FIPI

FEDERATION OF INDIAN PETROLEUM INDUSTRY

POLICY & ECONOMIC REPORT

OIL & GAS MARKET

JULY

2023

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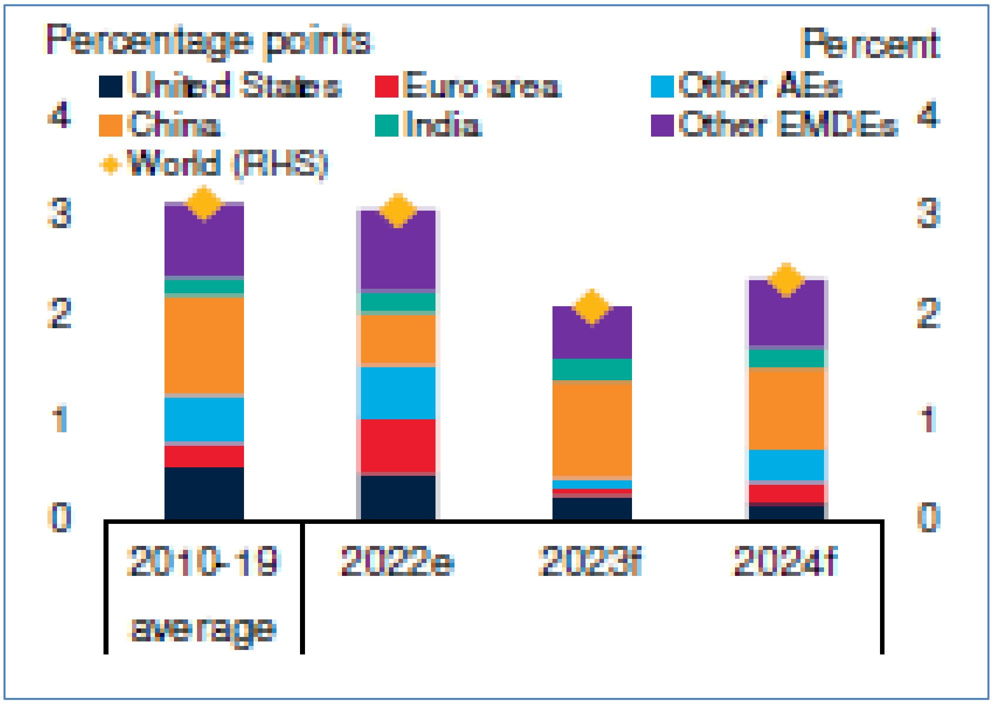
Executive Summary

According to World Bank estimates, the global economy is set to slow substantially from 3.1 % in 2022 to 2.1% in 2023, amid continued monetary policy tightening to rein in high inflation, before a tepid recovery in 2024, to 2.4 %. Global growth has shown weaker signs on account of widespread banking sector stress and persistent inflation pressures that prompt tighter monetary policy. Growth in advanced economies is set to decelerate substantially for 2023, to 0.7 %, due to monetary tightening, less favorable credit conditions, and softening labor markets. In EMDEs, aggregate growth is projected to edge up to 4 % in 2023, almost entirely due to a rebound in China following the removal of strict pandemic-related mobility restrictions. Excluding China, growth in EMDEs is set to slow substantially to 2.9 % this year.

Figure- Contributions to global growth



Source- World Bank

As far as India is concerned, according to World Bank forecasts, growth in India is expected to be at 6.3 % in FY2023-24. This growth is attributed to private consumption being constrained by high inflation and rising borrowing costs, while government consumption is impacted by fiscal consolidation. Growth is projected to pick up slightly through FY2025-26 as inflation moves back in line. World Bank predicts that India will remain the fastest-growing economy (in terms of both aggregate and per capita GDP) of the largest EMDEs.

RBI has projected India's 2023-24 GDP growth at 6.5 %, with quarter Q1 at 8.0 %, Q2 at 6.5 %, Q3 at 6.0 %, and Q4 at 5.7 %. As per the provisional estimates released by the National Statistical Office (NSO) in May 2023, the real GDP growth for 2022-23 stood at 7.2 %, higher than the 7% projected.

India's consumer price index (CPI) inflation rises for the first time in five months to 4.81% in June 2023. Even though there has been a rise in CPI, it has remained within the Reserve Bank of India's (RBI) tolerance band of 2-6 per cent for the fourth consecutive month. CPI was pushed higher than expected due to a less supportive base and the onset of a surge in vegetable prices. Food inflation spiked to 4.49% in June 2023.

Figure- Retail inflation in India

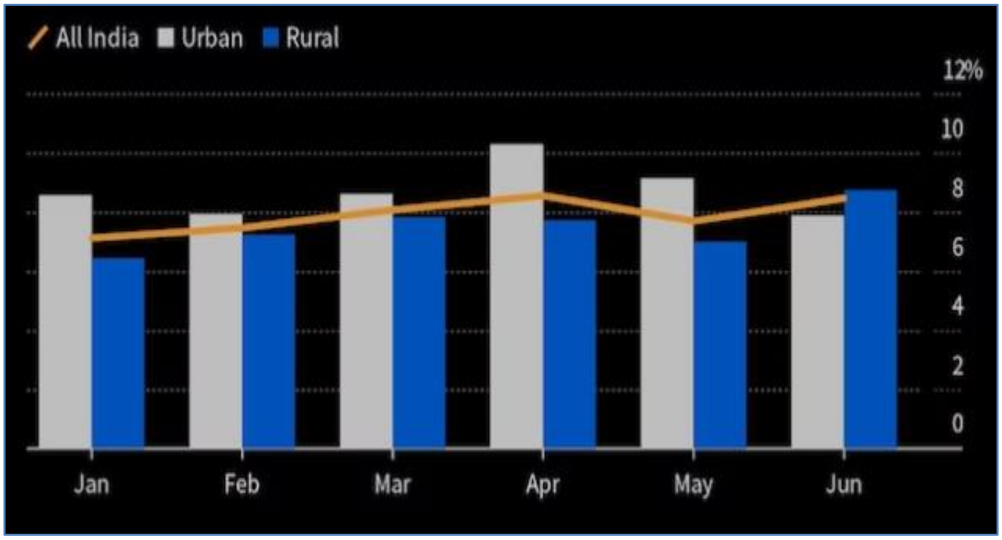
Source- MoSPI

The Reserve Bank of India (RBI) has lowered India's inflation projection for 2023-24 to 5.1% against its April 2023 estimate of 5.2%. According to RBI, on a quarterly basis, retail inflation (or Consumer Price Index) in Q1 is seen at 4.6%, Q2 at 5.2 %, Q3 at 5.4 %, and Q4 at 5.2%. India's headline inflation has come down during March-April 2023 to 4.7 % in April, the lowest since November 2021. RBI's monetary policy committee unanimously decided to keep the repo rate unchanged at 6.5 %. The repo rate is the rate of interest at which RBI lends to other banks.

India's manufacturing industry expanded at the second-fastest rate this year in June 2023, supported by robust demand despite higher inflationary pressures. The S&P Global Manufacturing Purchasing Managers' Index was marked at 57.8 in June 2023 owing to robust demand for Indian-made products, both in the domestic and international markets. The business activity growth in India's services sector eased to a three-month low in the month of June as the S&P Global India services Purchasing Managers' Index (PMI) fell to 58.5 in June 2023 from 61.2 in May 2023.

The unemployment rate in India jumped to 8.45% in June 2023 from 7.68% in the previous month, according to the Centre for Monitoring Indian Economy (CMIE). While unemployment in urban areas eased to 7.87% in June 2023, rural India saw a two-year high of 8.73%.

Figure- India's Unemployment rate



Source- CMIE

India's overall exports (Merchandise and Services combined) in June 2023 is estimated to be USD 60.09 Billion, exhibiting a negative growth of (-) 13.16 per cent over June 2022. Overall imports in June 2023 are estimated to be USD 68.98 Billion, exhibiting a negative growth of (-) 13.91 per cent over June 2022.

As far as oil and gas industry is concerned, benchmark crude oil prices traded in a narrow range as persistent economic woes overshadowed deepening supply cuts from some OPEC+ countries. Amid an overall slackening in oil demand growth, China's widely anticipated reopening has so far failed to extend beyond travel and services, with its economic recovery losing steam after the bounce earlier in the year.

Crude spot prices averaged lower in June, extending the previous month's losses. Selling pressure in futures markets amid persistent worries over the rise in interest rates from central banks in key economies and uncertainty about the strength of demand outlook growth, specifically in China, weighed heavily on oil prices. Crude oil futures prices averaged lower in June, m-o-m, in a volatile market, as selling pressure, including from hedge funds and other money managers, persisted. Sentiment in the market remained dominated by hyped-up worries about the global economy, demand outlooks, and tightening monetary policies in key economies hence remained a drag on prices.

Hedge funds and other money managers continued to further close bullish positions in June after the previous month's heavy selloff, as speculators appeared to bet on lower prices amid a narrative of uncertain economic and oil demand outlooks.

Natural gas spot prices at the U.S. Henry Hub benchmark averaged $2.18 per million British thermal units (MMBtu) in June 2023. Henry Hub spot prices continue to rise throughout the year as U.S. dry natural gas production has been relatively flat in recent months, a production trend that generally continue for the rest of the year. With flat production and year-over-year growth in natural gas consumption, EIA expects U.S. natural gas inventories will reduce the surplus to the five-year average, which will put upward pressure on prices.

Economy in Focus

1. A snapshot of the global economy

Global economic growth

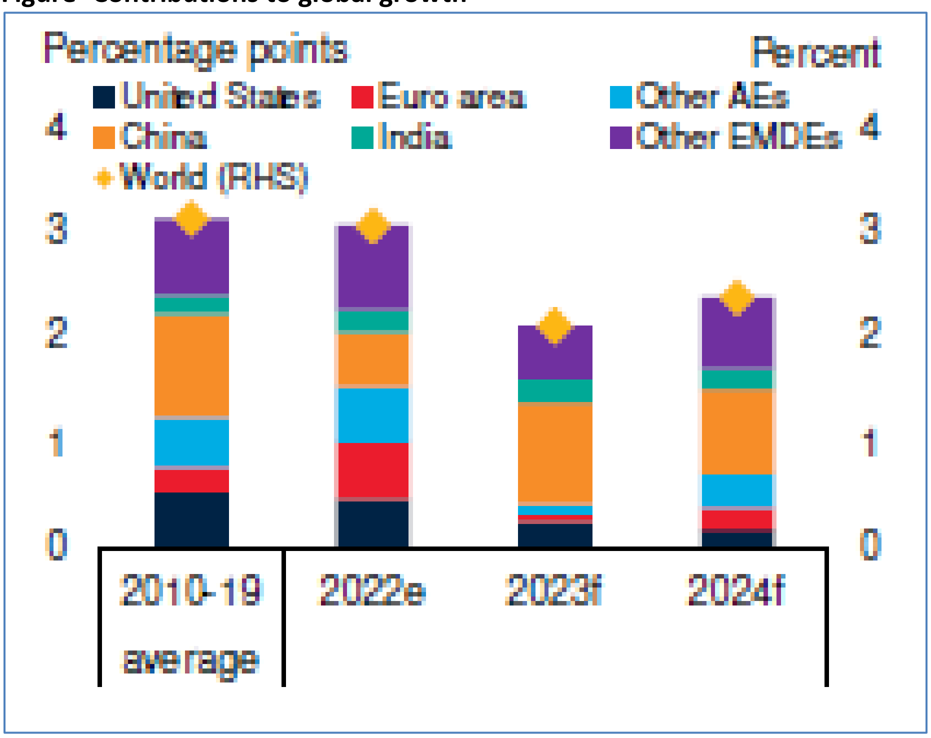
- According to World Bank estimates, the global economy is set to slow substantially from 3.1 % in 2022 to 2.1% in 2023, amid continued monetary policy tightening to rein in high inflation, before a tepid recovery in 2024, to 2.4 %.

- Global growth has shown weaker signs on account of widespread banking sector stress and persistent inflation pressures that prompt tighter monetary policy.

- Growth in advanced economies is set to decelerate substantially for 2023, to 0.7 %, due to monetary tightening, less favorable credit conditions, and softening labor markets.

- In EMDEs, aggregate growth is projected to edge up to 4 % in 2023, almost entirely due to a rebound in China following the removal of strict pandemic-related mobility restrictions. Excluding China, growth in EMDEs is set to slow substantially to 2.9 % this year.

Figure- Contributions to global growth



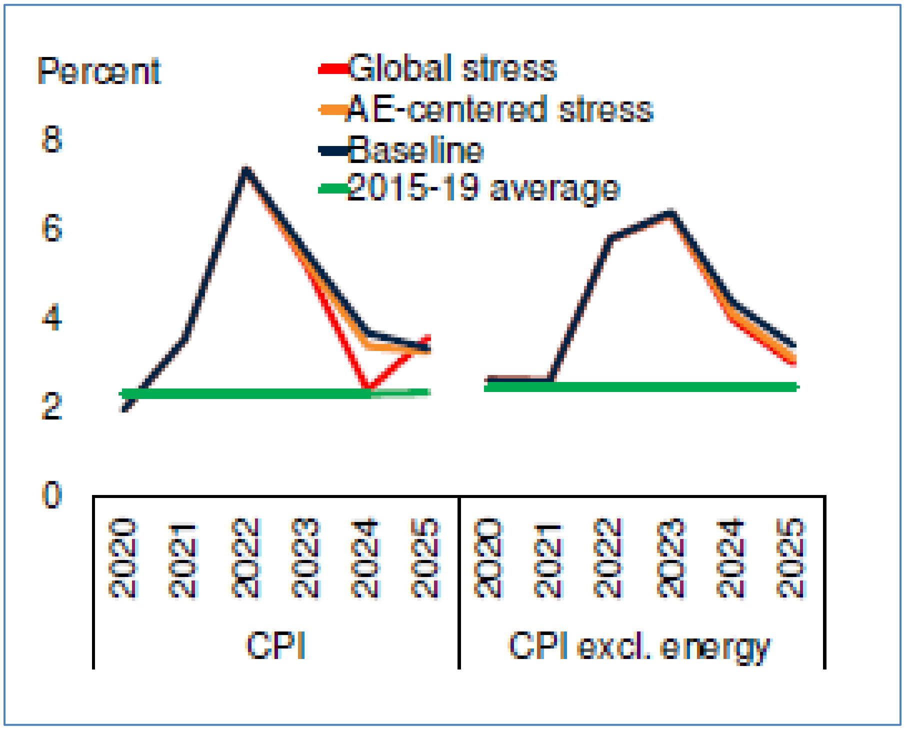
Source- World Bank

Global inflation

- Headline inflation is projected to fall from 7.3 % in 2022 to 5.5 % in 2023.

- The combination of weaker growth and lower commodity prices, by 2024, are expected to dampen core inflation, with headline inflation falling to 3.7 %.

Figure- Global Inflation



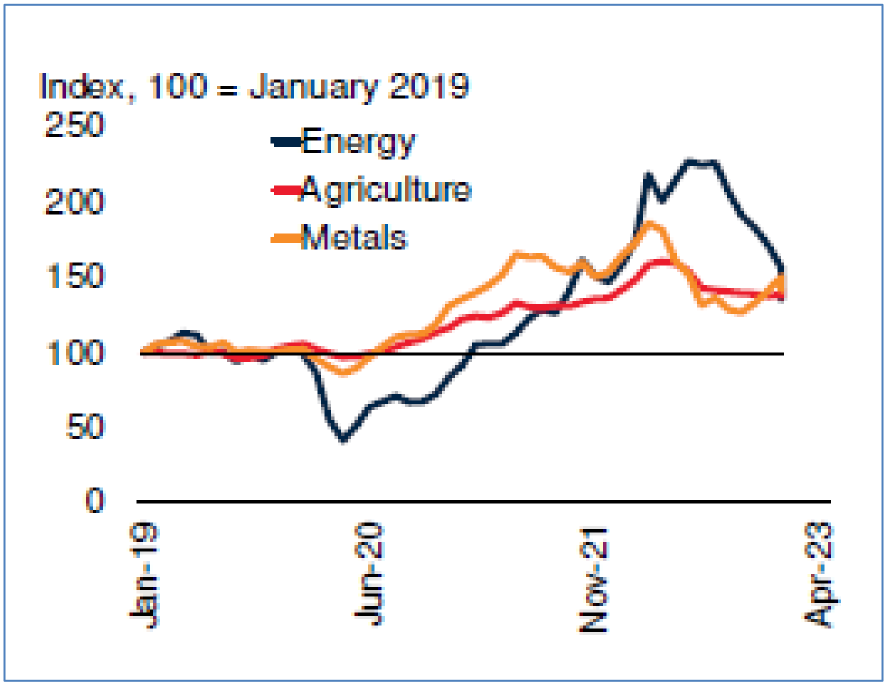
Source- World Bank

- Further, energy prices have eased considerably since their peak in the third quarter of 2022. A warmer-than expected northern hemisphere winter reduced natural gas and electricity consumption, especially in Europe. Oil prices have averaged $80/bbl in 2023 to date, but they have been volatile.

- Crude oil prices are projected to average $80/bbl in 2023, a $8/bbl downward revision from the January forecast, and to edge up to $82/bbl in 2024, reflecting a modest pickup in demand.

- Prices for natural gas and coal are expected to moderate in 2023 and decline further in 2024, as Europe has made substantial progress in improving efficiency and reducing energy demand.

Figure- Commodity price indexes



Source- World Bank

- Agricultural prices are projected to fall 7.2 % in 2023 and ease further in 2024, as production of grains and oilseeds is expected to increase. Nonetheless, food prices have risen significantly faster than overall inflation since the pandemic, with substantially larger increases in some countries as a result of weaker currencies and transport disruptions. Overall, the agricultural price index is expected to remain well above pre-pandemic nominal levels in 2024.

Global Trade

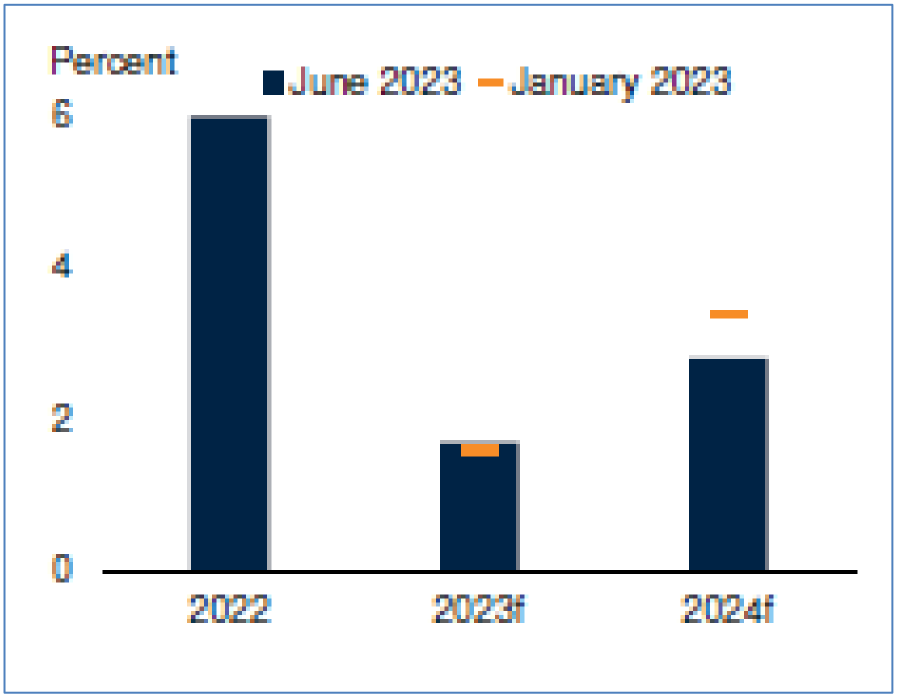
- Global goods trade growth slowed in the first half of 2023 in tandem with weakening global industrial production.

- Global trade growth is forecast to slow from 6 % in 2022 to 1.7 % in 2023. As global consumption returns to its pre-pandemic mix between goods and services, trade is expected to recover to 2.8 % in 2024.

- The trade outlook is subject to various downside risks, including weaker-than-expected global demand, tighter global financial conditions, worsening trade tensions between major economies, mounting geopolitical uncertainty, and a further rise in protectionist measures.

- Services trade, by contrast, continued to strengthen following the easing of pandemic-induced mobility restrictions. International tourist arrivals are expected to approach 95 % of 2019 levels in 2023, an increase from 63 % in 2022.

Figure- Global Trade forecast



Source- World Bank

2. **The World Investment Report 2023 shows developing countries need renewable energy investments of about $1.7 trillion annually but attracted only $544 billion in 2022- UNCTAD**

- The United Nations Conference on Trade and Development (UNCTAD) called for urgent support to developing countries to enable them to attract significantly more investment for their transition to clean energy.
- UNCTAD's World Investment Report 2023 published in the month of July shows that much of the growth in international investment in renewable energy, which has nearly tripled since the adoption of the Paris Agreement in 2015, has been concentrated in developed countries.
- Developing countries need renewable energy investments of about $1.7 trillion annually but attracted foreign direct investment in clean energy worth only $544 billion in 2022, according to the report.
- Total funding needs for the energy transition in developing countries are much larger and include investment in power grids, transmission lines, storage, and energy efficiency.

The key findings from the report-:

- The report proposes a compact setting out priority actions ranging from financing mechanisms to investment policies to enable developing countries to attract investments to build sustainable energy systems.
- On financing, the report calls for the de-risking of energy transition investment in developing countries through loans, guarantees, insurance instruments and equity participation of the public sector – through public private partnerships and blended finance – and multilateral development banks.
- Also, partnerships between international investors, the public sector and multilateral financial institutions can significantly reduce the cost of capital for clean energy investment in developing countries.
- UNCTAD also emphasizes the need for debt relief to offer developing countries fiscal space to make the investments necessary for the clean energy transition and to help them attract international private investment by lowering country risk ratings.

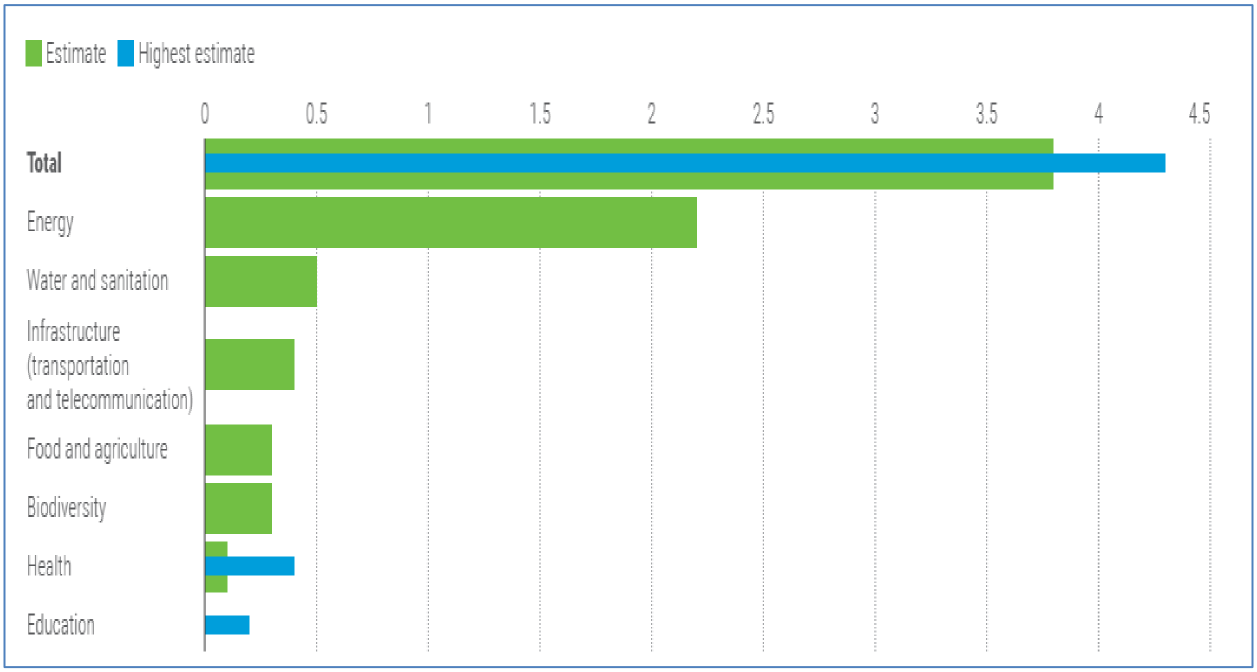
Renewable energy investment growth slows

- The report shows that the growth of investment in renewable energy slowed down in 2022, as international project finance deals declined.
- Although total international investment in renewables has nearly tripled since 2015, in developing countries the growth rate has exceeded GDP growth only marginally.
- The report also finds that energy companies among the top 100 multinationals are divesting fossil fuel assets at a rate of about $15 billion per year.

3. Sustainable development goals investment gap widens to $4 trillion per year- UNCTAD

According to UNCTAD, the investment gap across all sectors of the Sustainable Development Goals (SDGs) has increased to more than $4 trillion per year from $2.5 trillion in 2015. The largest gaps are in energy, water, and transport infrastructure. The increase is the result of both underinvestment and additional needs.

Figure- Estimated annual investment gap to reach the SDGs by 2030, total and per sector, capital expenditure, trillions of US dollars



Source- UNCTAD

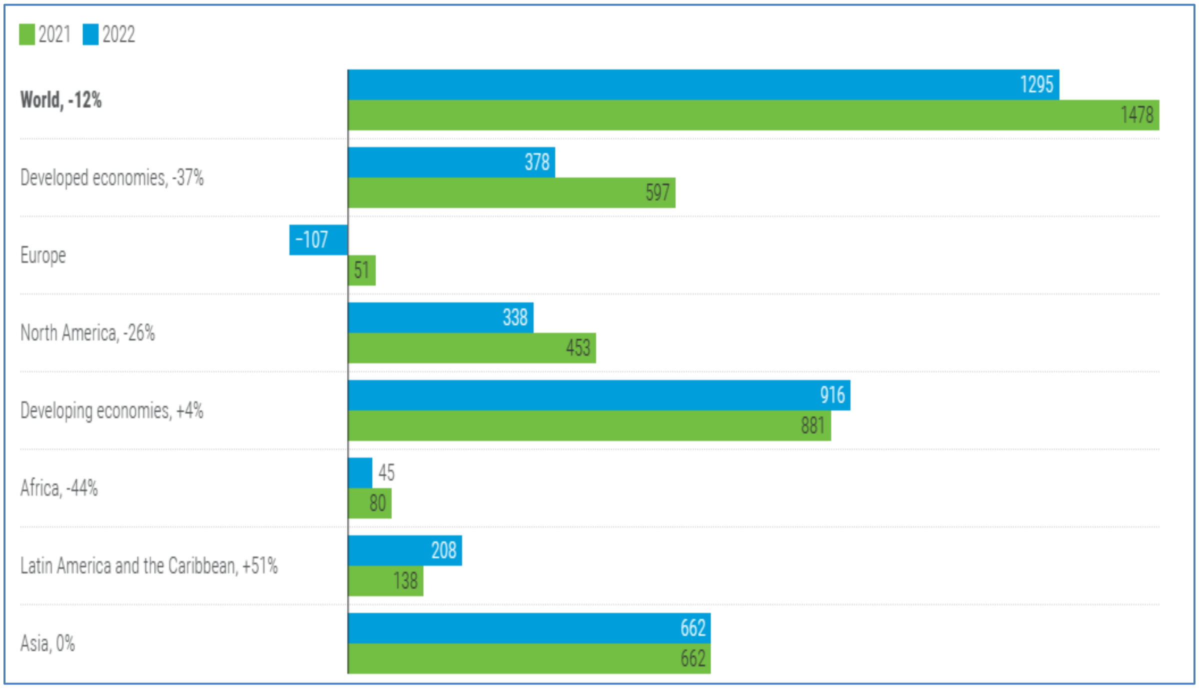
The growing SDG investment gap in developing countries contrasts with positive sustainability trends in global capital markets. The value of the sustainable finance market reached $5.8 trillion in 2022.

4. Global foreign direct investment fell by 12% in 2022- UNCTAD

Global foreign direct investment (FDI) declined by 12% in 2022, to $1.3 trillion, after a strong rebound in 2021 following the steep drop induced by COVID-19 in 2020.

The decline was mainly a result of lower volumes of financial flows and transactions in developed countries. The slowdown was driven by overlapping crises: the war in Ukraine, high food and energy prices and debt pressures. The fall in FDI flows was mostly caused by financial transactions of multinational enterprises in developed economies, where FDI fell by 37% to $378 billion.

Figure- Global Foreign Direct Investment (by sub region, bn of USD, per cent, 2021 & 2022)



Source- UNCTAD

As the global environment for international business and cross-border investment remains challenging in 2023, UNCTAD expects downward pressure on global FDI to continue in 2023.

- FDI flows to developed economies declined and developing countries accounted for two thirds of global FDI in 2022, with Latin America and the Caribbean experiencing a significant increase. FDI inflows in least developed countries fell by 16%.
- The FDI increase in developing countries was unevenly shared. Much of the growth was concentrated in a few large emerging economies.
- FDI in Africa fell to prior levels of $45 billion
- FDI inflows in developing countries in Asia were flat at $662 billion but still accounted for more than half of global FDI.
- Flows to Latin America and the Caribbean increased by 51%, reaching $208 billion, the highest level ever recorded.

5. Upstream spend of $500bn a year enough to meet peak oil demand in 2030s- Wood Mackenzie

According to Wood Mackenzie, investment of half a trillion US dollars a year will be enough for the world to meet peak oil and gas demand in the 2030s. Despite concerns about underinvestment in upstream, research from Wood Mackenzie claims that the industry can be sustained without a substantial increase to current annual levels of spend.

Peak oil, a theory devised by American geologist M. King Hubbert, is a theoretical point in time when production peaks, and thereafter enters a long and steady decline.

Entitled 'Enough is Enough? Debunking the myth of upstream investment,' the study explores the widespread belief that industry is underinvesting and a supply crunch is inevitable, be it sooner or later.

From 2024, the research body expects oil demand growth to slow, reaching a peak of 108 million barrels per day (b/d) in the early 2030s. Further, most of the industry's oil and gas investment for the rest of this decade, WoodMac predicts, will target advantaged resources: those with the lowest cost, lowest emissions and least risk.

6. Indian Economy

India's economic growth

According to World Bank forecasts, growth in India is expected to be at 6.3 % in FY2023-24. This growth is attributed to private consumption being constrained by high inflation and rising borrowing costs, while government consumption is impacted by fiscal consolidation.

Growth is projected to pick up slightly through FY2025-26 as inflation moves back in line. World Bank predicts that India will remain the fastest-growing economy (in terms of both aggregate and per capita GDP) of the largest EMDEs.

As far as RBI is concerned, India's 2023-24 GDP growth is expected to be projected at 6.5 %, with quarter Q1 at 8.0 %, Q2 at 6.5 %, Q3 at 6.0 %, and Q4 at 5.7 %. As per the provisional estimates released by the National Statistical Office (NSO) in May 2023, the real GDP growth for 2022-23 stood at 7.2 %, higher than the 7% projected.

Inflation in India

- India's consumer price index (CPI) inflation rises for the first time in five months to 4.81% in June 2023.
- Even though there has been a rise in CPI, it has remained within the Reserve Bank of India's (RBI) tolerance band of 2-6 per cent for the fourth consecutive month.
- CPI was pushed higher than expected due to a less supportive base and the onset of a surge in vegetable prices. Food inflation spiked to 4.49% in June 2023.
- As per the Ministry of Statistics & Programme Implementation (MoSPI), CPI inflation stood at 180.9 in June 2023, versus 178.2 in May month and 172.6 in the same month a year ago.
- In percentage terms, the CPI based inflation came in at 4.81% versus 4.31% in May 2023 and 7.01% in June last year. Rural inflation stood at 4.72 per cent while urban inflation stood at 4.96 per cent.

- Further, in June 2023, the food and beverages inflation rate were at 4.63%, pan, tobacco, and intoxicants inflation rate came in at 3.65%. Clothing and footwear recorded an inflation of 6.19%, meanwhile, housing inflation stood at 4.56%. Fuel and light inflation were at 3.92%, and miscellaneous saw inflation of 5.19%.

Figure- Retail inflation in India

Source- MoSPI

RBI stance on inflation: -

- The Reserve Bank of India (RBI) has lowered India’s inflation projection for 2023-24 to 5.1% against its April 2023 estimate of 5.2%.

- According to RBI, on a quarterly basis, retail inflation (or Consumer Price Index) in Q1 is seen at 4.6%, Q2 at 5.2 %, Q3 at 5.4 %, and Q4 at 5.2%. India’s headline inflation has come down during March-April 2023 to 4.7 % in April, the lowest since November 2021.

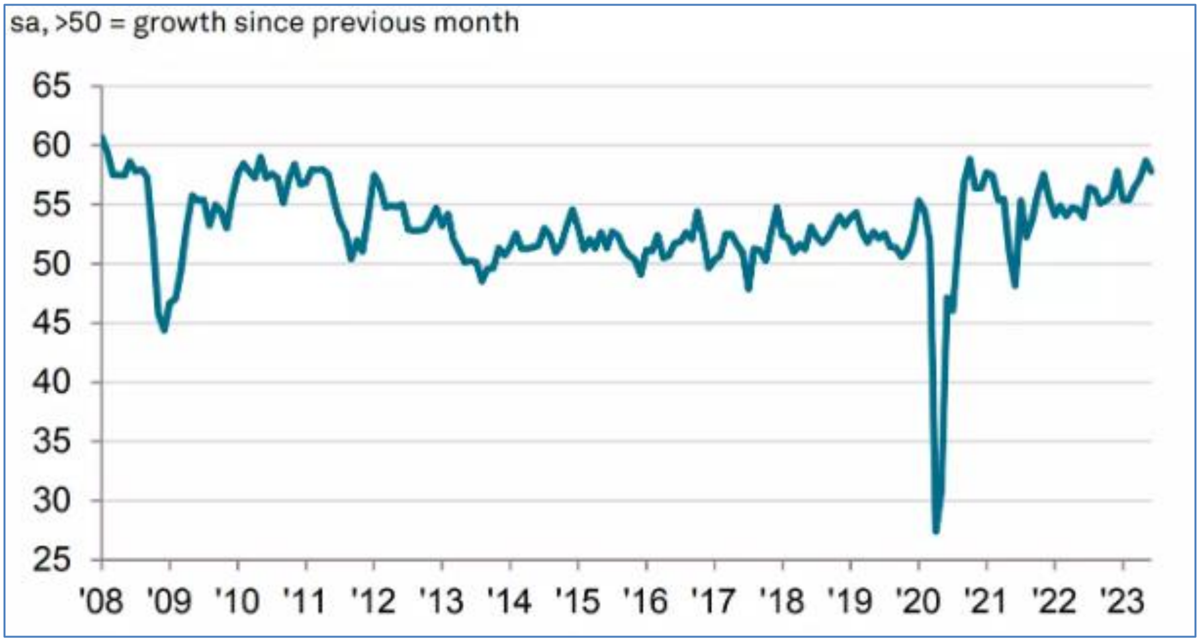
- RBI’s monetary policy committee unanimously decided to keep the repo rate unchanged at 6.5 %. The repo rate is the rate of interest at which RBI lends to other banks.

India PMI

- India's manufacturing industry expanded at the second-fastest rate this year in June 2023, supported by robust demand despite higher inflationary pressures.

- The S&P Global Manufacturing Purchasing Managers' Index was marked at 57.8 in June 2023 owing to robust demand for Indian-made products, both in the domestic and international markets.

Figure- India Manufacturing PMI



Source- S&P Global

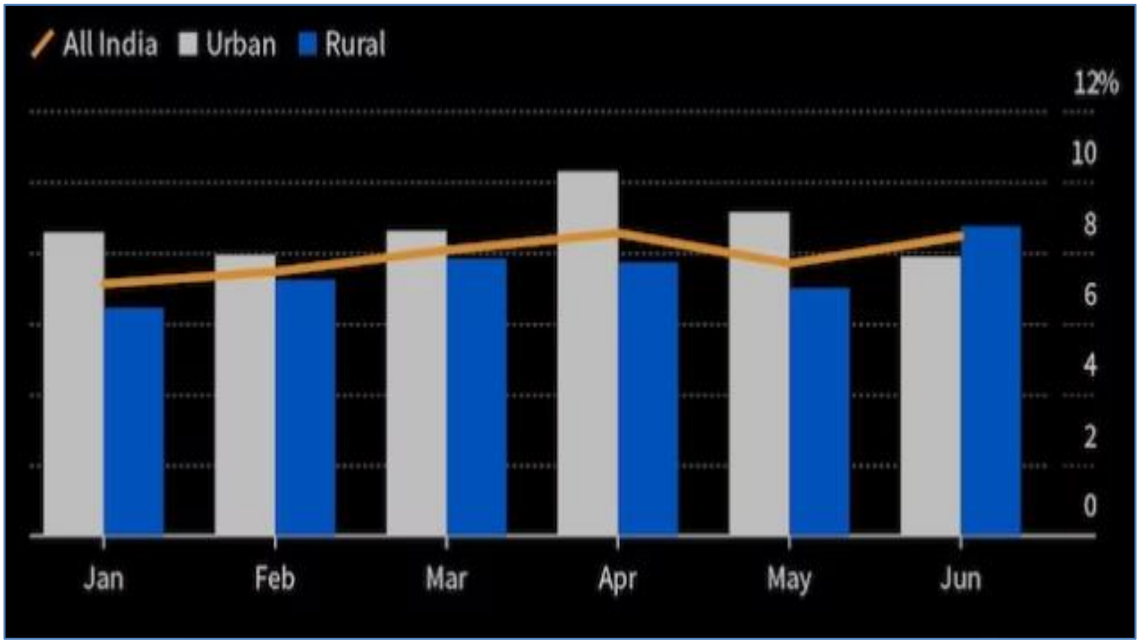
- The business activity growth in India's services sector eased to a three-month low in the month of June as the S&P Global India services Purchasing Managers' Index (PMI) fell to 58.5 in June 2023 from 61.2 in May 2023.

Unemployment in India

- The unemployment rate jumped to 8.45% in June 2023 from 7.68% in the previous month, according to the Centre for Monitoring Indian Economy (CMIE).

- While unemployment in urban areas eased to 7.87% in June 2023, rural India saw a two-year high of 8.73%.

Figure- India's Unemployment rate



Source- CMIE

India's external position

India's foreign trade position

- India's overall exports (Merchandise and Services combined) in June 2023 is estimated to be USD 60.09 Billion, exhibiting a negative growth of (-) 13.16 per cent over June 2022.

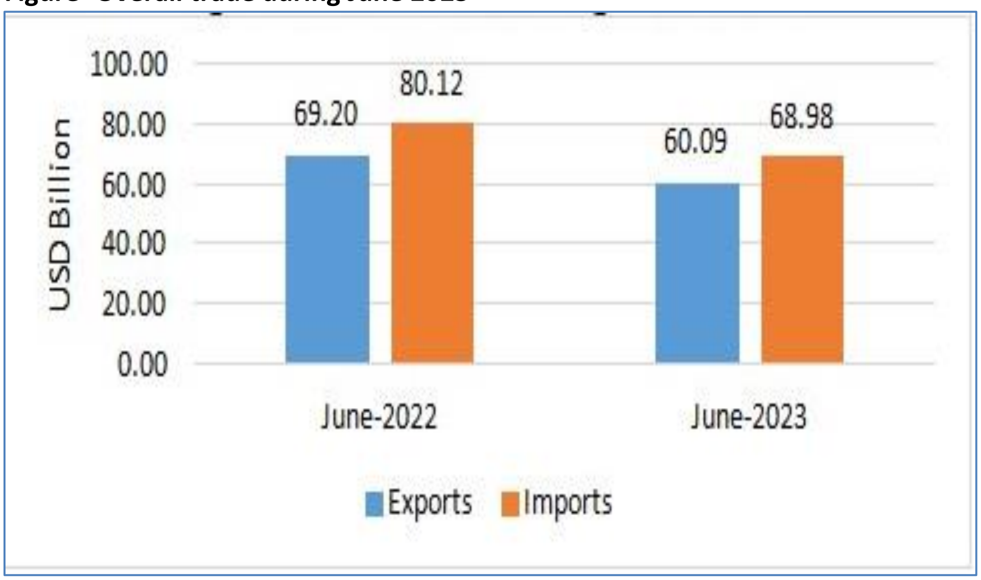
- Overall imports in June 2023 are estimated to be USD 68.98 Billion, exhibiting a negative growth of (-) 13.91 per cent over June 2022.

Table- Trade during June 2023

		June 2023 (USD Billion)	June 2022 (USD Billion)
Merchandise	Exports	32.97	42.28
	Imports	53.10	64.35
Services*	Exports	27.12	26.92
	Imports	15.88	15.77
Overall Trade (Merchandise +Services) *	Exports	60.09	69.20
	Imports	68.98	80.12
	Trade Balance	-8.89	-10.92

Source- RBI

Figure- Overall trade during June 2023



Source- RBI

- For the month of June 2023, under merchandise exports, 9 of the 30 key sectors exhibited growth in June 2023 as compared to same period last year (June 2022). These include Iron Ore (1664.3%), Electronic Goods (45.36%), Oil Seeds (33.33%), Cashew (19.6%), Tobacco (17.8%), Fruits & Vegetables (14.1%), Coffee (7.1%), Handicrafts Excl. Hand Made Carpet (5.14%) and Drugs & Pharmaceuticals (5.13%).

- Exports of Electronic goods increased by 45.36 percent during June 2023 at USD 2.43 Billion as compared to USD 1.67 Billion in June 2022. During April-June 2023 electronic goods exports were recorded at USD 6.96 Billion as compared to USD 4.73 Billion during April-June 2022, registering a growth of 47.05 percent.

- Textiles exports continued to decline in June 2023 because of subdued demand due to recessionary effects in major economies.

- Under merchandise imports, 21 out of 30 key sectors exhibited negative growth in June 2023. These include Silver (-94.36%), Coal, Coke & Briquettes, Etc. (-47.61%), Sulphur & Unroasted Iron Pyrites (-35.64%), Petroleum, Crude & Products (-33.77%), Textile Yarn Fabric, Made-Up Articles (-33.72%), Organic & Inorganic Chemicals (-30.53%), Wood & Wood Products (-28.83%), Vegetable Oil (-28.18%), Artificial Resins, Plastic Materials, Etc. (-25.99%), Dyeing/Tanning/Colouring Materials (-25.55%), Pearls, Precious & Semi-Precious Stones (-24.46%), Cotton Raw & Waste (-24.27%), Fruits & Vegetables (-18.04%), Metalliferous Ores & Other Minerals (-16.99%), Fertilisers, Crude & Manufactured (-8.6%), Medicinal & Pharmaceutical Products (-5.41%), Machine Tools (-5.36%), Pulp And Waste Paper (-4.3%), Non-Ferrous Metals (-3.51%), Machinery, Electrical & Non-Electrical (-2.19%) and Transport Equipment (-1.57%).

- India’s trade deficit has shown considerable decline in April-June 2023. Overall trade deficit for April-June 2023 is estimated at USD 22.59 Billion as compared to the deficit of USD 31.49 Billion during April-June 2022, registering a decline of (-) 28.27 percent. The merchandise trade deficit during April-June 2023 was USD 57.60 Billion compared to USD 62.55 Billion during April-June 2022, registering a decline of (-) 7.92 percent.

7. Outstanding performance by India in United Nations Economic and Social Commission for Asia Pacific's (UNESCAP) Global Survey on Digital and Sustainable Trade Facilitation.

India continues to demonstrate its commitment to digital and sustainable trade facilitation, as evidenced by its outstanding performance in the recently released United Nations Economic and Social Commission for Asia Pacific's (UNESCAP) Global Survey on Digital and Sustainable Trade Facilitation.

The 2023 survey, covering more than 140 economies and evaluating 60 trade facilitation measures, has positioned India at the forefront of global trade facilitation efforts, with an impressive score of 93.55% in 2023 vis a vis 90.32% in 2021.

Figure- India's exceptional progress across various sub-indicators - United Nations Economic and Social Commission for Asia Pacific's (UNESCAP) Global Survey on Digital and Sustainable Trade Facilitation (2023)

Source- pib

The 2023 Survey has recognized India's exceptional progress across various sub indicators, with the country achieving a perfect score of 100% in four key areas: Transparency, Formalities, Institutional Arrangement and Cooperation, and Paperless Trade. These remarkable scores are a testament to India's relentless efforts in streamlining trade processes, enhancing transparency, and promoting cooperation among stakeholders through initiative such as Turant Customs, Single Window Interface for Facilitation of Trade (SWIFT), Pre-Arrival data processing, e- Sanchit, Coordinated Border Management etc.

India has witnessed a substantial improvement in the score for "Women in Trade Facilitation" component from 66.7% in 2021 to 77.8% in 2023 thereby indicating commitment to gender inclusivity and the empowerment of women in the trade sector.

India is the best performing country amongst all the countries of South Asia region. The overall score of India has been greater than many developed countries including Canada, France, UK, Germany etc.

8. World Bank approves $1.5 billion financing for India's low carbon energy sector

The World Bank has approved $1.5 billion in financing to accelerate the development of India's low carbon energy sector. The financing will help India promote low-carbon energy by scaling up renewable energy, developing green hydrogen and stimulating climate finance for low-carbon energy investments. The program will support the successful implementation of the National Green Hydrogen Mission that aims to stimulate $100 billion in private sector investment by 2030.

The program aims to scale up renewable energy supply by reducing costs and improving power grid integration, while helping India reach its committed 500 gigawatts (GW) of renewable energy capacity by 2030.

According to World Bank, while India's per capita energy consumption was only one-third of the global average, demand was expected to grow rapidly with the expansion of the economy. This calls for a phasing down of fossil-based energy sources in line with India's goal of achieving net-zero by 2070.

The financing programme is the first in two operations and aims to support India in developing green hydrogen. The low-carbon energy is produced by electrolysis of water powered by renewable energy. The operation will help stimulate private financing and other support by addressing viability funding gaps, reducing off-taker risks, boosting grid integration of renewables, and stimulating demand for renewable energy.

9. Government notifies draft framework for formation of India's first carbon market

The Indian government has notified a draft of the Carbon Credit Trading Scheme, 2023. In this context, a carbon market will help decarbonize the commercial and industrial (C&I) sector. A carbon market in India, which as per the notification, as of now will be a regulated domestic one, will provide flexibility to entities in hard-to-abate sectors to supplement their own greenhouse emission reduction efforts with credits from the carbon market.

The steering committee will govern and oversee the functions of the carbon market. It will recommend the Bureau of Energy Efficiency (BEE) for the formulation and finalisation of procedures for institutionalising the Indian carbon market and setting specific greenhouse gas emission targets for the obligated entities among other functions.

This panel will have secretary of the Ministry of Environment, Forest and Climate Change as its co-chairperson and members from the ministries of finance, new and renewable energy, steel, coal, and petroleum, Niti Aayog among others.

The Central Electricity Regulatory Commission (CERC) will be the Indian carbon market regulator for all trading activities, while Grid-India will be its registry. The BEE will be the administrator of the carbon market, and it will also determine the procedure, including eligibility criteria for the accreditation of any agency, to function as an accredited carbon verification agency.

A compliance mechanism will also be formulated, for which the power ministry would identify the sectors. Following the identification of the sectors, the BEE will develop the trajectory and targets for the entities under the compliance mechanism.

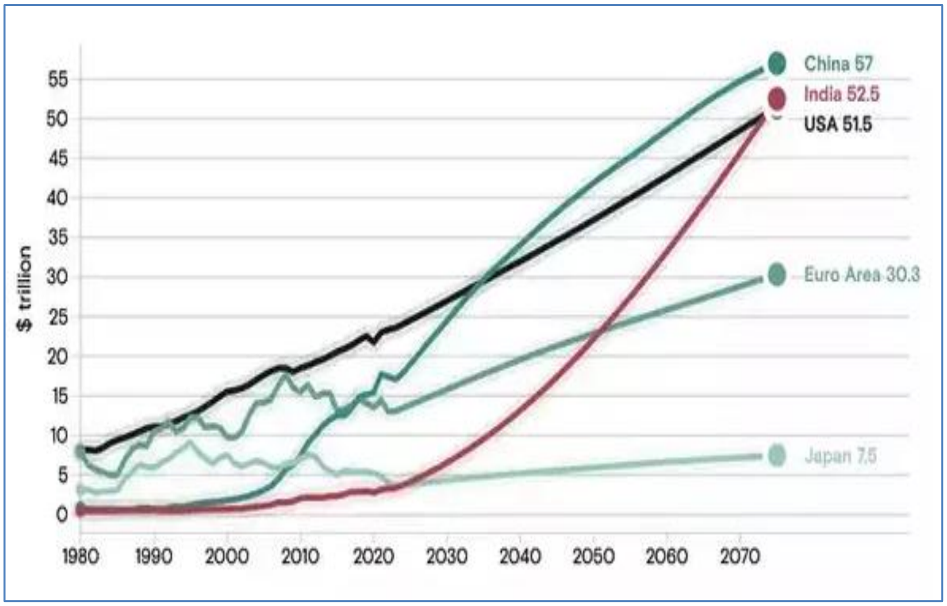
The carbon trading market is expected to incentivize entities with low reduction costs to reduce emissions beyond their mandate. Besides, trading in the carbon market could reduce the overall cost of emission reductions in India.

10. India to surpass US to become world's 2nd largest economy by 2075: Report

According to a report by Goldman Sachs Research, India is expected to overtake the US and become the world's second-largest economy by 2075. As of now, India holds the position of the world's fifth-largest economy, following Germany, Japan, China, and the US.

India's population of 1.4 billion, which is already said to be the largest in the world, is set to be a key driver behind the country's economic growth in coming years.

Figure- GDP level projections in real 2021 USD trillion



Source- Goldman Sachs Research

According to Goldman Sachs, to harness the potential of its growing population, India needs to focus on increasing labor force participation and providing training and skills to its talented workforce.

Capital investment is another crucial driver, as India's savings rate is expected to rise with falling dependency ratios, increasing incomes, and a more developed financial sector. Favorable demographics, including a large and relatively young population, will also contribute to India's potential growth.

11. **India sees 415 million people coming out of poverty in 15 years: United Nations**

According to the United Nations, India has witnessed a remarkable achievement in poverty reduction, with a staggering 415 million individuals transitioning out of poverty within a relatively short span of 15 years, from 2005-2006 to 2019-2021.

This was highlighted in the latest update of the global Multidimensional Poverty Index (MPI), which was jointly released by the United Nations Development Programme (UNDP) and the Oxford Poverty and Human Development Initiative (OPHI) at the University of Oxford.

The report showed that 25 countries, including India, managed to halve their global MPI values within a 15-year timeframe, illustrating the possibility of rapid progress. Among the countries that achieved this feat are Cambodia, China, Congo, Honduras, India, Indonesia, Morocco, Serbia, and Vietnam. According to the report, people who are multidimensionally poor and deprived under the nutrition indicator in India declined from 44.3 per cent in 2005-2006 to 11.8 per cent in 2019-2021, and child mortality fell from 4.5 per cent to 1.5 per cent.

The global MPI monitors poverty reduction and informs policy, showing how people experience poverty in different aspects of their daily lives - from access to education and health to living standards such as housing, drinking water, sanitation, and electricity.

Lessons from Economics

Greenwashing

Greenwashing is the act of providing the consumers or investors with misleading or false information about the environment impact of a company's products and operations. It involves making an unsubstantiated claim to deceive consumers into believing that a company's products are environmentally friendly or have a greater positive environmental impact than they do.

The aim to perform greenwashing is an attempt to capitalize on the growing demand for environmentally sound products, which are more natural, healthier, free of chemicals, and recyclable. Companies have engaged in greenwashing via press releases and commercials touting their clean energy or pollution reduction efforts. Thus, to capitalize on the socially responsible or environmental, social, and governance (ESG) investing movement, many companies undertake greenwashing.

Greenwashing has increased in recent years to meet consumer demand for environmentally-friendly goods and services. New regulations, laws, and guidelines by organizations have been formulated to discourage companies from using greenwashing to deceive consumers.

1. In 2021, Committee of Advertising Practice (CAP), Broadcast Committee of Advertising Practice (BCAP) and the European Commission published guidance to assist organizations in interpreting their regulations on environmental advertising. The guidance includes the explanations such as:

    - **Basis of claims**. The basis of environmental claims must be clear. Marketers should not assume consumers hold a high level of understanding of their environmental claims and must include any additional information required to clarify their claims.
    - **Clarity of terms**. The meaning of all terms must be clear to consumers. Marketers should not assume that their consumers have a level of knowledge greater than is reasonable or likely.

- **Adverse effects**. Products that do not damage the environment should not be marketed to imply that the product has been changed to make it safe. For example, if a product is environmentally damaging (four example, a petrol four-wheel drive), advertisers should not imply that they have stopped the adverse impact through improvements (for example, the car may be *"greener"* if emissions are lowered but not *"green"*).
- **Social responsibility**. Marketing must be prepared with a sense of responsibility to the audience and society.

2. **The role of Federal Trade Commission (FTC)-** The U.S. Federal Trade Commission (FTC) helps protect consumers by enforcing laws designed to ensure a competitive, fair marketplace. The FTC offers guidelines on how to differentiate real green products from the greenwashed:

    - Packaging and advertising should explain the product's green claims in plain language and readable type near the claim.
    - An environmental marketing claim should specify whether it refers to the product, the packaging, or just a portion of the product or package.
    - A product's marketing claim should not overstate, an environmental attribute or benefit.
    - If a product claims a benefit compared with the competition, then the claim should be substantiated.

Examples of Greenwashing

- In 2009, McDonald's changed the color of its European logos from yellow-and-red to yellow-and-green; in order to show their responsibility for the preservation of natural resources. In October 2021 McDonald's was accused of greenwashing after announcing its pledge to reach net-zero emissions by 2050.

- In 2018, in response to increased calls to ban plastic straws, Starbucks introduced a lid with a built-in drinking straw that contained more plastic by weight than the old straw and lid together.

It is difficult to spot greenwashing however, true green products are often certified by an official vetting organization, which will be clearly labeled.

Oil Market

Crude oil price – Monthly Review

Benchmark crude oil prices traded in a narrow range as persistent economic woes overshadowed deepening supply cuts from some OPEC+ countries. Amid an overall slackening in oil demand growth, China's widely expected reopening has so far failed to extend beyond travel and services, with its economic recovery losing steam after the bounce earlier in the year.

Crude spot prices averaged lower in June, extending the previous month's losses. Selling pressure in futures markets amid persistent worries over the rise in interest rates from central banks in key economies and uncertainty about the strength of demand outlook growth, specifically in China, weighed heavily on oil prices. This largely offset positive factors that limited price decline, including signs of healthy demand in the spot market and rising global refinery runs, as well as improving oil supply-demand fundamental outlooks and rising refining margins in all major trading hubs. The decline in prices was more in light sweet benchmarks Brent and WTI.

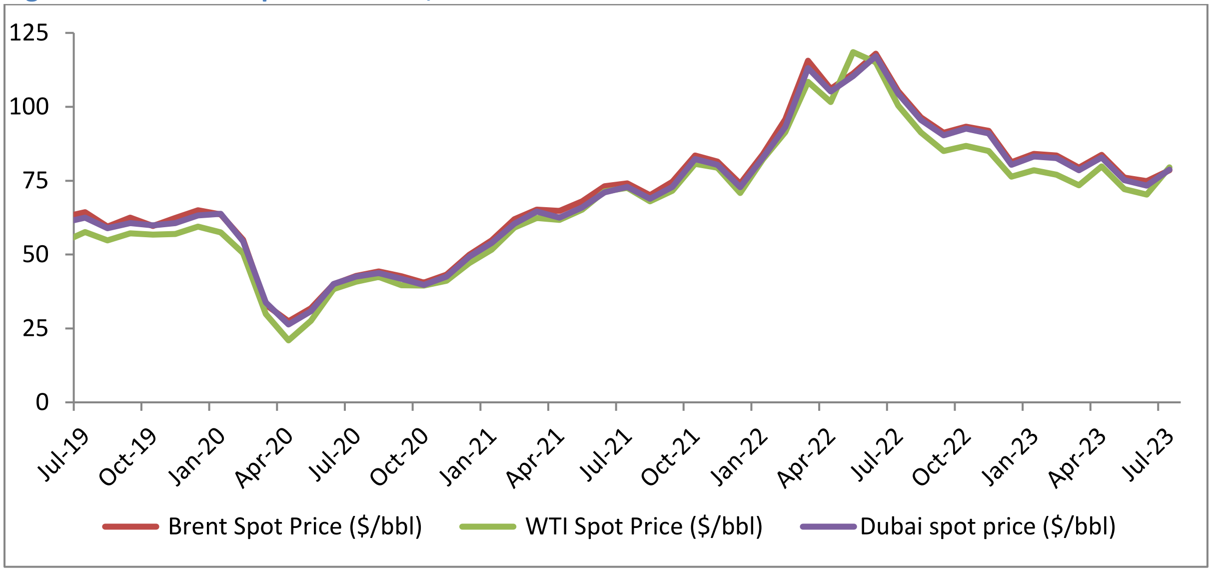
Crude oil futures prices averaged lower in June, m-o-m, in a volatile market, as selling pressure, including from hedge funds and other money managers, persisted. Sentiment in the market remained dominated by increasing worries about the global economy, demand outlooks, and tightening monetary policies in key economies hence remained a drag on prices. However, improving supply/demand outlooks and alleviating investors' worries about the U.S. banking sector and market reactions to the passage of a U.S. debt-ceiling bill in the U.S. House of Representatives curbed selling in crude futures contracts.

Hedge funds and other money managers continued to further close bullish positions in June after the previous month's heavy selloff, as speculators appeared to bet on lower prices amid a narrative of uncertain economic and oil demand outlooks. Lower oil prices in May and June likely prompted speculators to liquidate more long positions. The selling was concentrated in NYMEX WTI futures and options contracts in June, while speculators kept their positions in ICE Brent a little changed over the same period. The market structure of all three crude benchmarks, namely ICE Brent, NYMEX WTI and DME Oman weakened in June compared with the previous month, and the nearest time spreads of ICE Brent and NYMEX WTI flipped into contango, signaling investors' perceptions of an oversupplied short-term crude market.

The OPEC Reference Basket (ORB) price fell in June by 63¢ m-o-m, or 0.8%, to stand at $75.19/b, amid a decline in ORB component-related crude benchmarks, and mixed movement in crude differentials and official selling prices. The decline was seen mainly in sweet grades and Brent-related components, amid the high availability of light sweet crude in the Atlantic Basin.

Brent crude ranged an average to $78.56 a barrel and WTI ranged to $79.56 per barrel in the month of July.

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



Source: World Bank

- Brent crude price averaged $78.56 per bbl in July 2023, up by 4.9% on a month on month (MoM) and down by 25.4% on year on year (YoY) basis, respectively.
- WTI crude price averaged $79.56 per bbl in July 2023, up by 13.2% on a month on month (MoM) and down by 20.7% on year on year (YoY) basis, respectively.
- Dubai crude price averaged $78.70 per bbl in July 2023, up by 7.4% on a month on month (MoM) and down by 24.6% on year on year (YoY) basis, respectively.

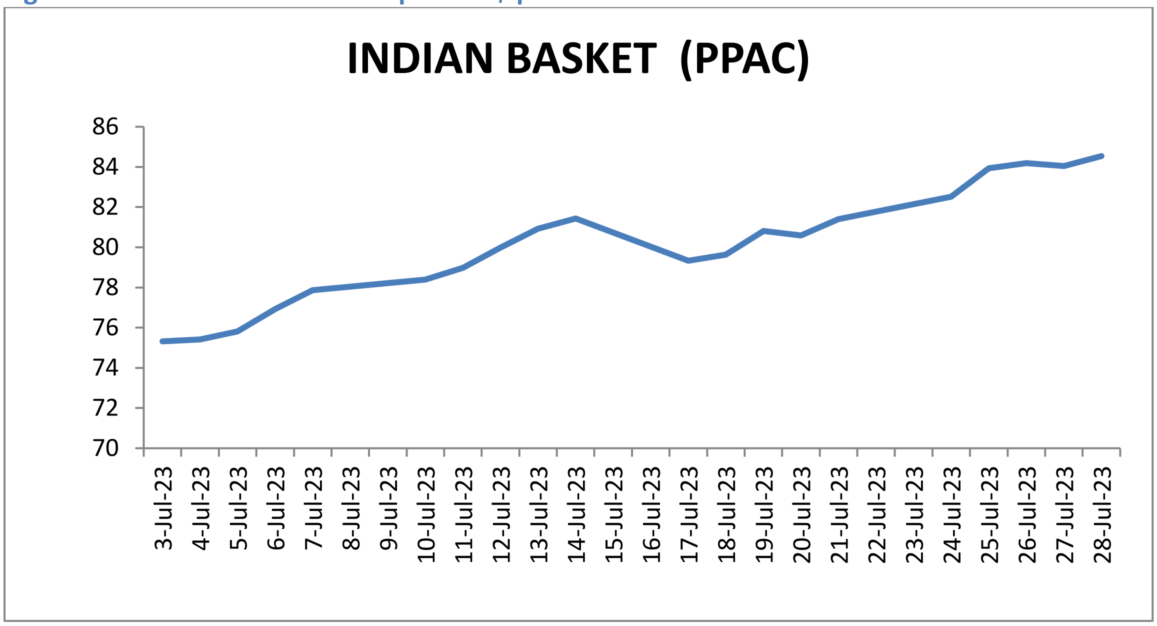
Table 1: Crude oil price in July, 2023

Crude oil	Price ($/bbl)	MoM (%) change	YoY (%) change
Brent	78.56	4.9%	-25.4%
WTI	79.56	13.2%	-20.7%
Dubai	78.70	7.4%	-24.6%

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 $80.10 per barrel in July 2023, up by 7.2% on Month on Month (M-o-M) and down by 24.1% on a year on year (Y-o-Y) basis, respectively.

Oil production situation

- World oil supply rose 480 kb/d to 101.8 mb/d in June 2023 but is set to decline in July 2023 as Saudi Arabia makes a sharp 1 mb/d voluntary output cut. For 2023, global production is anticipated to increase by 1.6 mb/d to 101.5 mb/d, as non-OPEC+ expands by 1.9 mb/d. In 2024, global supply is set to rise by 1.2 mb/d to a new record of 102.8 mb/d, with non-OPEC+ accounting for all of the increase.
- Russian oil exports fell 600 kb/d to 7.3 mb/d in June 2023, their lowest since March 2021. Estimated export revenues plunged by $1.5 billion to $11.8 billion, nearly half the levels of a year ago. Moscow promised a further 500 kb/d cut to exports from August to stem declining prices and revenues, but may hold production steady as domestic oil demand rises seasonally.
- Lower production from Saudi Arabia and core OPEC+ members since production cuts were first implemented last November has so far been offset by higher output from other producers. In June, global oil supply was a mere 70 kb/d below October levels just before the first round of OPEC+ cuts kicked in. Iran, exempt from cuts due to sanctions, ramped up production by 530 kb/d over the same period, reaching a five-year high. At the same time, output recovered in Kazakhstan and Nigeria.

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

Non-OPEC liquids production	2022	1Q23	2Q23	3Q23	4Q23	2023
Americas	26.84	27.88	27.95	28.22	28.42	28.12
of which US	*19.21*	*20.08*	*20.29*	*20.34*	*20.45*	*20.29*
Europe	3.57	3.66	3.63	3.80	3.94	3.76
Asia Pacific	0.48	0.45	0.45	0.48	0.47	0.46
Total OECD	**30.89**	**32.00**	**32.03**	**32.50**	**32.84**	**32.34**
China	4.48	4.63	4.63	4.50	4.50	4.56
India	0.77	0.76	0.77	0.78	0.78	0.78
Other Asia	2.30	2.31	2.31	2.33	2.36	2.33
Latin America	6.34	6.69	6.71	6.70	6.79	6.72
Middle East	3.29	3.27	3.29	3.29	3.30	3.29
Africa	1.29	1.25	1.28	1.32	1.31	1.29
Russia	11.03	11.20	10.83	9.55	9.57	10.28
Other Eurasia	2.83	3.00	2.96	2.95	2.98	2.97
Other Europe	0.11	0.11	0.11	0.11	0.10	0.11
Total Non-OECD	**32.44**	**33.23**	**32.89**	**31.54**	**31.69**	**32.33**
Total Non-OPEC production	63.34	65.23	64.92	64.04	64.53	64.68
Processing gains	2.40	2.47	2.47	2.47	2.47	2.47
Total Non-OPEC liquids production	**65.73**	**67.69**	**67.39**	**66.51**	**67.00**	**67.14**
Previous estimate	**65.74**	**67.75**	**66.99**	**66.73**	**67.24**	**67.17**
Revision	-0.01	-0.05	0.39	-0.22	-0.24	-0.03

Source: OPEC

- From the above table, it can be inferred, that the total non-OPEC liquids production is expected to reach 67.14 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 28.19 mb/d in June 2023, higher by 91 tb/d m-o-m.

Oil demand situation

- Global oil demand is anticipated to climb by 2.2 mb/d in 2023 to reach 102.1 mb/d, a new record. However, persistent macroeconomic headwinds, apparent in a deepening manufacturing slump, have led to revise 2023 growth estimate lower for the first time in 2023, by 220 kb/d. Anchored by surging petrochemical use, China will account for 70% of global gains, while OECD consumption remains anaemic. Growth will slow to 1.1 mb/d in 2024.
- World oil demand is coming under pressure from the challenging economic environment, not because of the dramatic tightening of monetary policy in many advanced and developing countries over the past twelve months. Chinese demand growth continues to surprise to the upside, a surge in domestic petrochemical activity has undermined steam cracker margins and activity elsewhere. Demand in the

OECD, and Europe in particular, is languishing amid a grinding slowdown in industrial activity. African countries have seen imports and demand decline by higher retail fuel prices after subsidies were dismantled. Even so, global oil demand is set to rise seasonally by 1.6 mb/d from 2Q23 to 3Q23, and to average 102.1 mb/d for the year as whole.

Table 3: World Oil demand, mb/d

	2022	1Q23	2Q23	3Q23	4Q23	2023	Growth	%
Total OECD	**45.95**	**45.49**	**45.52**	**46.85**	**46.16**	**46.01**	**0.06**	**0.13**
~ of which US	*20.43*	*20.12*	*20.52*	*20.75*	*20.37*	*20.44*	*0.01*	*0.04*
Total Non-OECD	**53.62**	**56.12**	**55.70**	**55.11**	**57.05**	**55.99**	**2.38**	**4.43**
~ of which India#	*5.14*	*5.40*	*5.41*	*5.21*	*5.50*	*5.38*	*0.24*	*4.75*
~ of which China	14.85	15.63	15.96	15.38	16.11	15.77	0.92	6.19
Total world	**99.56**	**101.61**	**101.22**	**101.95**	**103.21**	**102.00**	**2.44**	**2.45**

Source: OPEC monthly report, July 2023

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

Global petroleum product prices

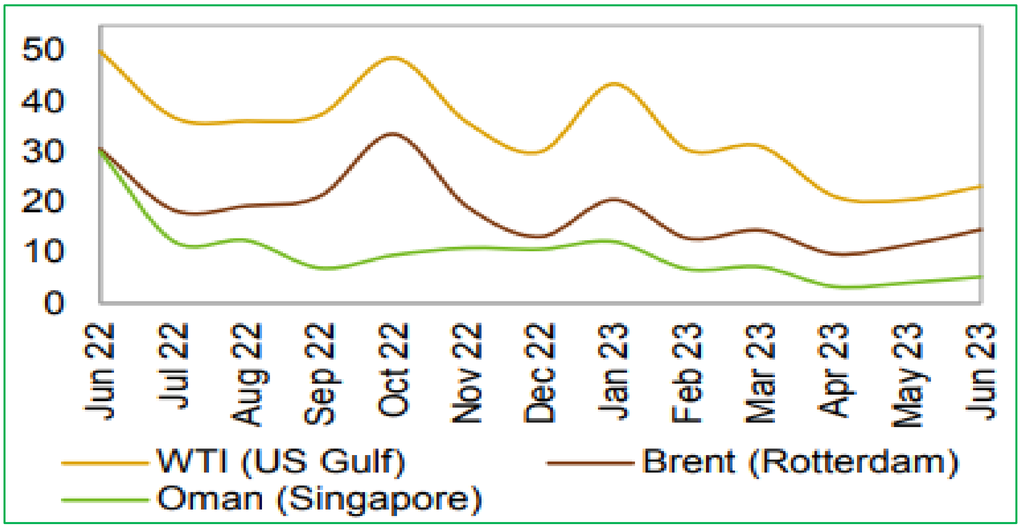
USGC refining margins against WTI recovered from the previous months' y-t-d low, exhibiting solid monthly gains despite being considerably below the levels seen at the same time in 2022. Despite rising refinery runs, the boost in fuel demand partially offset the rise in product output levels. The pressure on nationwide product stocks shadowed the improvement in US mobility activity and transport fuel requirements amid the onset of the summer season, with gasoline representing the strongest margin contributor. Moreover, fuel oil markets firmed up to become the second strongest performer across the barrel in the USGC as the strength in gasoline markets provided economic incentives for fuel oil conversion. This further contributed to the upturn in USGC refining economics.

In terms of operations, US refinery intake continued to increase and gained 550 tb/d m-o-m to an average of 17.16 mb/d in June. USGC margins against WTI averaged $23.15/b, up by $2.68 m-o-m, but this was down $26.77 y-o-y.

Refinery margins in Rotterdam against Brent increased for the second consecutive month to show the largest monthly rise, outperforming those seen in the USGC and Singapore. A declining trend in OECD Europe product imports, given the latest data available, amid relatively healthy regional product demand supported product markets within the region. Throughout June, some European refineries underwent unplanned shutdowns, which likely weighed on monthly throughput figures by limiting further gains. According to preliminary reports, Russian refinery processing rates rose considerably in June with the ongoing conclusion of heavy refinery maintenance works.

Refinery throughput in Europe continued to rise in June. According to preliminary data, it was 190 tb/d higher at an average of 9.94 mb/d. Refinery margins against Brent in Europe averaged $14.56/b in June, $3.01 higher compared with a month earlier, but $16.01 lower y-o-y.

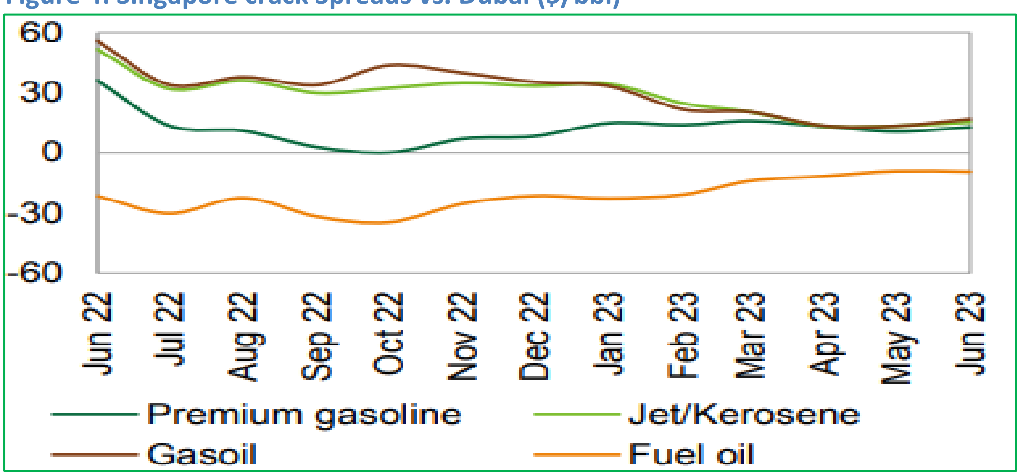
Figure 3: Refining Margins ($/bbl)



Source: Argus and OPEC

The Asian gasoline 92 crack increased as regional consumption was supportive. In South Korea, gasoline consumption levels were reported to have increased by 26.3% in May, while exports from the country to Australia showed an increase too. In Indonesia, gasoline imports from Singapore rose 109.21% w-o-w to 233,895 metric Tons before the start of the Eid al-Adha festivities in late June, according to Platts. At the same time, gasoline supplies from India declined towards the end of the month due to refinery maintenance and supply disruptions caused by cyclone threats and the subsequent closures of one of India's Ports. The Singapore gasoline crack spread against Dubai in June averaged $12.73/b. This was up $2.17 m-o-m but lower by $23.24 y-o-y.

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



Source: Argus and OPEC

The Singapore gasoil crack spread reversed the trend to show solid improvement. It was the largest source of strength in the Asian product market, followed by gasoline. Strong exports to the OECD Europe and Americas, provided support, while consumption levels within the region remained somewhat capped due to weaker industrial and manufacturing gasoil demand. The Singapore gasoil crack spread against Oman averaged $16.82/b, up by $3.44 m-o-m but was down by $38.90 y-o-y.

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

Singapore product prices	Price ($/b)	MoM (%) change	YoY (%) change
Naphtha	57.01	-8.4%	-33.5%
Premium gasoline (unleaded 95)	92.30	2.2%	-40.5%
Regular gasoline (unleaded 92)	87.43	2.0%	-41.3%
Jet/Kerosene	90.06	1.7%	-45.2%
Gasoil/Diesel (50 ppm)	91.91	3.6%	-48.0%
Fuel oil (180 cst 2.0% S)	90.45	4.7%	-46.3%
Fuel oil (380 cst 3.5% S)	65.25	-1.1%	-28.5%

Source: OPEC

Petroleum products consumption in India

Monthly Review:

- Overall consumption of all petroleum products in June 2023 with a volume of 19.31 MMT registered a growth of 3.44% on volume of 18.67 MMT in June 2022.

- MS (Petrol) consumption during the month of June 2023 with a volume of 3.15 MMT recorded a growth of 6.19% on volume of 2.97 MMT in June 2022.

- HSD (Diesel) consumption during the month of June 2023 with a volume of 7.91 MMT recorded a growth of 3.05% on volume of 7.68 MMT in the month of June 2022.

- LPG consumption during the month of June 2023 with a volume of 2.233 MMT registered growth of 0.05% over the volume of 2.232 MMT in the month of June 2022.

- ATF consumption during June 2023 with a volume of 0.642 MMT registered a growth of 8.65% over the volume of 0.591 MMT in June 2022.

- Bitumen consumption during June 2023 with a volume of 0.746 MMT registered growth of 6.75% over volume of 0.699 MMT in the month of June 2022.

- Kerosene consumption registered growth of 12.53% during the month of June 2023 as compared to June 2022.

Table 5: Petroleum products consumption in India, June 2023

CONSUMPTION OF PETROLEUM PRODUCTS (P)	Consumption in '000 MT	MoM (%) change	YoY (%) change
LPG	2,233	-4.9%	0.1%
Naphtha	976	-15.1%	-6.2%
MS	3,152	-5.9%	6.2%
ATF	642	-4.2%	8.6%
SKO	51	21.4%	12.5%
HSD	7,911	-3.7%	3.0%
LDO	64	-7.2%	12.0%
Lubricants & Greases	321	9.9%	-13.3%
FO & LSHS	518	-9.8%	-3.5%
Bitumen	746	0.8%	6.8%
Petroleum coke	1,588	11.2%	29.8%
Others	1,112	-5.8%	-9.7%
TOTAL	**19,314**	**-3.7%**	**3.4%**

Source: PPAC

Natural Gas Market

Natural Gas Price – Monthly Review

- Natural gas spot prices at the U.S. Henry Hub benchmark averaged $2.18 per million British thermal units (MMBtu) in June 2023. As per EIA forecast, the Henry Hub spot price will continue to rise throughout the year as U.S. dry natural gas production has been relatively flat in recent months, a production trend that generally continue for the rest of the year. With flat production and year-over-year growth in natural gas consumption, EIA expect U.S. natural gas inventories will reduce the surplus to the five-year average, which will put upward pressure on prices. Natural gas-fired electric power generation has increased in the past two summers as higher-than-normal temperatures in the summer months have increased overall electricity generation to meet air-conditioning demand.

- The natural gas spot price at the Title Transfer Facility (TTF) in the Netherlands in Europe traded at an average of $10.35 per MMBtu. Natural gas prices have started increasing as decisive EU policy as outlined by the REPowerEU plan and market rebalancing have helped reduce concerns about shortages, and bringing prices back to physical fundamentals.

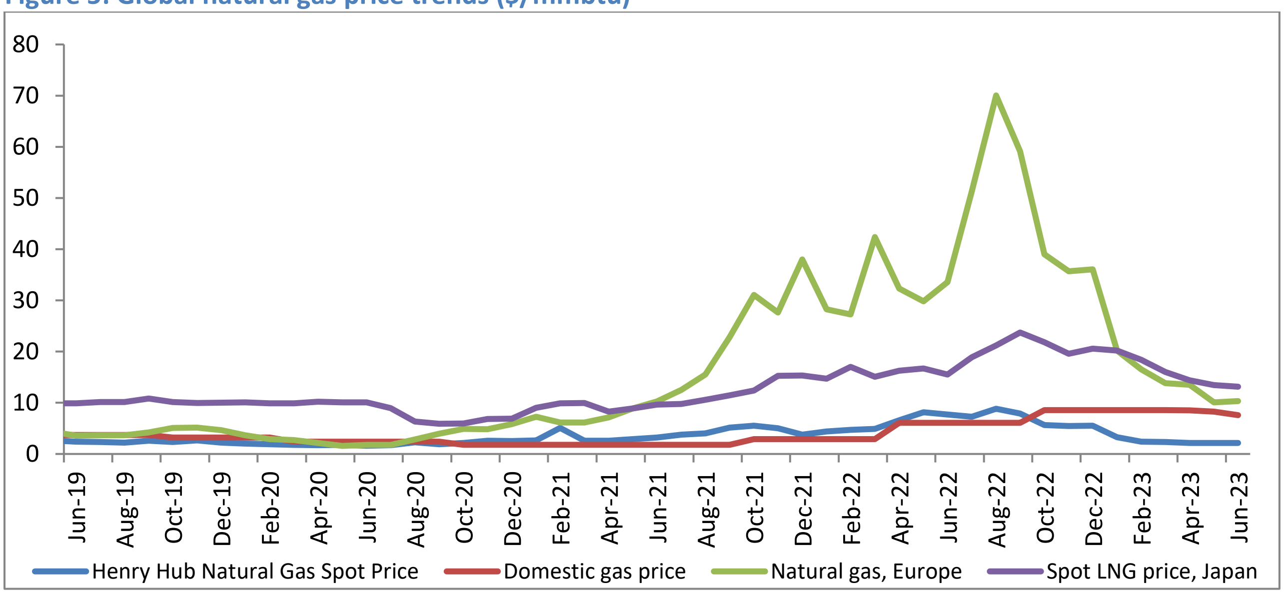
- Japan Liquefied Natural Gas Import Price averaged at $13.17 per MMBtu for June 2023, down from $13.43 per MMBtu in May 2023. Japan continues to focus on its nuclear power, thereby having lesser reliance on fossil fuel and importing less quantities of LNG. Deliveries of LNG sharply declined as compared to previous year.

- 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. However, on 7th April, 2023, the price of domestic natural gas for the period 1st April 2023 to 7th April 2023 was notified as US$ 9.16/MMBTU on GCV basis. Further, the price of domestic natural gas for the period 8th April 2023 to 30th April 2023 was notified as US$ 7.92/MMBTU.

- On 30th April 2023, in accordance with MoP&NG 's notification, the price of domestic natural gas for the period 1st May 2023 to 31st May 2023 was notified as US$ 8.27/MMBTU on GCV basis. Subsequently, on 31st May 2023, in accordance with MoP&NG 's notification, the price of domestic natural gas for the period 1st June 2023 to 30th June 2023 was notified as US$ 7.58/MMBTU on GCV basis. Further, on 30th June 2023, in accordance with MoP&NG 's notification, the price of domestic natural gas for the period 1st July 2023 to 31st July 2023 was notified as US$ 7.48/MMBTU on GCV basis.

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



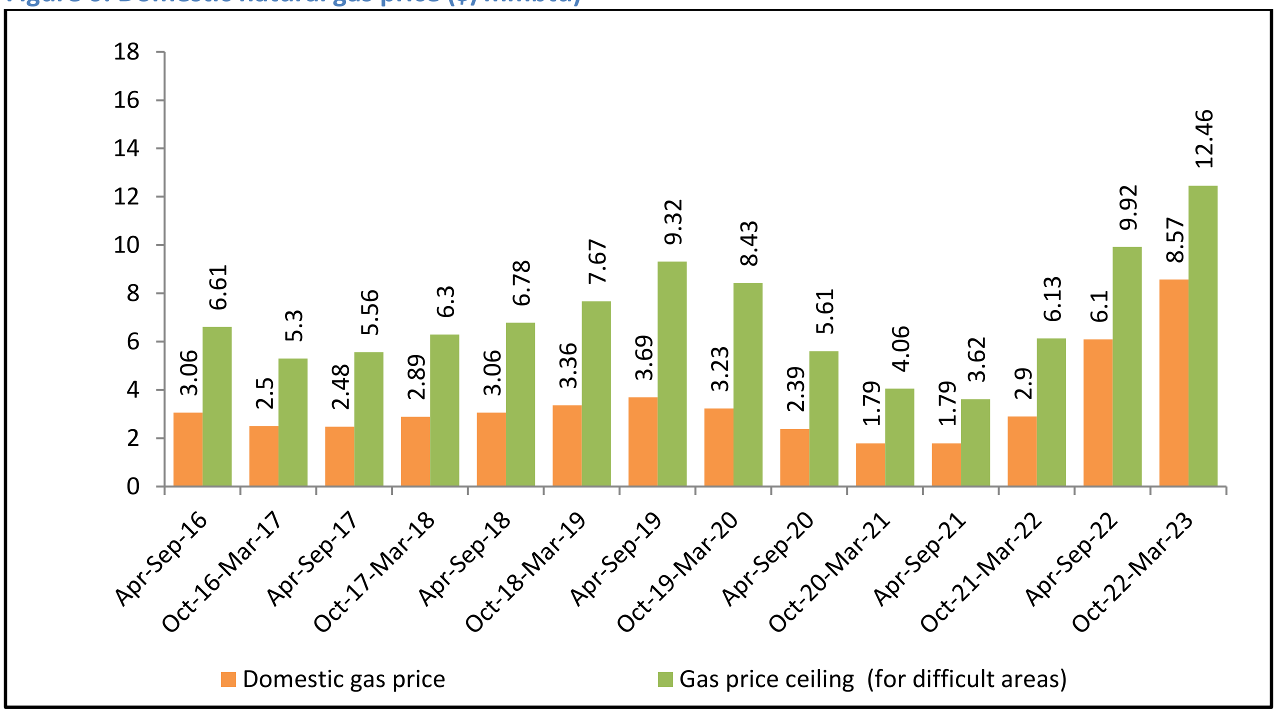
Source: EIA, World Bank

Table 6: Gas price, June 2023

Natural Gas	Price ($/MMBTU)	MoM (%) change	YoY (%) change
India, Domestic gas price (July'23)	7.48	-1.32%	-
India, Gas price ceiling – difficult areas (Apr-Sep-23)	12.12	-2.7%	22.2%
Henry Hub	2.18	1.4%	-71.7%
Natural Gas, Europe	10.35	2.4%	-69.2%
Liquefied Natural Gas, Japan	13.17	-1.9%	-15.2%

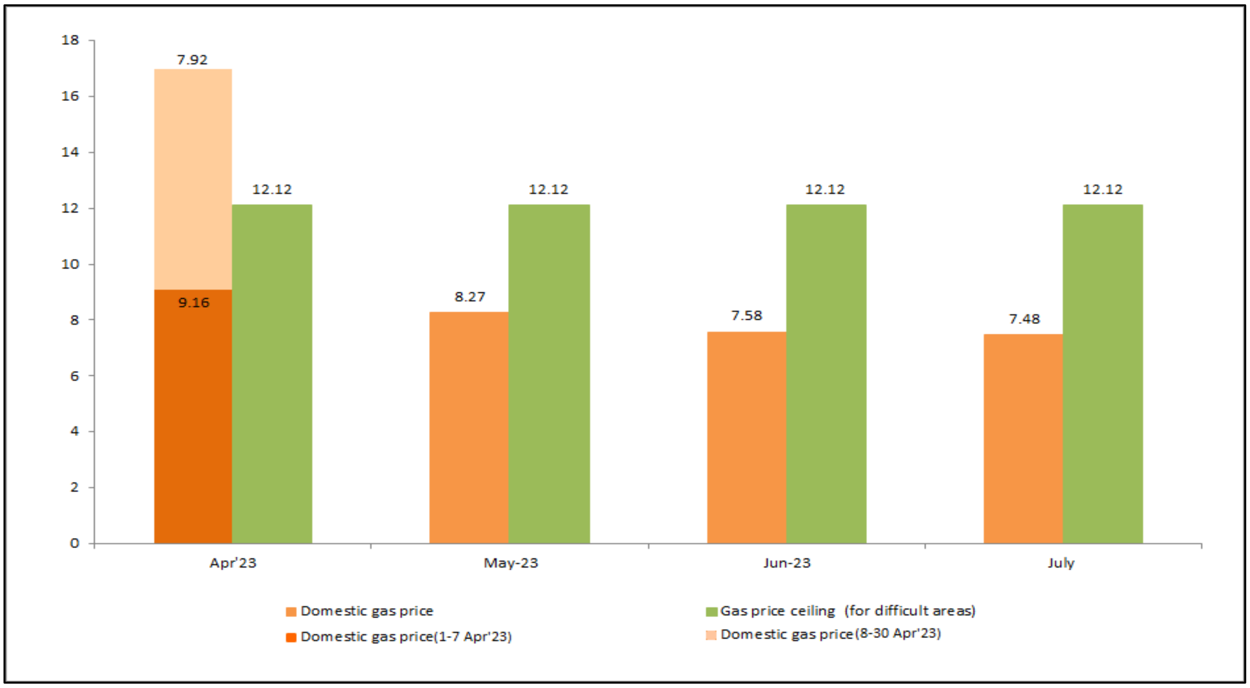
Source: EIA, PPAC, World Bank

Figure 6: Domestic natural gas price ($/mmbtu)



Source: PPAC

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



Source: PPAC

Indian Gas Market

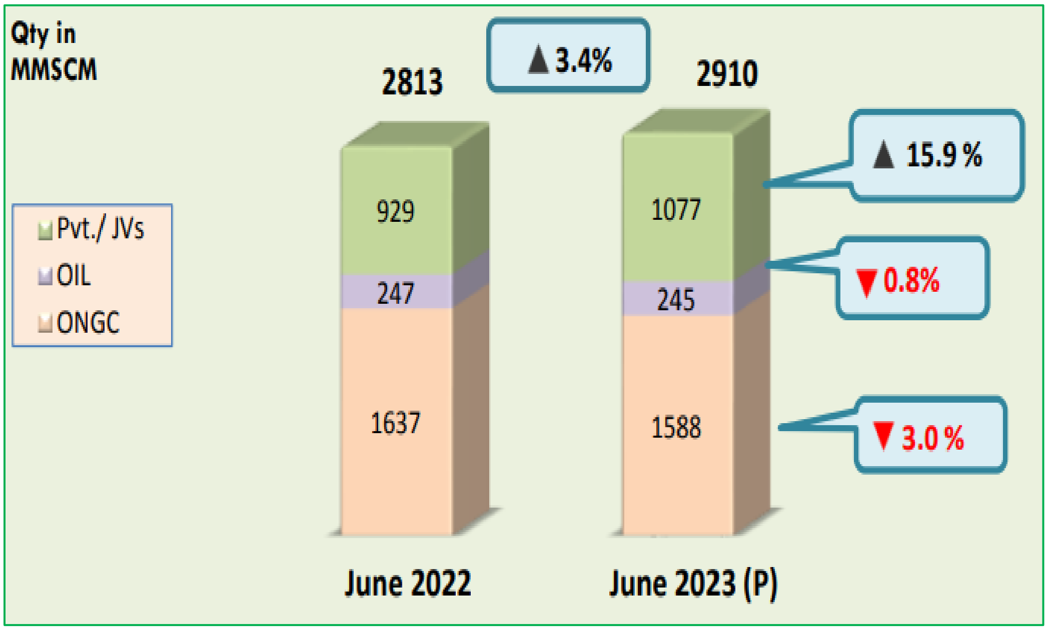
- Gross production of natural gas for the month of June 2023 was 2,910 MMSCM (increase of 3.4% over the corresponding month of the previous year).
- Total imports of LNG (provisional) during the month of June 2023 were 2,221 MMSCM (P) (decrease of 1.6% over the corresponding month of the previous year).
- Natural gas available for sale during June 2023 was 4,622 MMSCM (increase of 2.0% over the corresponding month of the previous year).
- Total consumption during June 2023 was 5,386 MMSCM (provisional). Major consumers were fertilizer (30%), City Gas Distribution (CGD) (19%), Power (14%), Refinery (8%) and Petrochemicals (3%).

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

1. Domestic Natural Gas Gross Production:

Domestic natural gas gross production for the month of June 2023 was 2,910 MMSCM (increase of 3.4% over the corresponding month of the previous year).

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

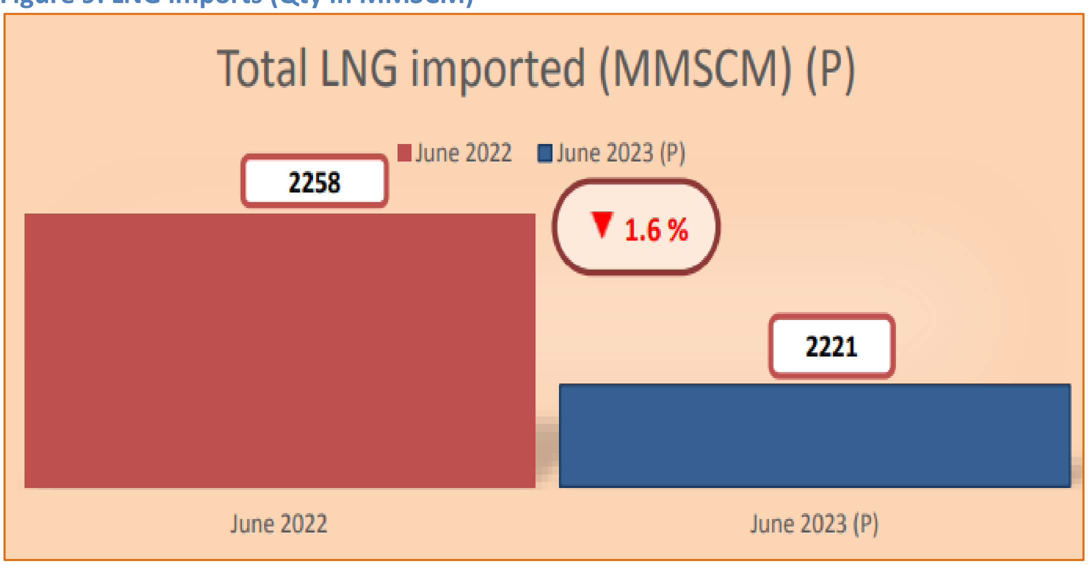


Source: PPAC

2. LNG imports:

Total imports of LNG (provisional) during the month of June 2023 were 2,221 MMSCM (decrease of 1.6%) over the corresponding month of the previous year 2,258 MMSCM.

Figure 9: LNG imports (Qty in MMSCM)

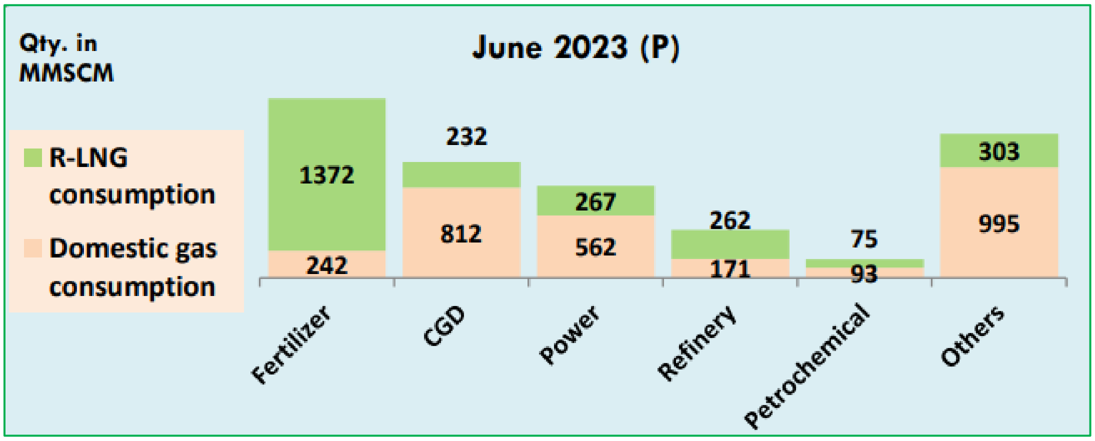


Source: PPAC

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 June 2023



Source: PPAC

Key developments in Oil & Gas sector

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

1. Production of Crude Oil

Indigenous crude oil and condensate production during June 2023 was 2.43 MMT. OIL registered a production of 0.27 MMT, ONGC registered a production of 1.59 MMT whereas PSC registered production of 0.56 MMT during June 2023.

2. Production of Natural Gas

Gross production of natural gas for the month of June 2023 (P) was 2910 MMSCM which was higher by 3.4% compared with the corresponding month of the previous year.

3. Crude Oil Processed (Crude Throughput)

Total Crude oil processed during June 2023 was 21.5 MMT. Where PSU/JV Refiners processed 14.9 MMT and PVT Refiners Processed 6.6 MMT of Crude Oil. Total Indigenous Crude Oil processed was 2.2 MMT and total Imported Crude oil processed was 19.3 by all Indian Refineries (PSU+JV+PVT).

4. Production of Petroleum Products

Production of petroleum products was 23.1 MMT during June 2023 which is 4.6% higher than June 2022, where 22.8 MMT was from Refinery production & 0.3 MMT was from Fractionator. There was 2.0 % growth in Production of petroleum products in Apr June FY 2023 – 24 as compared to same period of FY 2022 – 23. Out of total POL production, in June 2023, HSD has 42.3 %, MS has 16.4 %, Naphtha has 6.4 %, ATF has 6.0 %, Pet Coke has 5.4, % LPG has 4.7 % which are of major products and rest are shared by Bitumen, FO/LSHS, LDO, Lubes & others.

Key Policy developments/significant news in Energy sector

Windfall tax on petroleum crude, ATF, diesel retained at zero

Government has reimposed the windfall tax on domestic petroleum crude, effective July 15, 2023. According to notification, the Government has levied the Special Additional Excise Duty (SAED) on crude petroleum to Rs 1600/per metric tonne from zero. Windfall tax on diesel, petrol, and aviation turbine fuel unchanged at zero. In May 2023, the Government has slashed the windfall tax on petroleum crude to nil from ₹4,100/tonne.

India first imposed windfall profit taxes on July 1, 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 tonne ($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.

IEA launches Oil 2023 (Analysis & forecast to 2028) medium-term market report

The International Energy Agency (IEA) in collaboration with Petroleum Planning and Analysis Cell (PPAC) under the aegis of MoP&NG launched the Oil 2023 medium-term market report, titled: IEA Oil 2023 – Supply and demand dynamics to 2028, in Delhi at an event that saw participation from the captains from the Indian oil and gas industry.

Speaking at the launch event, Shri Pankaj Jain, Secretary, MoP&NG in his keynote address said, "India`s demand for energy is growing faster than any other major economy and the same trend is expected to continue. Growth will come in all sectors due to favorable demographics supported by urbanization and industrialization."

Talking about the consumption of petroleum products in FY 2022-23, the Petroleum Secretary said, "Last year the overall consumption of petroleum products was at 223 MMT, with a growth of about 12% over the previous year. This growth in the petroleum products has been driven by growth in HSD at 12.1%, the largest contributor with 85.9 MMT and MS with 34.9 MMT consumption during 2022-23 at a growth rate of 13.4% over the previous year."

Speaking further, Shri Jain said, in both cases, volumes not only crossed pre-covid consumption by a margin but are also highest consumption in history, till date. The growth momentum continues in current year too. Secretary Petroleum also mentioned that India is the World's 4th largest refiner, has the 4th largest LNG terminal capacity, 4th largest Auto market and 3rd largest bio fuels producer. "India`s focus is on decarbonization and it has already achieved 12% ethanol blending in Petrol and has targeted for 20% blending by 2025", he added.

The launch report of IEA finds that growth of global oil demand is set to slow down, almost coming to a halt by 2028. This is due to hastened shift towards cleaner energy technologies for energy security concerns. Despite robust demand from the petchem and aviation, annual demand growth is expected to decline from 2.4 mb/d in 2023 to just 0.4 mb/d in 2028, putting a peak in demand in sight. In particular, the use of oil for transport is set to decline after 2026 as the expansion of electric vehicles, the growth of biofuels and improving fuel economy reduce consumption. However, some economies, notably China and India, will continue to register growth throughout the forecast.

Commenting on India's growth forecast on oil, Toril Bosoni, head of the oil industry and markets division at the IEA said, "Around three-quarters of the 2022-28 increase will come from Asia, with India surpassing China as the main source of growth by 2027".

Alternate clean fuels like biofuels are expected to provide 10% of new liquid fuel supply growth to 2028. As per the report, biofuels production expands nearly 600 kb/d from 2022 to 2028, with Brazil, Indonesia, and India combined accounting for 70% of this increase.

IEA report has assessed those global upstream investments in oil and gas exploration, extraction and production are on course to reach their highest levels since 2015, growing 11% year-on-year to USD 528 billion in 2023. Oil producing countries outside the OPEC+ alliance dominate plans for increasing global supply capacity in the medium term, with an expected rise of 5.1 mb/d by 2028 led by the United States, Brazil and Guyana. Saudi Arabia, the United Arab Emirates and Iraq lead the plans for capacity building within OPEC+. IEA has felt that this level of investment, if sustained, would be adequate to meet forecast demand in the period covered by the report. However, it exceeds the amount that would be needed in a world that gets on track for net zero emissions.

PNGRB increases unified tariff for national gas grid system by 10 per cent to Rs 81.1 mBtu

PNGRB has increased the unified tariff for the national gas grid system by 10 per cent from Rs 73.9 mBtu to Rs 81.1 mBtu from July 1, 2023. To boost gas consumption, PNGRB had introduced unified tariff for natural gas pipelines from April 1, 2023 which allows customers to pay a single tariff whereas pipeline operators receive differentiated tariffs based on distance. For this, three tariff zones were created with the first zone being located 300 km from the gas source with a tariff of Rs 40 mBtu, second zone between 300-1200 km with Rs 79 tariff and the third zone beyond 1200 km with Rs 114.5 tariff.

Govt floats tender to set up 4.5 lakh tonne Green Hydrogen production facility in India

Solar Energy Corporation of India (SECI) floated a tender for setting up a production facility of 4.5 lakh tonne of green hydrogen in India under the Strategic Interventions for Green Hydrogen Transition (SIGHT) scheme. SECI is a Government of India enterprise under the administrative control of Ministry of New & Renewable Energy (MNRE). It is a nodal agency for implementing various schemes for renewable energy in the country. As per the tender document, the total capacity available for bidding is 4.5 lakh tonne per annum including 4.1 lakh tonne under Technology Agnostic Pathways and 40,000 tonne under Biomass

Based Pathways. It also provided that a bidder, including its parent, affiliate or ultimate parent or any group company shall submit a single bid undertaking to set up a GH2 production facility.

Under the Technology Agnostic Pathways (Bucket I), minimum bid capacity would be for 10,000 tonne while maximum would be 90,000 tonne. Under Biomass Based Pathways (Bucket II), the minimum bid capacity would be 500 tonne while maximum would be 4,000 tonne.

The maximum time allowed for commissioning (SCD) would be 30 months from the date of the Letter of Award. The SIGHT programme is a major financial measure under the mission, with an outlay of Rs 17,490 crore. The programme proposes two distinct financial incentive mechanisms to support domestic production of electrolysers and production of green hydrogen. These incentives are aimed at enabling rapid scale-up, technology development and cost reduction.

Focus on 100 million Ton Coal Gasification by 2030

Government has launched National Coal Gasification Mission to achieve coal gasification and liquefaction of 100 MT of coal by 2030. In line with the Mission document, Coal India Limited has signed MOUs with BHEL, GAIL and IOCL to take up coal gasification projects in the country.

In order to promote coal gasification, Ministry of Coal has formulated a policy wherein, a provision has been made for 50% rebate in revenue share for all future commercial coal block auctions for the coal used in gasification purpose provided the coal quantity used for gasification is at least 10% of total coal production. Further, separate auction window under non-regulated sector (NRS) sector has been created for making coal available for new coal gasification plants.

Subsidy Under Fame-II Scheme

The Ministry of Heavy Industries (MHI) formulated Faster Adoption and Manufacturing of Electric Vehicles in India Phase II (FAME India Phase II) Scheme for a period of five years commencing from April 01, 2019 with a total budgetary support of Rs. 10,000 crore. This phase mainly focuses on supporting electrification of public & shared transportation, and aims to support through demand incentive 7090 eBuses, 5 lakh e-3 Wheelers, 55000 e-4 Wheeler Passenger Cars and 10 lakh e-2 Wheelers. In addition, creation of charging infrastructure is also supported under the Scheme.

Under phase-II of FAME India Scheme, about 7,40,722 no. of electric two vehicles have been sold as on 20.07.2023. Further, MHI sanctioned 6315 electric buses to 65 cities/STUs/State Govt. entities for intracity operations. At present no proposal to launch FAME-III is under consideration in the Ministry of Heavy Industries.

Fame India Scheme

Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India (FAME India) Scheme Phase-II is being implemented by the Ministry of Heavy Industries for a period of five years commencing from 1st April,2019 with a total budgetary support of Rs. 10,000 crore. This phase mainly focuses on supporting electrification of public & shared transportation, and aims to support through demand incentive 7090 eBuses, 5 lakh e-3 Wheelers, 55000 e-4 Wheeler Passenger Cars and 10 lakh e-2 Wheelers. In addition, creation of charging infrastructure is also supported under the Scheme.

The details of electric vehicles (EVs) sold under FAME India Scheme Phase-II are as under as on 21.07.2023:

Sl. No.	Wheeler Type	Registered & Revalidated Models	Registered OEMs	Total No. of Vehicle sold under FAME-II as on 21.07.2023
1	2-Wheeler	45	25	7,40,722
2	3-Wheeler	96	28	83,420
3	4-Wheeler	34	3	8,982
Total		175	56	8,32,824

The Ministry of Heavy Industries had sanctioned 520 Charging Stations/ Infrastructure under the Phase-I of FAME India Scheme. Further, Ministry has also sanctioned 2,877 Electric Vehicle Charging Stations in 68 cities across 25 States/UTs and1576 charging stations across 9 Expressways and 16 Highways under Phase II of FAME India Scheme.

The Ministry of Heavy Industries has also sanctioned Rs. 800 Cr. as capital subsidy to the three Oil Marketing Companies (OMCs) of the Ministry of Petroleum and Natural Gas (MoP&NG) for establishment of 7,432 electric vehicle public charging stations.

The Government of India has taken following steps to give incentives/ subsidies on electric vehicles:

i. Faster Adoption and Manufacturing of Hybrid and Electric Vehicles in India (FAME India): The Government notified Phase-II of FAME India Scheme initially for a period of five years commencing from 1st April, 2019 with a total budgetary support of Rs. 10,000 crore. Under FAME-India Scheme phase-II, incentives are provided to buyers of electric vehicles in the form of an upfront reduction in the purchase price of electric vehicles.
ii. Production Linked Incentive (PLI) Scheme for Automotive Sector: The Government on 15th Sep 2021 approved the PLI Scheme for Automotive Sector with a budgetary outlay of Rs. 25,938 crores to support domestic manufacturing of vehicles. Electric vehicles are covered under this PLI scheme.
iii. PLI Scheme for Advanced Chemistry Cell (ACC): The Government on 12th May, 2021 approved PLI Scheme for manufacturing of ACC in the country with a budgetary outlay of Rs. 18,100 crore. The scheme envisages to establish a competitive ACC battery manufacturing set up in the country for 50 GWh. Additionally, 5GWh of niche ACC technologies is also covered under the Scheme.
iv. GST on EVs has been reduced from 12% to 5%; GST on chargers/ charging stations for EVs has been reduced from 18% to 5%.
v. Ministry of Road Transport & Highways (MoRTH) announced that the battery-operated vehicles will be given green license plates and be exempted from permit requirements.
vi. MoRTH issued a notification advising states to waive road tax on EVs, which in turn will help reduce the initial cost of the EVs.

Re-bidding of 20 GWh Advanced Chemistry Cell (ACC) manufacturing under Production Linked Incentive scheme "National Programme on Advanced Chemistry Cell Battery Storage"

The Ministry of Heavy Industries (MHI) has announced the re-bidding of performance linked incentives (PLI) for 20 GWh Advanced Chemistry Cell (ACC) manufacturing. With this auctioning process, the prospective applicants can submit their bids to set-up domestic manufacturing facility for advanced chemistry cell, which will help them qualify for incentives under ACC PLI scheme. The initiative is aligned with the Prime Minister's vision of Aatmanirbhar Bharat by increasing reliance on domestic manufacturing, reducing dependence on imports, and thereby creating more job opportunities for fellow Indians.

The MHI will be facilitating a stakeholder consultation with industry representatives on Monday, July 24th, 2023 for their inputs and suggestions before the start of the re-bidding process of remaining 20 GWh capacity. A Public Notice regarding this, inviting the stakeholders, has been issued. The consultation shall be chaired by the Secretary, Ministry of Heavy Industries (MHI).

ACCs are the new generation of advanced storage technologies that can store electric energy either as electrochemical or as chemical energy and convert it back to electric energy as and when required. These have major applications in the electric vehicles, maintaining grid stability, solar rooftop, consumer electronics etc. With India's commitment towards renewable energy and achieving net-zero by 2070, energy storage is expected to play a crucial role in the overall energy ecosystem.

In May 2021, the Cabinet, chaired by Prime Minister, had approved the Production Linked Incentive (PLI) Scheme on 'National Programme on Advanced Chemistry Cell (ACC) Battery Storage' for achieving manufacturing capacity of Fifty (50) Giga Watt Hour (GWh) of ACC and 5 GWh of "Niche" ACC with an outlay of Rs.18,100 Crore. The first round of the ACC PLI bidding was concluded in March 2022, and three companies were allocated a total capacity of Thirty (30) Giga Watt Hour (GWh), and the program agreement with selected companies was signed in July 2022.

Special Ministerial Consultations and Recommendations on Global Biofuels Alliance

Energy Transitions Ministerial Meeting has highlighted **Fuels for Future (3F)** as one of the priority areas. In this context, on the sideline of the Energy Transitions Ministerial Meeting a standalone event on Consultations and Recommendations for the Global Biofuels Alliance was organized on 22nd July'23 in Goa.

This event received strong support from countries within and beyond the G20. Nineteen countries expressed their interest in being the initiating members of the alliance with fifteen Countries and nine International Organizations attending the event. This signifies a momentous step forward in advancing the development and deployment of biofuels through a multi-stakeholder global alliance.

This GBA event witnessed participation from the Energy Ministers of thirteen countries and Heads of nine international organizations. India, Argentina, Bangladesh, Brazil, Canada, Italy, Kenya, Mauritius, Paraguay, Seychelles, the United States, UAE and Uganda, and international organizations such as the Bio future Platform, International Civil Aviation Organization, International Energy Agency, International Energy Forum, International Renewable Energy Agency, World Bank, World Biogas Association, and World Economic Forum who were part of the event welcomed the initiative.

Emphasizing the importance of biofuels and collaboration, Union Minister for Petroleum and Natural Gas & Urban and Housing Affairs, Shri Hardeep Singh Puri, said “True success of Global Biofuels Alliance will depend on moving this project from a project of the government to the project of the people.”

Ministers from several other countries also highlighted the appeal of biofuels as a low-carbon pathway, while underscoring the critical necessity for engaging in clean energy initiatives. The leaders highlighted that despite the huge potential of Biofuels as an important low-carbon pathway to development, several challenges continue to hinder their adoption.

Jennifer Granholm, Secretary of Energy, US, remarked that the United States recognize the establishment of a Global Biofuels Alliance as a critical step in their biofuels journey and that they look forward to moving from "test tube to test drive and field to fuels".

Mr. Alexandre Silveira de Oliveira, Minister of State of Mines and Energy, Brazil, highlighted that to meet sustainable energy needs multiple forms of energy will be required and, in this context, reinforced the importance of the alliance.

Multiple countries including Brazil, Italy, Kenya, and UAE highlighted the importance of sharing best practices across policy, technology, and implementation.

The forum recognized that overcoming challenges such as feedstock management, standards development, and technological innovations requires a collaborative approach and welcomed the initiative by Indian Presidency to create the global alliance.

Further, International Organizations such as IEA and IEF reinforced the expansive potential of biofuels for other countries and highlighted the importance of standardization, waste recycling, and investments to build on the untapped potential.

ICAO emphasized that more than 600 billion liters of SAF are required to replace all fossil fuels, translating into more than USD 3 trillion in investment by 2050. This necessitates the need for close collaboration across stakeholders.

World Biogas Association highlighted that only 2% of waste is being recycled currently and absence of recycling to consumable products is contributing to methane emissions. International Organizations also enunciated how they look forward to supporting the alliance.

This consultative process resulted in the Energy Ministers recommending establishment of GBA to the G20 Leaders.

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Research, analysis & compilation by:

Economic Policy & Planning Team -FIPI

Email: pankhuri@fipi.org.in