 was 4,807 MMSCM (increase of 13.8% over the corresponding month of the previous year).

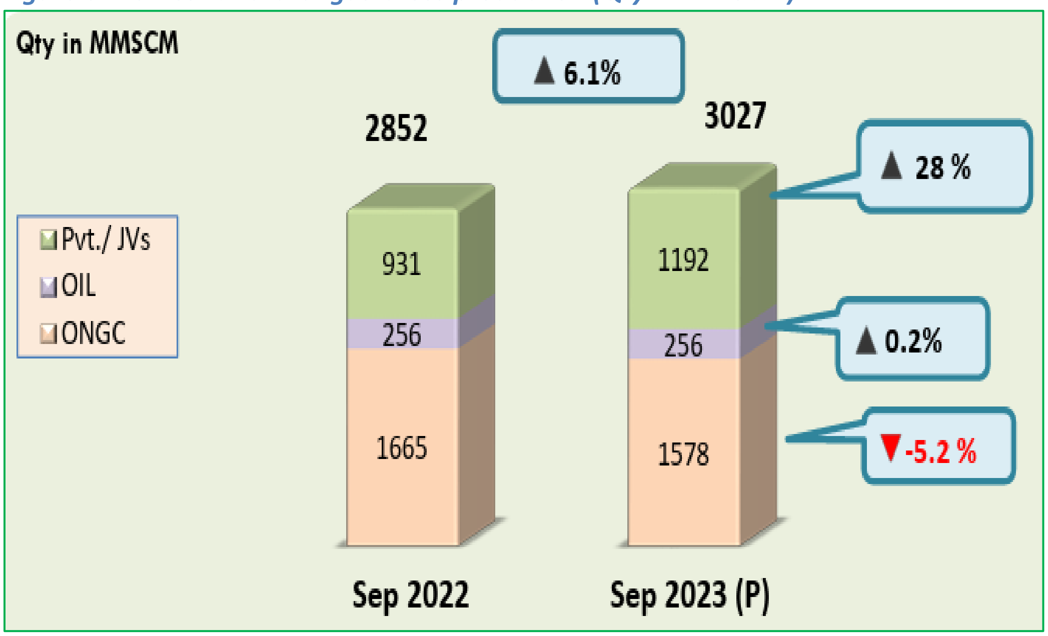
- Total consumption during September 2023 was 5,779 MMSCM (provisional). Major consumers were fertilizer (31%), City Gas Distribution (CGD) (19%), Power (14%), Refinery (8%) and Petrochemicals (4%).

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

1. Domestic Natural Gas Gross Production:

Domestic natural gas gross production for the month of September 2023 was 3,027 MMSCM (increase of 6.1% over the corresponding month of the previous year).

Figure 8: Domestic natural gas Gross production (Qty in MMSCM)

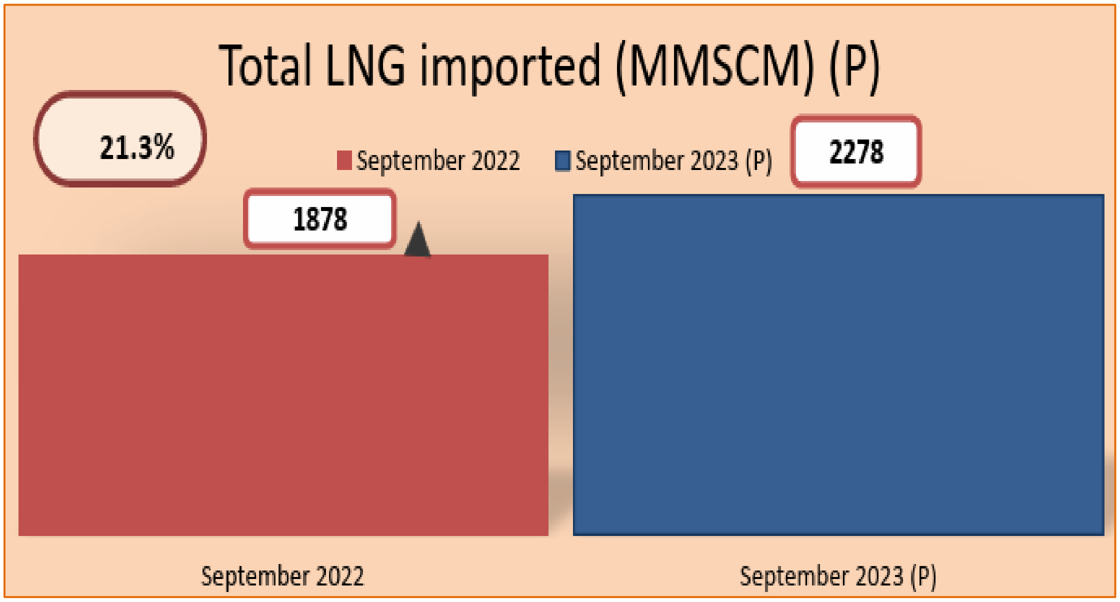


Source: PPAC

2. LNG imports:

Total imports of LNG (provisional) during the month of September 2023 were 2,278 MMSCM (increase of 21.3%) over the corresponding month of the previous year 1,878 MMSCM.

Figure 9: LNG imports (Qty in MMSCM)

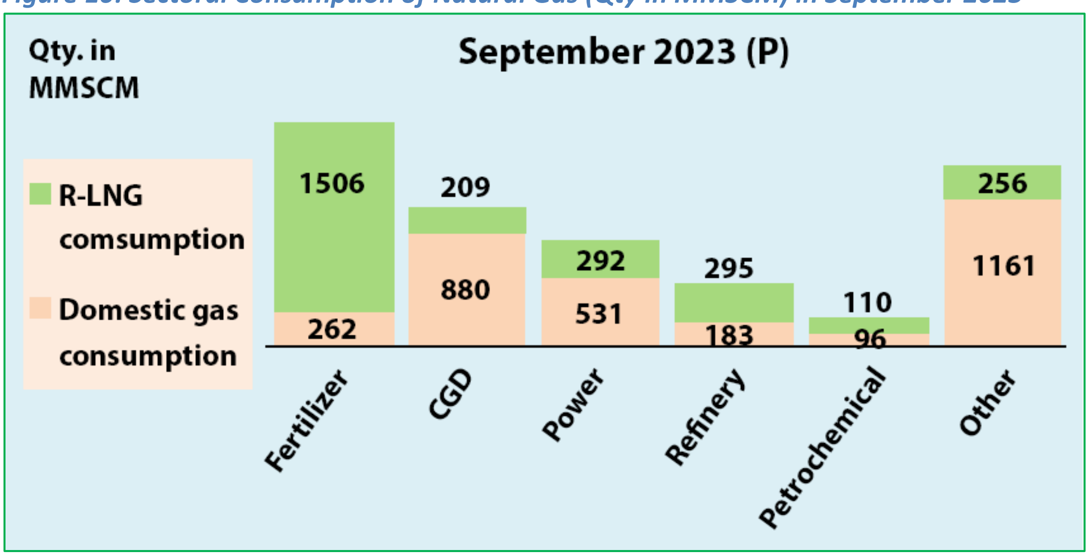


Source: PPAC

3. Sectoral Consumption of Natural Gas:

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

Figure 10: Sectoral Consumption of Natural Gas (Qty in MMSCM) in September 2023



Source: PPAC

Key developments in Oil & Gas sector

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

1. Production of Crude Oil

Indigenous crude oil and condensate production during September 2023 was 2.38 MMT. OIL registered a production of 0.27 MMT, ONGC registered a production of 1.55 MMT whereas PSC registered production of 0.56 MMT during September 2023.

2. Production of Natural Gas

Gross production of natural gas for the month of September 2023 (P) was 3027 MMSCM which was higher by 6.1% compared with the corresponding month of the previous year. The cumulative gross production of natural gas of 17879 MMSCM for the current financial year till September 2023 was higher by 4.0% compared with the corresponding period of the previous year.

3. Crude Oil Processed (Crude Throughput)

Total Crude oil processed during September 2023 was 20.3 MMT which is 3.8% higher than September 2022. Where PSU/JV Refiners processed 13.8 MMT and PVT Refiners Processed 6.5 MMT of Crude Oil. Total Indigenous Crude Oil processed was 2.4 MMT and total Imported Crude oil processed was 17.9 MMT by all Indian Refineries (PSU+JV+PVT). There was a growth of 2.8% in Total Crude oil processed in April September FY 2023 – 24 as compared to same period of FY 2022 – 23.

4. Production of Petroleum Products

Production of petroleum products was 21.5 MMT during September 2023 which is 5.5% higher than September 2022. Out of 21.5MMT, 21.2 MMT was from Refinery production & 0.3 MMT was from Fractionator. There was a growth of 3.8% in Production of petroleum products in April - September 2023 – 24 as compared to the corresponding period of the previous year. Out of total POL production, in September 2023, HSD has 41.6%, MS has 16.6%, Naphtha has 6.4%, ATF has 6.0%, PetCoke has 5.4%, and LPG has 4.1% 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 ATF and diesel; Petrol to remain zero

The Indian government decreased the windfall tax on crude petroleum to Rs 9,050 per ton from Rs 12,100 per ton with effect from October 18, 2023. Special Additional Excise Duty (SAED) on diesel was reduced to Rs 4 per litre from Rs 5 per litre. Also, govt has cut SAED on aviation turbine fuel to Rs. 1 per litre from Rs. 2.5 per litre. The windfall tax on petrol 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.

Petroleum Minister Hardeep S Puri launched 12th City Gas Distribution (CGD) Bidding Round

Minister of Petroleum and Natural Gas, Shri Hardeep Singh Puri launched the 12th City Gas Distribution (CGD) Bidding Round of the Petroleum and Natural Gas Regulatory Board (PNGRB) in Delhi.

Calling the Natural Gas, an environment friendly clean fossil fuel, Shri Hardeep Singh Puri, said that it has huge potential in providing solutions to the environmental challenges as well as ever growing energy needs in a sustainable manner. Accordingly, he said that Government of India (GoI) has focused to promote the usage of Natural Gas as a fuel/feedstock across the country to increase the share of Natural Gas in primary energy mix from current level to 15% in coming years.

Speaking on the occasion, Shri Hardeep Singh Puri noted that successful conclusion of 11th CGD bidding round has increased potential coverage of CGD sector to about 98% population and 88% geographical area of the country. The 12th bidding round launched will help in expansion of CGD coverage further, he said.

The Minister highlighted the importance of pipelines as economical means of gas transport in the country. Talking about the growth in pipeline network, he said that the pipeline network has seen a significant progress since 2014. At present, about 23,500 Km long gas pipeline network is under operation in the country and around 12,000 KM pipeline is approved/under construction. Efforts are underway to complete the vision of One Nation One Gas Grid by 2030, he noted.

Shri Hardeep Singh Puri highlighted the progress of CGD network since May 2014. He also talked about the growth in number of PNG Connections, and CNG stations during this period.

Progress at country level of CGD network since May 2014 is as under:

Parameters	As on May, 2014	As on August, 2023	% Growth
No. of CGD networks for GAs	53	300	566
PNG Connections	25.4 Lakh	1.16 Crore	457
No. of CNG Stations	738	6000	813
CGD Coverage (% wise Population)	13.27	98	738
CGD Coverage (% wise Area)	5.58	88	1577

The Minister spoke about the steps taken by government to cater the growing demand of CGD sector and insulate the common people from price volatility. The Government released new CGD sector Gas allocation Guidelines wherein allocation of Domestic APM Gas was increased to CGD entities which has reduced basic cost of the Gas to CGD entities substantially by diverting the gas from other sectors.

Shri Puri said that the government had insulated people common from recent turmoil in oil and gas prices caused by Geo Political events. “We had taken measures so that impact of surge of international gas prices did not pass on to the consumers of the country.,” he said.

Speaking at the occasion, the Chairperson, PNGRB, Dr. Anil Kumar Jain, said that the current focus of PNGRB is to create a vibrant and sustainable gas infrastructure in the whole of the country. The launch of this bidding round for Himalayan States is a step towards providing a cleaner fuel in the fragile ecosystem of these States.

Addressing the gathering, Shri Pankaj Jain, Secretary, Ministry of Petroleum and Natural Gas, welcomed the steps being taken by PNGRB to develop gas infrastructure in country.

After completion of 12th CGD bidding round, almost entire part of the country, except Mizoram (as the election date was announced on 09.10.2023), Andaman and Nicobar Islands and Lakshadweep will be covered under the City Gas Distribution network providing access to cleaner cooking fuel to households, other industrial and commercial facilities as well as fuel for transportation.

This amounts to a giant leap by the PNGRB towards improving the share of natural gas in the country’s energy mix. India’s current share of Gas in the Energy mix stands at 5.78 %, which is slated to increase to 15% by 2030 thereby creating a Gas based economy.

Petroleum Minister Hardeep S Puri launched Reference Fuels produced by Indian Oil

“The Launch of Reference Fuels produced by Indian Oil’s Paradip & Panipat Refineries, utilizing the intellectual talent available at Indian Oil’s Research & Development Centre, is a dynamic achievement”, said Shri Hardeep Singh Puri, Minister of Petroleum & Natural Gas and Housing & Urban Affairs. Speaking at the historic occasion marking the launch of ‘Reference Gasoline and Diesel Fuels’ produced by Indian Oil for the first time in India. Shri Pankaj Jain, Secretary, Ministry of Petroleum & Natural Gas and Shri S.M. Vaidya, Chairperson, Indian Oil were also present at the event.

Addressing the gathering, Shri Hardeep Singh Puri said that this step stamps our indigenous technical prowess which gives impetus to the Make in India mission of the Government of India. It is yet another initiative to foster the AtmaNirbhar Bharat vision of our Hon’ble Prime Minister, he noted.

The Minister said that this is the first time that India is venturing into the production of Reference Gasoline and Diesel Fuels. He said, the home-grown development of these products in-line with international benchmarks testifies to the brilliance and relentless hard work of IndianOil. This achievement not only reduces India's dependence on imports but also catapults India's energy industry to the select global players armed with exclusive competencies, he stressed.

The Petroleum & Natural Gas Minister spoke about the four-pronged energy security strategy adopted by the Ministry of Petroleum & Natural Gas. He said that the strategy guided by Prime Minister Shri Narendra Modi's vision of transforming India into an 'energy-independent' nation by 2047, includes, (i) Diversification of energy supplies (ii) Increasing India's exploration and Production footprint (iii) Alternate energy sources and meeting energy transition through Gas based economy and (iv) Green Hydrogen and EVs.

Shri Puri lauded the efforts of Oil Companies that are making major strides toward fulfilling national goals & commitments under the guidance of the Ministry of Petroleum & Natural Gas. He also mentioned about the Ministry's efforts in the direction of clean energy especially Bio-fuels section, transition to BS-VI fuels and introduction of EV charging stations, CBG, Sustainable Aviation Fuel, Ethanol blending, and Hydrogen fuels are to be mentioned.

Calling Panipat Refinery & Petrochemicals Complex as the flagbearer of path-breaking initiatives for enhancing IndianOil's green agenda by commissioning India's first 2G & 3G ethanol plants, the Minister said that the upcoming 10 KTA green hydrogen plant at Panipat will further augment IndianOil's green energy transition. The Unit is on the cusp of a major expansion and it heralds a promising future for the nation's energy industry, he added.

Referring to the Paradip Refinery as the most modern and complex refinery of India that can process 100% high sulphur crude oil, he said that the refinery marked a major milestone when it handled its 1000th vessel at the south oil jetty in the recent past.

Prime Minister dedicated the First 800 MW Unit of Telangana Super Thermal Power Project of NTPC to the Nation

The Prime Minister, Shri Narendra Modi dedicated the first 800 MW Unit of phase 1 of Telangana Super Thermal Power Project of NTPC to the nation, at a programme in Nizamabad, Telangana. The project, situated in Peddapalli district, will provide low-cost power to Telangana and provide a boost to the economic development of the state. It will also be one of the most environmentally compliant power stations in the country.

Addressing the gathering, the Prime Minister congratulated the people of Telangana and said that the development of any nation or state depends upon its self-reliant capacity for electricity production as it improves Ease of Living and Ease of Doing Business simultaneously. "Smooth supply of electricity gives momentum to growth of industries in a state", the Prime Minister remarked. He emphasized that the second unit of the project will also be operational very soon, and upon its completion, the installed capacity of the power plant would rise to 4,000 MW.

Phase I of Telangana Super Thermal Power Project of NTPC is being established at an approved cost of INR 10,998 crore on the available land in the premises of NTPC's existing Ramagundam station in Peddapalli district. It will supply 85% of its power to the state of Telangana.

Being a pit-head power station with ultra supercritical technology, this project will also help the state of Telangana with low-cost power. Further, this being the most efficient power station of NTPC in India, this will reduce specific coal consumption (Total consumption of coal per unit of power generated) and CO2 emissions, making it one of the most environmentally compliant power stations in India.

India and Saudi Arabia signed MoU in Electrical Interconnections, Green / Clean Hydrogen and Supply Chains

India and Saudi Arabia have signed a Memorandum of Understanding in Riyadh, in the fields of Electrical Interconnections, Green / Clean Hydrogen and Supply Chains. The MoU was signed between the visiting Union Minister for Power and New & Renewable Energy, Government of India, Shri R.K. Singh and the Minister of Energy, Government of Saudi Arabia, Mr. Abdulaziz bin Salman Al-Saud on the sidelines of the MENA Climate Week in Riyadh.

This MoU aims to establish a general framework for cooperation between the two countries in the field of electrical interconnection; exchange of electricity during peak times and emergencies; co-development of projects; co-production of green / clean hydrogen and renewable energy; and also establishing secure, reliable and resilient supply chains of materials used in green / clean hydrogen and the renewable energy sector.

It was also decided between the two energy ministers that B2B Business Summits and regular B2B interactions between the two countries will be conducted to establish complete supply and value chains in the above-mentioned areas of energy sector cooperation.

Addressing a session on "Global Stocktake of the Paris Agreement (GST) Regional Dialogue: Highlighting enablers and technologies for ambition and just and inclusive transitions" on the first day of the MENA Climate Week in Riyadh, the Union Minister for Power and New & Renewable Energy said that MENA Climate Week is extremely important in exploring and sharing opportunities to shape the future of energy production, consumption and sustainability on a global scale. He said that the gathering at MENA CW holds great significance for the MENA region and collectively possesses immense potential in influencing the current and future narrative of energy transition.

The Minister told the global community that India is one of the world's most vital voices in the energy landscape, and has emerged as a leader in energy transition. "India having almost 17% of the world population and being the world's fifth largest economy, is taking significant steps to reduce emission intensity of its GDP by 45% by the year 2030 and to achieve the goal of Net Zero by the year 2070." He recalled that India's energy sector has undergone a remarkable transformation, aimed at providing reliable, affordable and sustainable energy to its people. "The country has made significant strides in enhancing power generation capacity from non-fossil fuels, established a unified national grid and has strengthened distribution network, promoting renewable energy, expanding access to energy and achieving 100% household electrification, and implementing innovative policies."

Shri Singh said that green hydrogen is a promising alternative for accelerating India's energy transition. "It brings me great pleasure in informing you that the Government of India has launched the National Green Hydrogen Mission for harnessing hydrogen energy and has approved an initial outlay of US $2.3 billion for this Mission."

Union Power and New & Renewable Energy Minister launched dashboard for Data on Adoption and Forecasts of Electric Vehicles

The Union Minister for Power and New & Renewable Energy, Shri R. K. Singh launched a brand-new EV-Ready India Dashboard (evreadyindia.org). Developed by policy and industry experts at thinktank OMI Foundation. The dashboard is a free digital platform focused on near real-time Electric Vehicle adoption and forecasts, associated battery demand, charging density, and market growth trends. The dashboard is expected to facilitate greater inclusion across audiences, for the industry, policymakers and end users of electric vehicles. The platform leverages the power of data and AI and seeks to address the need for macroeconomic data and analysis on India's massively growing electric mobility segment. The EV-Ready India dashboard has forecast a 45.5% Compounded Annual Growth Rate (CAGR) in electric vehicles between calendar year (CY) 2022 and CY 2030, increasing from annual sales of 6,90,550 electric two-wheelers (E2Ws) in 2022 to 1,39,36,691 E2Ws in 2030.

Addressing representatives of central and state governments, industry, World Bank and other stakeholders at the launch event, the Union Minister for Power and New & Renewable Energy asserted that the future is going to be electric. "The future is electric. Nobody can stop this. The price of storage will come down, and once that comes down, diesel and petrol SUVs will be history. We will have electric, which suits in our journey as one of the largest economies of the world."

Shri Singh said that it is absolutely essential for India as a country to switch to electric mobility. "We want to move up from 5th largest to 3rd largest economy and increase our heft in strategic affairs. This requires energy independence, which is the primary reason for Electric Vehicles."

The Union Minister for Power and New & Renewable Energy emphasized the importance of decarbonizing transport sector and said that transport accounts for 18% of our emissions, just below industry and the government was actively promoting EVs. "Our Prime Minister bought solar at Rs. 15 per unit when he was Chief Minister of Gujarat; many people criticized him then saying that thermal power was available at Rs. 4.50 per unit, but he said that unless he buys at that rate, the price will not come down. And today, the price of solar has come down. This is the motive behind our push for electric vehicles." The Minister recalled that the government first came out with guidelines for charging of electric vehicles, in April 2018, much before anybody had started talking about EVs.

The Minister informed that the government has launched a dashboard (https://evyatra.beeindia.gov.in/) where we will get to know the location of charging stations and whether they are occupied or not. That dashboard enables one to book charging space before you reach the destination.

Solar Panels to have Star Label indicating Quality and Energy Efficiency, Programme to be voluntary for first two years

The Government has come out with a Standards & Labelling Programme for solar panels. The programme, launched in New Delhi, October 20, 2023, by the Union Minister for Power and New & Renewable Energy Shri R. K. Singh, will make it easier for citizens to make an informed and judicious decision while purchasing and deploying solar photovoltaic modules, known commonly as solar panels. The star labelling scheme prepared by the Bureau of Energy Efficiency (BEE) for PV modules is from January 1, 2024 till December 31, 2025. For this period, there shall be no labelling fee as well.

On the one hand, the formulation of performance standards will enable customers to be better aware of the cost and energy savings from using solar panels. At the same time, this also contributes to the government's larger goal of enhancing the share of renewable energy and reducing emission intensity of GDP by 45% by 2030.

The Minister said that the Standards & Labelling Programme is in public interest, and explained how precisely the programme will empower the common man and woman who wants to install a solar panel. "While the government is promoting the solar rooftop programme, the common citizen has absolutely no idea as to which solar panel is more efficient or less efficient. At present, he or she is at the mercy of the vendor, the installer. The installer can say anything and the consumer had no way to check it. Now, the person who wants to get a rooftop installed can see for himself or herself which brand of solar module is more efficient, which is less efficient."

Shri Singh explained that besides public interest, the other motivation for the programme is the government's focus on energy transition. "Our programme for Star Labelling is a world leader. It has resulted in emissions reduction of almost 58 million tonnes of CO2 per annum, Overall, just 3 – 4 programmes of BEE have resulted in a reduction of carbon dioxide emission of almost 300 million tonnes per annum. The assessment is that Star enabling of solar panels will reduce carbon dioxide emissions by 30 million tonnes per annum by 2030. This is necessary for the survival of the planet and of human beings."

Cabinet approved Green Energy Corridor (GEC) Phase-II – Inter-State Transmission System (ISTS) for 13 GW Renewable Energy Project in Ladakh

The Cabinet Committee on Economic Affairs, chaired by the Hon'ble Prime Minister, Shri Narendra Modi, approved the project on Green Energy Corridor (GEC) Phase-II – Inter-State Transmission System (ISTS) for 13 GW Renewable Energy Project in Ladakh.

The project is targeted to be set up by FY 2029-30 with total estimated cost of Rs.20,773.70 crore and Central Financial Assistance (CFA) @ 40 percent of the project cost i.e., Rs.8,309.48 crore.

Keeping in view the complex terrain, adverse climatic conditions and defense sensitivities of Ladakh region, Power Grid Corporation of India Limited (POWERGRID) will be the Implementing Agency for this project. State of the art Voltage Source Converter (VSC) based High Voltage Direct Current (HVDC) system and Extra High Voltage Alternating Current (EHVAC) systems will be deployed.

The transmission line for evacuating this power will pass through Himachal Pradesh and Punjab up to Kaithal in Haryana, where it will be integrated with the National Grid. An interconnection is also planned from this project in Leh to existing Ladakh grid so as to ensure reliable power supply to the Ladakh. It will also be connected to Leh-Alusteng-Srinagar line to provide power to Jammu & Kashmir. The project will entail setting up of 713 km transmission lines (including 480 km HVDC line) and 5 GW capacity of HVDC terminal each at Pang (Ladakh) and Kaithal (Haryana).

The project will contribute to achieving the target of 500 GW of installed electricity capacity from non-fossil fuels by year 2030. The project will also help in developing long term energy security of the country and promote ecologically sustainable growth by reducing carbon footprint. It will generate large direct & indirect employment opportunities for both skilled and unskilled personnel in power and other related sectors, especially in Ladakh region.

This project is in addition to Intra-State Transmission System Green Energy Corridor Phase-II (InSTS GEC-II), which is already under implementation in the States of Gujarat, Himachal Pradesh, Karnataka, Kerala, Rajasthan, Tamil Nadu and Uttar Pradesh for grid integration and power evacuation of approx. 20 GW of RE power and is expected to be completed by 2026. The InSTS GEC-II scheme targets addition of 10753 ckm of transmission lines and 27546 MVA capacity of substations having estimated project cost of Rs.12,031.33 crore and CFA @33%, i.e., Rs.3970.34 crore.

SECI crosses milestone of signing Power Sale Agreements of 50 GW Power Capacity

Solar Energy Corporation of India (SECI), a Miniratna Category-I Central Public Sector Enterprise under the Ministry of New & Renewable Energy, has surpassed the milestone of 50 GW aggregate capacity of agreements signed under Power Sale Agreements (PSAs). The latest quantum of PSAs signed stands at 50,292.64 MW now, where SECI is the trader as an Intermediary Procurer.

Recently, SECI signed a PSA of 690 MW Wind Power with Uttar Pradesh Power Corporation Limited and PSAs of 500 MW Solar Power under ISTS Solar Tranche VIII with Tamil Nadu Generation and Distribution Corporation Limited. SECI also entered into a much-awaited Power Usage Agreement with Gujarat Urja Vikas Nigam Limited, for 700 MW Solar Power under CPSU Scheme.

SECI is also marching on the path of power trading, touching new heights as the largest renewable energy trader in the country.

Solar Energy Corporation of India Limited (SECI) is engaged in promotion and development of various renewable energy (RE) resources, especially solar energy, wind energy, RE-based storage systems, trading of power, R&D as well as renewable energy RE-based products like green hydrogen, green ammonia and RE-powered electric vehicles.

The company is one of the nodal agencies for implementation of a number of schemes of the Ministry of New & Renewable Energy. The company has a Category 1 power trading license and is active in this domain through trading of Solar, Wind, Hybrid, RTC and BSESS power from projects set up under the schemes being implemented by it.

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