FIPI

Federation of Indian Petroleum Industry

# POLICY & ECONOMIC REPORT

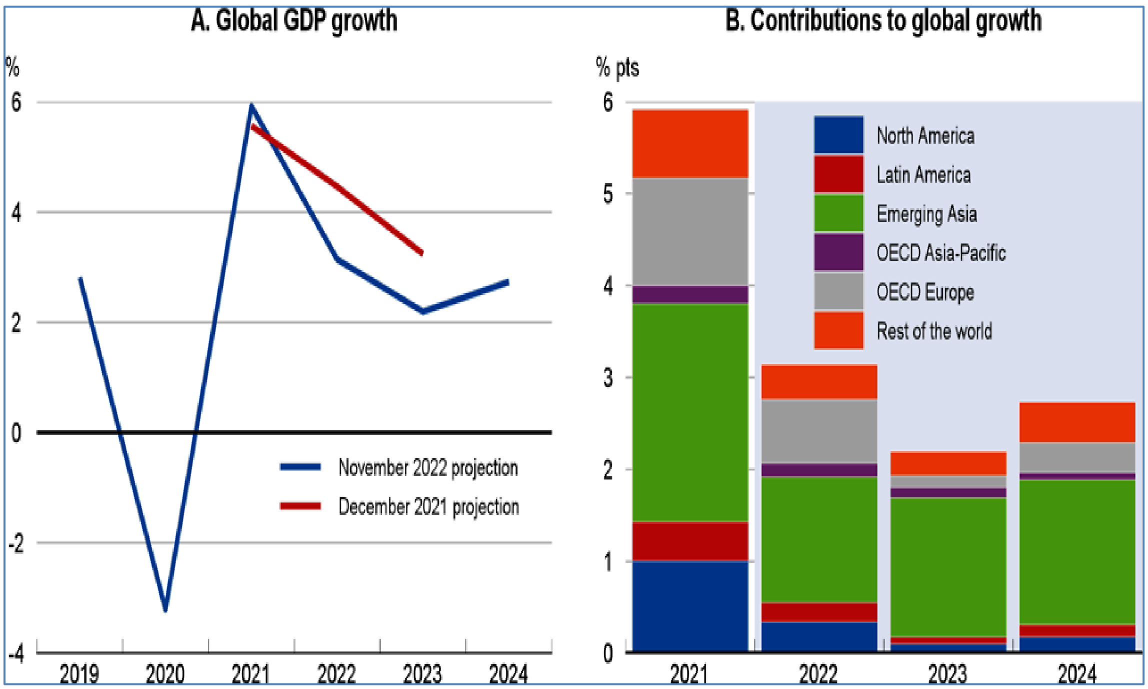
## OIL & GAS MARKET

December 2022

# Table of Contents

## Executive Summary

According to Organization for Economic Co-operation and Development (OECD), the global economy growth is revised to 2.2% from 3% for 2023 as financial conditions tighten, with rising Covid restrictions in China along with Europe's natural gas problems, thus hampering economic activity. The growth in United States and Euro area are slowing sharply with growth rates for both at 0.5% in 2023 while India, China and Japan are expected to grow at 5.7%, 4.6% and 1.8% respectively. Various factors have affected the global growth since March 2022, viz- uncertainty amid Russia-Ukraine war, reinforced supply disruptions, rising energy and food prices thereby boosting inflation, aggressive tightening by US Federal Reserve and other Central Banks thus denting global financial markets.

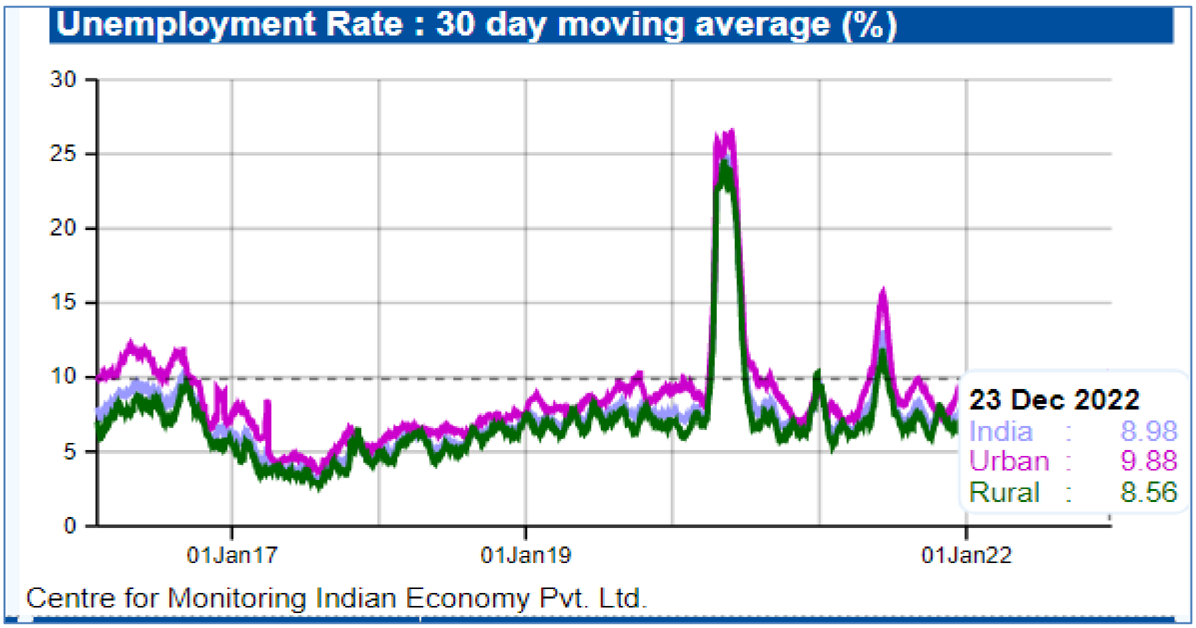



In case of India, according to the latest data released by National Statistical Office (NSO), real gross domestic product (GDP) posted a growth of 6.3 % year-on-year (y-o-y) in Q2 (July – September) of FY 2022-23, driven primarily by private consumption and investment.

For the third quarter Q3 (October-December) of FY 2022-23, NSO has estimated the rise in urban consumption, robust growth in passenger vehicle sales and domestic air passenger traffic, rising farm activity and increase in non-food bank credit. The manufacturing and services PMIs for India in November are among the highest in the world. While the manufacturing PMI rose from 55.3 in October to 55.7 in November, the PMI for the services sector expanded from 55.1 in October to 56.4 in November. Taking the above factors in consideration, the real GDP growth for 2022-23 is projected at 6.8 %, with Q3 at 4.4 % and Q4 at 4.2 %.

India's consumer price-based inflation eased to an 11-month low of 5.88 % in November on an annual basis from 6.77 % in October, 2022. The number has dropped within RBI's tolerance band of 2-6 % after 10 months. The decline can be attributed to easing food prices which account for almost 40 % of India's CPI basket. Food inflation for November came in at 4.67 % as against 7.01 % in October. The RBI has hiked benchmark interest rates by 2.25 % in five tranches since May to contain price rise. The repo rate currently stands at 6.25%.

The CMIE data for December, 2022 suggest that the unemployment rate has been at 8.98% in the month of December 2022 with urban unemployment rate at 9.88 % and the rural unemployment rate is at 8.56 % in December 2022.




As on 16th December 2022 India's foreign exchange reserves fell by USD 571 million to USD 563.5 billion. Further, slowing global demand, elevated international commodity prices, and relatively resilient domestic demand resulted into a sharp widening of the trade deficit in the current FY 2022-23. From April-November, the monthly trade deficit averaged ~ USD 25 billion, which was higher than the monthly average of USD 16 billion for FY 2021-22. The widening trade deficit is driven by the non-oil trade deficit.

A weak macroeconomic environment and abundant supply has led to a decrease of benchmark crude prices over the past month. The sell-off comes despite lower OPEC+ production, an EU embargo on Russian crude oil coming into full force and a relaxation of China's Covid restrictions that could pave the way for a quicker demand recovery in the world's second largest oil consumer.

Oil prices started to decline in the second half of the year as banks across the globe increased interest rates to fight inflation, thereby strengthening the US Dollar. This resulted in making dollar-denominated commodities more costly for holders of other currencies.

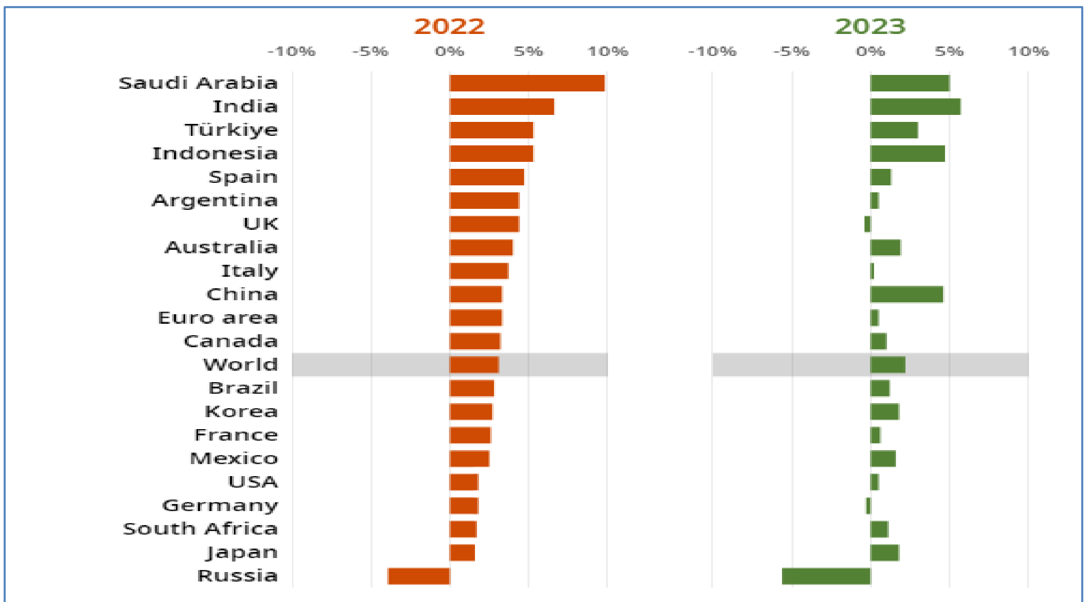
Natural gas spot prices at the U.S. Henry Hub benchmark averaged $5.45 per million British thermal units (MMBtu) in November 2022. Decrease in gas prices has been witnessed as natural gas production ramps up in the U.S. Further, warmer weather forecast decreases the demand of natural gas for heating purposes in the near future.

Considering the supplies, western sanctions will force Russia to divert more crude and refined products exports from Europe to Asia in the coming future.

## Economy in Focus

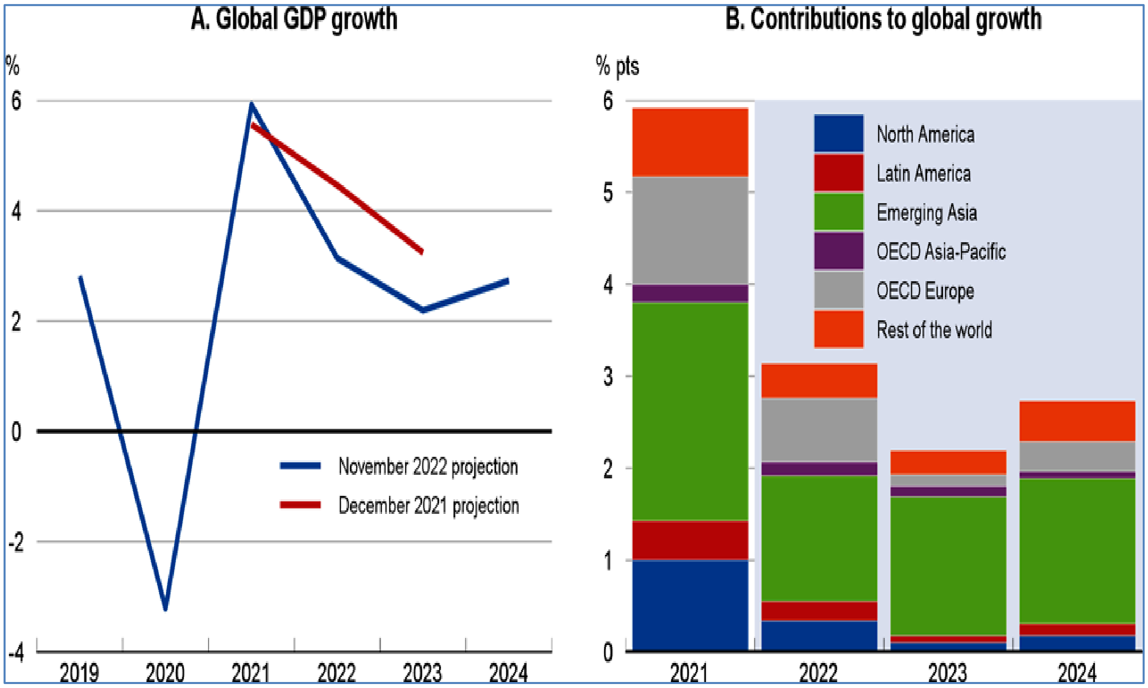
**Global economic situation**

- According to Organization for Economic Co-operation and Development (OECD), the global economy growth is revised to 2.2% from 3% for 2023 as financial conditions tighten, with rising Covid restrictions in China along with Europe's natural gas problems, thus hampering economic activity.
- The growth in United States and Euro area are slowing sharply with growth rates for both at 0.5% in 2023 while India, China and Japan are expected to grow at 5.7%, 4.6% and 1.8% respectively.
- Various factors have affected the global growth since March 2022, viz- uncertainty amid Russia-Ukraine war, reinforced supply disruptions, rising energy and food prices thereby boosting inflation, aggressive tightening by US Federal Reserve and other Central Banks thus denting global financial markets.




Source: OECD Economic Outlook (Edition 2022/2)

- The major advanced economies in Asia are projected to experience less of a slowdown than other regions. GDP growth in Japan is expected to be 1.8% in 2023 and 0.9% in 2024. While in Korea, GDP growth is expected to fall from 2.7% in 2022 to under 2% in 2023 and 2024.




Source- OECD

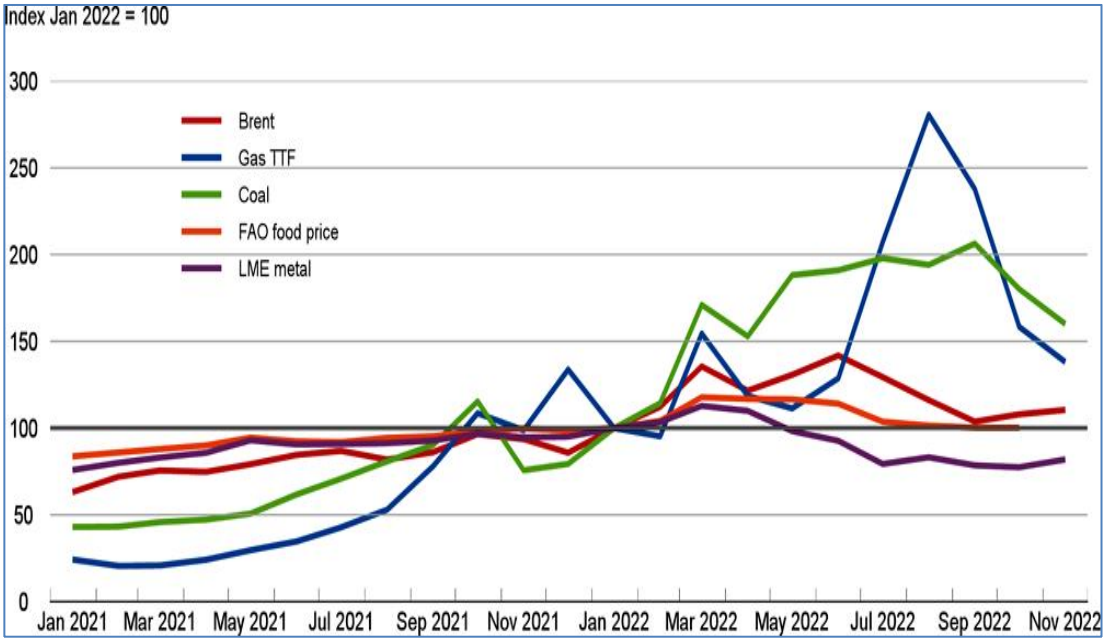
- In China, recurring waves of lockdowns have disrupted economic activity in 2022. Growth in 2023 and 2024 will be sustained by infrastructure investment. After 3.3% in 2022, GDP growth is projected to pick up to 4.6% in 2023 and at 4.1% in 2024.

**Global Inflation**

- In 2023, headline inflation is projected to be over 10% for a second successive year in Hungary, Poland, the Slovak Republic and the Baltic States, and at 8% in Germany and over 6.5% in the euro area. In contrast, price pressures are expected to ease considerably in 2023 and 2024 in the United States, Canada, Australia, Korea and Japan.

- The main reasons for rise in inflation is mainly due to the crisis in Russia - Ukraine, which has pushed up energy and food commodity prices. In the emerging-market economy, headline consumer price inflation reached 9.6% and 10.8% respectively in the third quarter of 2022.

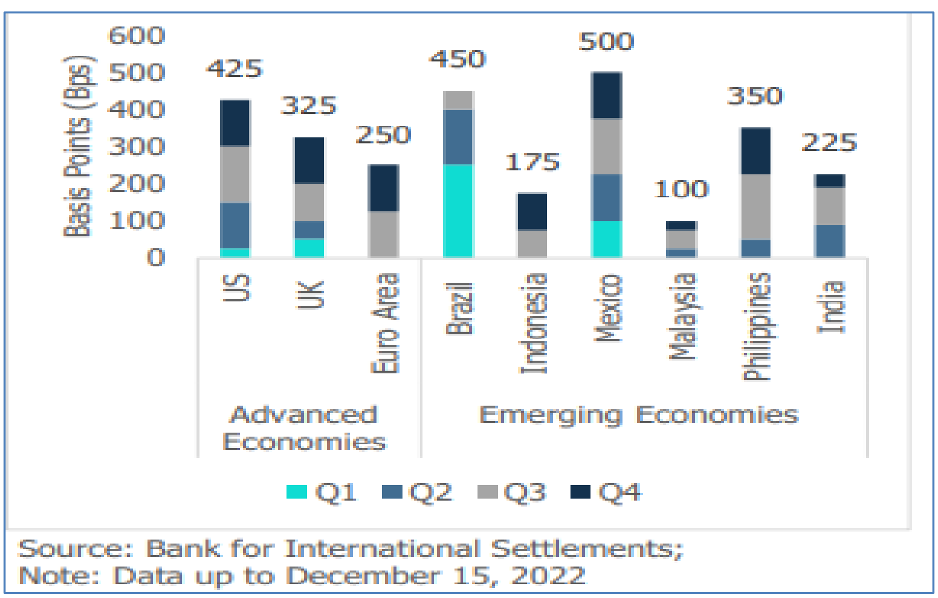
- The higher price of energy has triggered increasing prices across a broad basket of goods and services. The persistence inflationary pressures have resulted in a spike in a number of key commodity prices – for oil, gas and coal, a range of metals, wheat and corn and edible oils, as well as fertilizers. The following graph shows the rise in prices in these items.




- The rise in per- unit labor cost is also one of the causes for increase in inflation. Year-on-year unit labor cost growth is estimated to have been around 4% in the advanced economy and the aggregate euro area in the third quarter of 2022, over 6% in the United States, and above 10% in Central and Eastern European economies. In contrast, annual unit labor cost growth remained below 1% in Japan, Spain, and several European economies.

- During the year, many Central Banks have raised their policy rates to reduce the inflation in their country.

Figure- Pace of rate hikes across countries



**Global trade growth turns negative after record year: United Nations Conference on Trade and Development (UNCTAD)**

Global trade volume growth is projected to slow down to 2.9% in 2023 as demand softens and price pressures mount, in Europe and the United States. The global trade growth turned negative during the second half of 2022 according to UNCTAD. According to the UN trade in goods and services is expected to reach $25 trillion and $7 trillion respectively, by the end of the year. The downturn began in the third quarter of the year, with goods trading about 1% lower than from March to May.


Source: UNCTAD

In case of demand for foreign goods, trade volumes increased by 3 %. Trade volumes of East Asian economies have shown resilience, while South-South trade lagged during the third quarter.

Overall, geopolitical frictions, persisting inflation, and lower global demand are expected to negatively affect global trade during 2023, according to UNCTAD in its report.

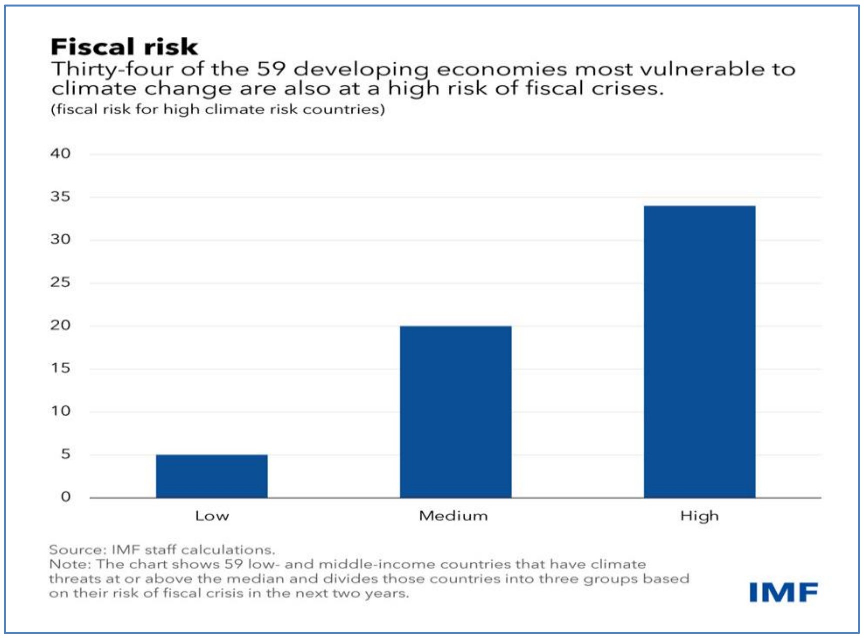
The factors leading to negative global trade growth are the following: -

- The lower economic growth forecast through 2023 due to high energy prices, rising interest rates, sustained inflation in many economies and the impact of the Russia – Ukraine war are considered to be the main factors for negative trade growth.
- Prices of components and consumer goods are expected to dampen demand for imports and lead to a declining volume of international trade.
- Record levels of global debt and increased interest rates, pose significant concerns for debt sustainability, increasing pressure on governments and thus hampering demand.

**Swapping Debt for Climate or Nature Pledges Can Help Fund Resilience- IMF**

According to IMF, countries that are vulnerable to climate change are also least able to afford investment to strengthen resilience because their budgets are burdened by debt. Such countries face a high risk of fiscal crisis. Debt-for-climate swaps and debt-for-nature swaps can be useful in such economies that can free up fiscal resources without leading to a fiscal crisis. Creditors provide debt relief in return for a government commitment to decarbonize the economy, invest in climate-resilient infrastructure, or protect biodiverse forests. These instruments have existed in various forms for decades, and more countries are considering them following recent agreements in Barbados, Belize and Seychelles.

Swaps could even create additional revenue for countries with valuable biodiversity by allowing them to charge others for protecting it and providing a global public good. This is also true of carbon sinks, or natural environments which absorb carbon dioxide from the atmosphere and are an important part of the transition to a lower carbon economy.




IMF has proposed: structuring deals around broad climate and environmental goals such as de-carbonizing the energy industry, investing in adaptation, or protecting nature; moving away from custom projects and supporting budgetary spending on climate in countries with strong public financial management and policy credibility; and linking swaps to metrics such as carbon emissions, deforestation, or ocean exploitation. Further, IMF's Resilience and Sustainability Trust could support resilience-enhancing climate-related policy reforms for many countries with affordable long-term financing.

According to IMF, swaps can play a role in some circumstances and should be scaled up to complement existing instruments and strengthen resilience in countries on the front line of climate change and loss of natural biodiversity at a time when financing is scarce for many low developed nations in the world.

**India**

According to the latest data released by National Statistical Office (NSO), real gross domestic product (GDP) posted a growth of 6.3 % year-on-year (y-o-y) in Q2 (July – September) of FY 2022-23, driven primarily by private consumption and investment.

For the third quarter Q3 (October-December) of FY 2022-23, NSO has estimated the following economic indicators related to Indian economy: -

- Urban consumption has firmed up driven by sustained recovery in discretionary spending, especially on services such as travel, tourism and hospitality.
- Passenger vehicle sales and domestic air passenger traffic posted robust growth.
- With rising farm activity, rural demand is recovering as reflected in the pace of tractor and retail two-wheeler sales.
- Non-food bank credit rose by ₹10.6 lakh crore during April-November 2022 as compared with an increase of ₹1.9 lakh crore last year.
- The agricultural sector remained resilient as the Rabi sowing got off to a strong start. As on 2nd December, 2022, the area sown so far is 6.8 % higher than the normal sown area.
- The manufacturing and services PMIs for India in November are among the highest in the world. While the manufacturing PMI rose from 55.3 in October to 55.7 in November, the PMI for the services sector expanded from 55.1 in October to 56.4 in November.

Taking the above factors in consideration, the real GDP growth for 2022-23 is projected at 6.8 %, with Q3 at 4.4 % and Q4 at 4.2 %.

**Inflation in India**

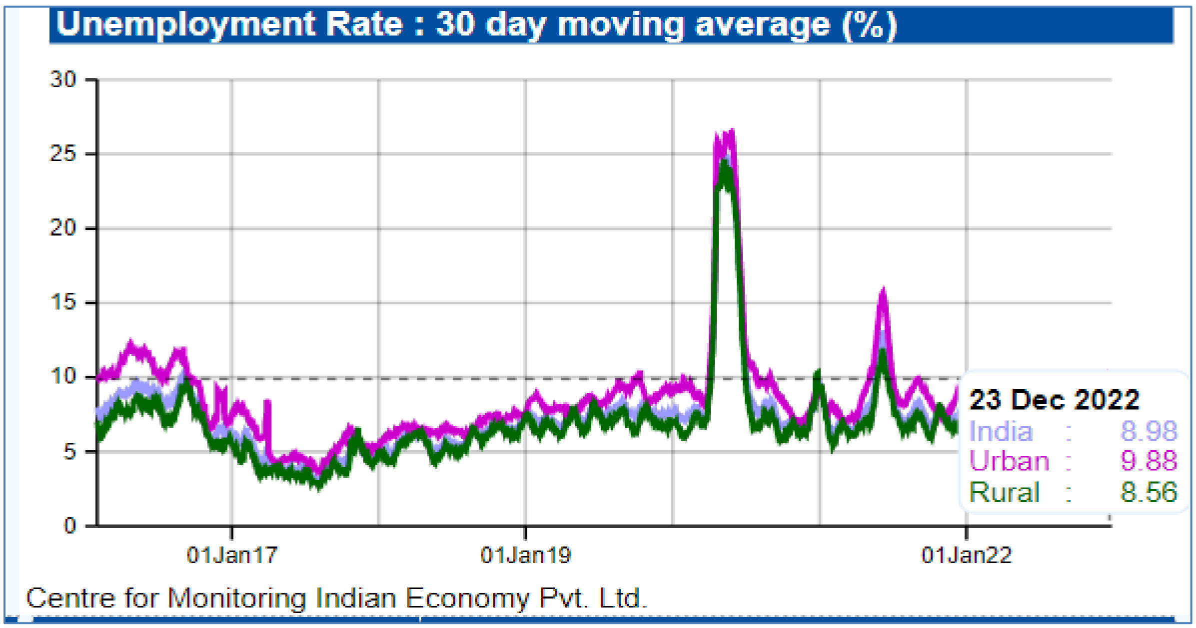
- India's consumer price-based inflation eased to an 11-month low of 5.88 % in November on an annual basis from 6.77 % in October, 2022.
- The number has dropped within RBI's tolerance band of 2-6 % after 10 months.
- The decline can be attributed to easing food prices which account for almost 40 % of India's CPI basket. Food inflation for November came in at 4.67 % as against 7.01 % in October.
- Inflation rate for vegetables contracted by 8.08 % while fuel and light inflation surged to 10.62 %.
- Assuming an average crude oil price (Indian basket) of USD 100 per barrel, the RBI has projected headline inflation to average 6.7 % in 2022-23, with Q3 (October-December) at 6.6 % and Q4 (January-March) at 5.9 %.

**RBI stance on inflation**

- The government has mandated the RBI to maintain retail inflation at 4 % with a margin of 2 % on either side for a five-year period ending March 2026.
- The RBI has hiked benchmark interest rates by 2.25 % in five tranches since May to contain price rise. The repo rate currently stands at 6.25%.

**Unemployment in India**

The CMIE data for December, 2022 suggest that the unemployment rate has been at 8.98% in the month of December 2022 with urban unemployment rate at 9.88 % and the rural unemployment rate is at 8.56 % in December 2022.

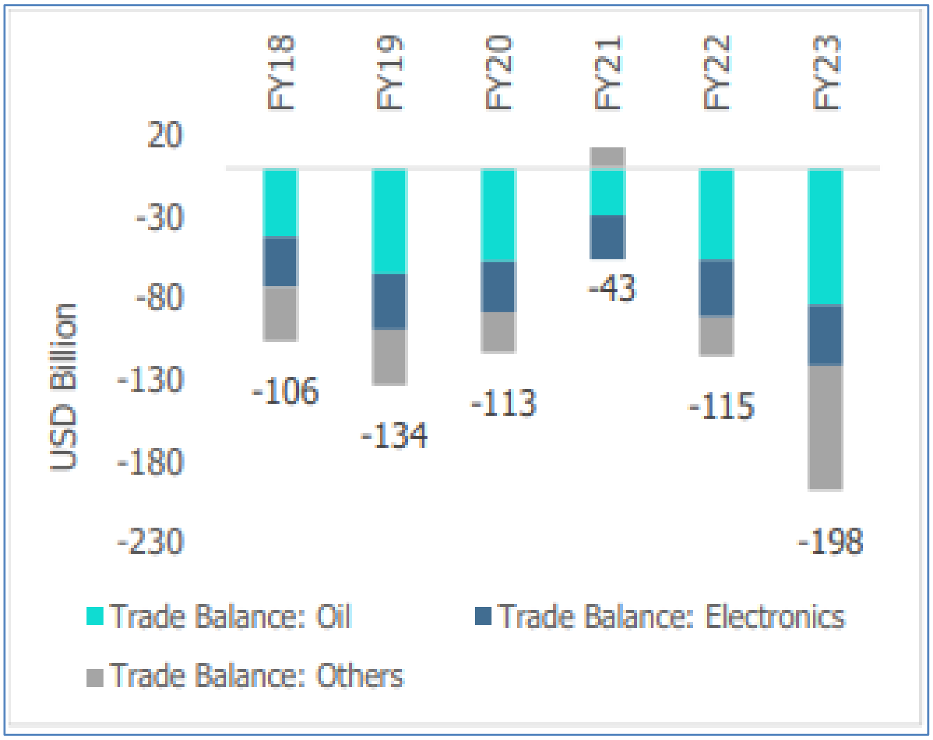



**India's external position**

- As on 16th December 2022 India's foreign exchange reserves fell by USD 571 million to USD 563.5 billion.
    - Foreign currency assets, the largest component of India's foreign exchange reserves, decreased by USD 500 million to USD 499.6 billion.
    - While gold reserves decreased by USD 150 million, special drawing rights (SDRs) increased by USD 75 million.
    - India's reserves position in International Monetary Fund (IMF) improved by USD 4 million to USD 5.1 billion.

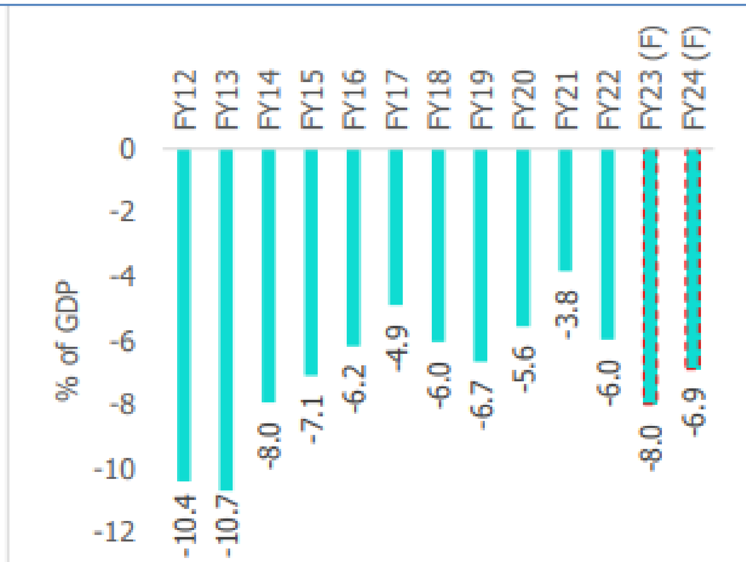
- Slowing global demand, elevated international commodity prices, and relatively resilient domestic demand resulted into a sharp widening of the trade deficit in the current FY 2022-23. From April-November, the monthly trade deficit averaged ~ USD 25 billion, which was higher than the monthly average of USD 16 billion for FY 2021-22. The widening trade deficit is driven by the non-oil trade deficit. Within the non-oil trade deficit, the deficit in electronic goods climbed to USD 37 billion so far in FY23, compared to an average of nearly USD 32 billion in the same period of the last five years.

Figure- Non-Oil trade deficit in FY 2023 (April- November 2023 period)




- CARE ratings have estimated the trade deficit in FY 2022-23 to be around USD 294 billion as against USD 189 billion in FY22. The trade deficit (as % of GDP) is projected to be at 6.9% in FY24 as against an estimate of 8% in FY23.

Figure- Merchandise trade deficit (as a % of GDP) in FY 2024




Source: CMIE & CareEdge; Note: Figures for FY23 & FY24 represent CareEdge forecast

**IMF projects India's GDP growth for 2022-23 at 6.8%**

- The International Monetary Fund (IMF) has projected India's real GDP growth for 2022-23 and 2023-24 at 6.8 % and 6.1 % respectively. The factors such as tighter financial conditions and rising inflation have affected the growth for India.

**IMF October 2022 World Economic Outlook Projections**

| | 2021 | 2022 (P) | 2023 (P) |
|---|---|---|---|
| World | 6.0 | 3.2 | 2.7 |
| Advanced Economies | 5.2 | 2.4 | 1.1 |
| United States | 5.7 | 1.6 | 1.0 |
| Euro Area | 5.2 | 3.1 | 0.5 |
| Japan | 1.7 | 1.7 | 1.6 |
| Emerging Market & Developing Economies | 6.6 | 3.7 | 3.7 |
| China | 8.1 | 3.2 | 4.4 |
| India | 8.7 | 6.8 | 6.1 |

Source: International Monetary Fund (IMF), World Economic Outlook Database, October 2022; Note: Forecasts for India on a fiscal year basis

- The IMF has projected India's inflation for the FY 2022-23 at 6.9 % which will moderate gradually over the next year to 5.1 %.
- Further, with higher commodity prices strengthening import demand, IMF has projected India's current account deficit (CAD) to rise to 3.5 % of the GDP for FY 2022-23.

**World Bank raises India's GDP growth prediction for 2022-23 to 6.9%, up from 6.5% predicted earlier**

- The World Bank increased its estimate of India's GDP growth rate to 6.9 % for 2022-23, up from the 6.5 % predicted earlier.
- The World Bank has raised India's GDP growth prediction for the current financial year due to the country's strong economic performance supported by healthy domestic demand.
- According to the World Bank, the government is expected to meet the fiscal deficit target of 6.4 % of the GDP in 2022-23.
- Further, the World Bank estimates India's retail inflation to be 7.1% in 2022-23.

**India's Foreign trade position**

- India's trade position exhibited a robust performance with India's overall export (Merchandise and Services combined) recorded an amount of USD 58.22 Billion in November2022. The exports exhibited a positive growth of 10.97 % over the same period last year.
- The overall import in November 2022 is estimated to be USD 69.33 Billion, exhibiting a positive growth of 5.60 % over the same period last year.

**Table: Trade during November 2022**

| | | November 2022 (USD Billion) | November 2021 (USD Billion) |
|---|---|---|---|
| **Merchandise** | Exports | 31.99 | 31.80 |
| | Imports | 55.88 | 53.03 |
| **Services** | Exports | 26.23 | 20.67 |
| | Imports | 13.44 | 12.63 |
| **Overall Trade (Merchandise Services)** | Exports | 58.22 | 52.46 |
| | Imports | 69.33 | 65.65 |
| | Trade Balance | **-11.11** | **-13.19** |

*Source- Ministry of Commerce & Industry*

**Overall Trade during November 2022**


*Source- Ministry of Commerce & Industry*

- India's overall exports (Merchandise and Services combined) in April-November 2022 is estimated to exhibit a positive growth of 17.72 % over the same period last year. As India's domestic demand has remained steady amidst the global slump, overall imports in April-November 2022 are estimated to exhibit a growth of 29.47 % over the same period last year.
- India's overall exports (Merchandise and Services combined) in April-November2022 are estimated to be USD 499.67 Billion. Overall imports in April-November 2022 are estimated to be USD 610.70 Billion.

**Table 2: Trade during April-November 2022**

| | | April-November 2022 (USD Billion) | April-November 2021 (USD Billion) |
|---|---|---|---|
| Merchandise | Exports | 295.26 | 265.77 |
| | Imports | 493.61 | 381.17 |
| Services* | Exports | 204.41 | 158.67 |
| | Imports | 117.09 | 90.52 |
| Overall Trade (Merchandise Services) | Exports | 499.67 | 424.45 |
| | Imports | 610.70 | 471.68 |
| | Trade Balance | -111.02 | -47.23 |

*Source- Ministry of Commerce & Industry*

**Fig: Overall Trade during April-November 2022**


*Source- Ministry of Commerce & Industry*

## Lessons from Economics

### Mixed Economy

A mixed economy combines the characteristics of both capitalism and socialism and allows both public and private sectors to operate, wherein private enterprises aim for profit maximization, while the Government sector works towards the welfare of the citizens.

The idea behind mixed economy was advocated by economist, John Maynard Keynes. A mixed economy typically combines the features of a market-based economy with a strong public sector. While most prices are set by supply and demand, the government may intervene in the economy by enforcing price floors or ceilings for certain goods, or by directing public funds to certain industries at the expense of others. The common examples of mixed-economy policies include- social welfare programs, price controls and subsidies, etc.

### Characteristics of Mixed economy

The characteristics of a mixed economy include: -

- allowing supply and demand to determine fair prices,
- the protection of private property,

- promotion of innovation and technology,
- standards of employment,
- overall socio-economic welfare provided by Government

## Benefits of a Mixed Economic System

Combining the features of a market economy and a command economy, a mixed economic system carries following advantages: -

1. **Efficient allocation of resources**

Resources are allocated efficiently to where they are needed the most in the private sector. Hence, customers' needs can be better met.

2. **Incentives for innovation and production efficiency**

In a free market with competition, the enterprises that can produce more efficiently are rewarded with higher profits. Companies are thus motivated to allocate capital to achieve innovation and efficiency of production.

3. **Government support**

In a mixed economy, government intervention can support key industries, such as education, defense, and healthcare, through subsidies or ownership. The government also takes care of the less competitive companies and disadvantaged individuals. For example, tax is an effective tool to reduce inequality by redistributing incomes. The government can also implement health care, retirement, and other programs to improve the welfare of the general society.

## Mixed Economy Vs Laissez-faire Capitalism

The difference from a laissez-faire capitalist system is that markets are subject to varying degrees of regulatory control and governments through fiscal and monetary policies can regulate the economy thus taking into consideration the socio-economic factors such as unemployment and economic inequality. In this framework, varying degrees of public utilities and essential services are provided by the government, including education, healthcare, physical infrastructure, and management of public lands.

This contrasts with laissez-faire capitalism, where state activity is limited to maintaining order and security, and providing public goods and services, as well as the legal framework for the protection of property rights and enforcement of contracts.

## Examples of Mixed economy

The United States, the United Kingdom, Sweden, Iceland, India, China follows a mixed economic system. Most of the industries in these countries are dominated by private enterprises with a certain level of government intervention, such as agricultural subsidies and financial regulations.

# Oil Market

## Crude oil price – Monthly Review

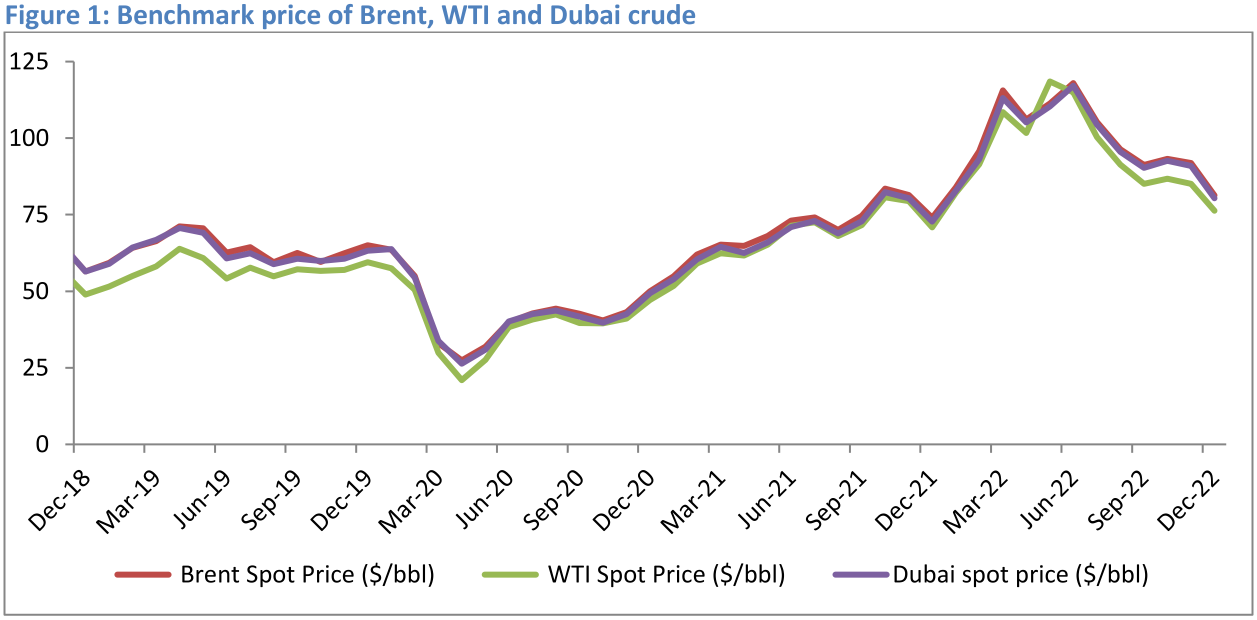
A weak macroeconomic environment and abundant supply have knocked around $15/bbl off benchmark crude prices over the past month. The sell-off comes despite lower OPEC+ production, an EU embargo on Russian crude oil coming into full force and a relaxation of China's Covid restrictions that could pave the way for a quicker demand recovery in the world's second largest oil consumer.

Russian prices saw steeper declines. Urals in Northwest Europe fell nearly $30/bbl to $43/bbl by early December, well below the $60/bbl price cap finally agreed by G7, Australia and the EU. The price cap aims to facilitate trade with Moscow by allowing third-party buyers to use European Union maritime services as long as they conclude purchases below that limit. On the supply side, western sanctions will force Russia to divert more crude and refined products exports from Europe to Asia.

Oil prices started to decline in the second half this year as central banks across the world hiked interest rates to fight inflation and boosted the U.S. dollar, thereby making dollar-denominated commodities a more costly investment for holders of other currencies. Also, China's zero-COVID restrictions, which were only eased in December, suppressed oil demand recovery hopes. While China is set to recover in 2023, a surge in COVID cases in the country and global recession concerns are dimming the commodities demand outlook.

Brent crude ranged an average to $81.76 a barrel and WTI ranged to $76.89 per barrel in the month of December.

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




Source: World Bank

- Brent crude price averaged $81.76 per bbl in December 2022, down by 11.0% on a month on month (MoM) and up by 10.5% on year on year (YoY) basis, respectively.
- WTI crude price averaged $76.89 per bbl in December 2022, down by 9.6% on a month on month (MoM) and up by 8.5% on year on year (YoY) basis, respectively.
- Dubai crude price averaged $80.90 per bbl in December 2022, down by 11.1% on a month on month (MoM) and up by 11.1% on year on year (YoY) basis, respectively.

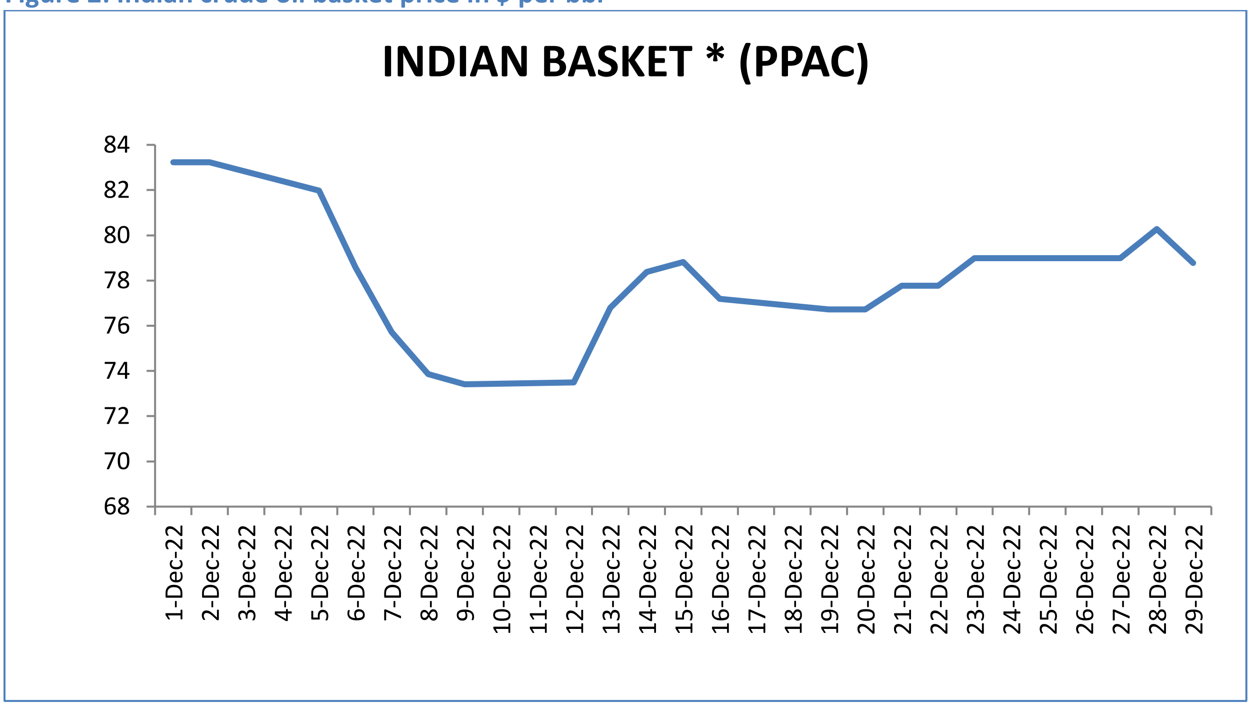
**Table 1: Crude oil price in December, 2022**

| Crude oil | Price ($/bbl) | MoM (%) change | YoY (%) change |
|---|---|---|---|
| **Brent** | 81.76 | -11.0% | 10.5% |
| **WTI** | 76.89 | -9.6% | 8.5% |
| **Dubai** | 80.90 | -11.1% | 11.1% |

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 $78.08 per barrel in December 2022, down by 12.8% on Month on Month (M-o-M) and up by 7.2% on a year on year (Y-o-Y) basis, respectively.

## Oil production situation

- World oil supply fell by 190 kb/d in November to 101.7 mb/d, breaking a five-month uptrend, after Saudi Arabia and other Gulf countries curbed supply in line with lower OPEC+ output targets. A steeper drop is expected next month as the EU ban on Russian crude imports and the G7 price cap take effect. Following annual gains this year of 4.7 mb/d, growth of 770 kb/d in 2023 will raise supply to 100.8 mb/d.
- Russian oil exports increased by 270 kb/d to 8.1 mb/d, the highest since April as diesel exports rose by 300 kb/d to 1.1 mb/d. Crude oil loadings were largely unchanged m-o-m, even as shipments to the EU fell by 430 kb/d to 1.1 mb/d. Loadings to India reached a new high of 1.3 mb/d. Export revenues, however, dropped $0.7 bn to $15.8 bn on lower prices and wider discounts for Russian-origin products.

**Table 2: Non-OPEC liquids production in 2022, mb/d**

| Non-OPEC liquids production | 2021 | 1Q22 | 2Q22 | 3Q22 | 4Q22 | 2022 |
|---|---|---|---|---|---|---|
| **Americas** | *25.25* | *25.86* | *26.27* | *27.04* | *27.36* | *26.64* |
| of which US | 17.85 | 18.27 | 18.83 | 19.30 | 19.50 | 18.98 |
| **Europe** | *3.76* | *3.73* | *3.43* | *3.49* | *3.74* | *3.60* |
| **Asia Pacific** | 0.51 | 0.49 | 0.51 | 0.43 | 0.53 | 0.49 |
| **Total OECD** | **29.52** | **30.08** | **30.22** | **30.97** | **31.63** | **30.73** |
| **China** | 4.31 | 4.51 | 4.52 | 4.38 | 4.43 | 4.46 |
| **India** | 0.78 | 0.78 | 0.77 | 0.76 | 0.77 | 0.77 |
| **Other Asia** | 2.41 | 2.35 | 2.30 | 2.25 | 2.33 | 2.31 |
| **Latin America** | 5.95 | 6.11 | 6.18 | 6.45 | 6.63 | 6.34 |
| **Middle East** | 3.24 | 3.29 | 3.33 | 3.36 | 3.36 | 3.34 |
| **Africa** | 1.35 | 1.33 | 1.31 | 1.32 | 1.32 | 1.32 |
| **Russia** | 10.80 | 11.33 | 10.63 | 11.01 | 10.88 | 10.96 |
| **Other Eurasia** | 2.93 | 3.05 | 2.77 | 2.61 | 2.95 | 2.84 |
| **Other Europe** | 0.11 | 0.11 | 0.11 | 0.10 | 0.10 | 0.11 |
| **Total Non-OECD** | **31.87** | **32.85** | **31.92** | **32.24** | **32.76** | **32.44** |
| **Total Non-OPEC production** | 61.39 | 62.93 | 62.14 | 63.21 | 64.39 | 63.17 |
| **Processing gains** | 2.29 | 2.40 | 2.40 | 2.40 | 2.40 | 2.40 |
| **Total Non-OPEC liquids production** | **63.68** | **65.33** | **64.54** | **65.61** | **66.79** | **65.57** |
| **Previous estimate** | **63.68** | **65.33** | **64.54** | **65.53** | **66.90** | **65.58** |
| **Revision** | 0.00 | 0.00 | 0.00 | 0.08 | -0.01 | -0.01 |

Source: OPEC

- From the above table, it can be inferred, that the total non-OPEC liquids production is expected to reach 65.57 mb/d by 2022.
- OPEC NGLs and non-conventional liquids production in 2022 is forecasted (as per OPEC monthly report) to grow by 0.1 mb/d to average 5.4 mb/d.
- OPEC-13 crude oil production averaged 28.83 mb/d in November 2022, lower by 744 tb/d m-o-m.

## Oil demand situation

- World oil demand is set to contract by 110 kb/d y-o-y in 4Q22, reaching 100.8 mb/d, up by 130 kb/d compared with last month's Report. Strong gasoil use in key consuming countries outweighs weak European and Asian petrochemical deliveries. Oil demand growth has been increased to 2.3 mb/d (+140 kb/d) for 2022 as a whole and to 1.7 mb/d next year (+100 kb/d), when it will reach 101.6 mb/d.

- Despite the seasonal slowdown in world oil demand and continued macro-economic headwinds, recent oil consumption data have surprised to the upside. This was especially apparent in non-OECD regions, including China, India and the Middle East. By contrast, OECD oil demand remained depressed as weak European and Asian petrochemical activity outweighed ongoing gas-to-oil switching in manufacturing processes. Oil demand is now forecast to rise by 2.3 mb/d in 2022 and a further 1.7 mb/d next year, up around 140 kb/d compared with last month's Report.

**Table 3: World Oil demand, mb/d**

| | 2021 | 1Q2022 | 2Q2022 | 3Q2022 | 4Q2022 | 2022 | Growth | % |
|---|---|---|---|---|---|---|---|---|
| **Total OECD** | **44.83** | **45.77** | **45.40** | **46.69** | **46.91** | **46.20** | **1.37** | **3.06** |
| *~ of which US* | *20.03* | *20.38* | *20.41* | *20.62* | *20.74* | *20.54* | *0.50* | *2.51* |
| **Total Non-OECD** | **52.18** | **53.58** | **52.81** | **52.84** | **54.20** | **53.36** | **1.18** | **2.25** |
| *~ of which India#* | *4.77* | *5.18* | *5.16* | *4.95* | *5.35* | *5.16* | *0.39* | *8.11* |
| ~ of which China | 14.97 | 14.74 | 14.42 | 14.69 | 15.32 | 14.79 | -0.18 | -1.17 |
| **Total world** | **97.01** | **99.35** | **98.21** | **99.54** | **101.11** | **99.56** | **2.55** | **2.62** |

Source: OPEC monthly report, December 2022

*# During 2022 rising oil demand will be supported by increasing requirements in all main petroleum product categories, however, some downside risks pertain relating to rising COVID-19 cases, new variants and their associated containment measures, as well as fuel substitution.*

*Note: 2022 = Forecast. Totals may not add up due to independent rounding*

## Global petroleum product prices

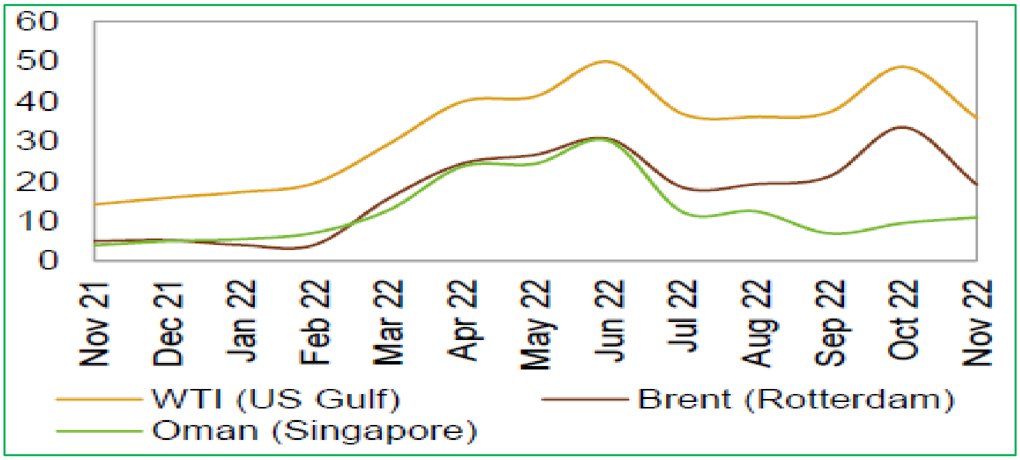
USGC refining margins against WTI reversed trends to lose the gains registered in the previous month. The end of heavy maintenance works in the country resulted in higher product output. Consequently, the growth in product balances exerted pressure on product crack spreads and led to negative performance all across the barrel. Most of the downturn in US product markets came from gasoil/diesel as inventory levels picked up from the alarmingly low level witnessed in the previous month, although they still remain below the 5-year average.

Refinery margins in Rotterdam against Brent ended their 3-month upward trend and lost solid ground in November to show the largest monthly decline compared with the other main trading hubs. The return of refineries from the heavy maintenance season in Europe and the subsequent rise in processing rates and product output weighed on regional product markets. In addition, despite weekly Amsterdam-Rotterdam-Antwerp hub inventory declines during November and higher road fuel consumption in the

UK, strong diesel imports from Russia and from the East kept the NWE region well supplied, further contributing to the weakness in European refinery economics.

Refinery throughput in Europe increased by 460 tb/d to average 9.99 mb/d according to preliminary data. Refinery margins against Brent in Europe averaged $19.12/b in November, down by $14.38/b compared with a month earlier but were higher by $14.15 y-o-y.

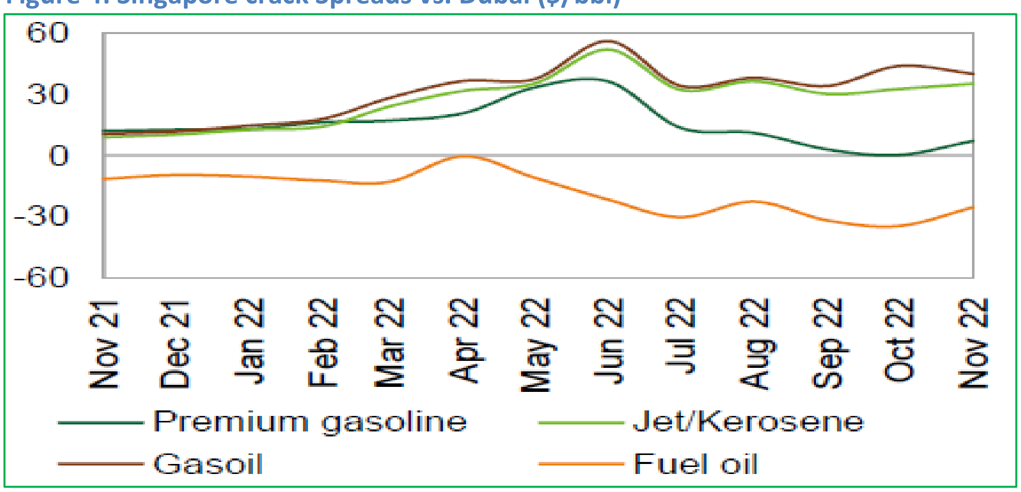
**Figure 3: Refining Margins ($/bbl)**




Source: Argus and OPEC

The Asian gasoline 92 crack spread recovered some ground over the month, mainly supported by robust consumption levels within the region. The Singapore gasoline crack spread against Oman in November averaged $6.99/bbl, up by $6.87 m-o-m but down by $4.87/bbl y-o-y.

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




Source: Argus and OPEC

The Singapore gasoil crack spread represented the sole negative performer across the barrel in November. The Singapore gasoil crack spread against Oman averaged $39.79/b, down by $3.78 m-o-m and by $29.24 y-o-y.

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

| Singapore product prices | Price ($/b) in November 2022 | MoM (%) change | YoY (%) change |
|---|---|---|---|
| **Naphtha** | 74.22 | 3.3% | -11.9% |
| **Premium gasoline (unleaded 95)** | 98.27 | 3.7% | 3.4% |
| **Regular gasoline (unleaded 92)** | 93.11 | 2.1% | 1.0% |
| **Jet/Kerosene** | 121.01 | -1.9% | 35.8% |
| **Gasoil/Diesel (50 ppm)** | 127.11 | -7.1% | 39.5% |
| **Fuel oil (180 cst 2.0% S)** | 125.41 | -6.4% | 38.3% |
| **Fuel oil (380 cst 3.5% S)** | 60.78 | 7.4% | -11.6% |

Source: OPEC

## Petroleum products consumption in India

**Monthly Review:**

- Overall consumption of all petroleum products in November 2022 with a volume of 18.8 MMT registered a growth of 9.96% on volume of 17.1 MMT in November 2021.

- MS (Petrol) consumption during the month of November 2022 with a volume of 2.86 MMT recorded a growth of 8.09% on volume of 2.65 MMT in November 2021.

- HSD (Diesel) consumption during the month of November 2022 with a volume of 7.76 MMT recorded a growth of to 19.26% on volume of 6.50 MMT in the month of November 2021.

- LPG consumption during the month of November 2022 with a volume of 2.47 MMT registered a growth of 5.31% over the volume of 2.34 MMT in the month of November 2021.

- ATF consumption during November 2022 with a volume of 0.617 MMT registered a growth of 22.53% over the volume of 0.504 MMT in November 2021.

- Bitumen consumption during November 2022 with a volume of 0.722 MMT registered a growth 28.36% over volume of 0.563 MMT in the month of November 2021.

- Kerosene consumption registered de-growth of 68.81% during the month of November 2022 as compared to November 2021.

Table 5: Petroleum products consumption in India, November 2022

| CONSUMPTION OF PETROLEUM PRODUCTS (P) | Consumption in '000 MT | MoM (%) change | YoY (%) change |
|---|---|---|---|
| LPG | 2,468 | 2.8% | 5.3% |
| Naphtha | 1,008 | 5.2% | -10.9% |
| MS | 2,860 | -4.6% | 8.1% |
| ATF | 617 | 0.3% | 22.5% |
| SKO | 39 | 14.6% | -68.8% |
| HSD | 7,760 | 11.2% | 19.3% |
| LDO | 57 | -15.0% | -12.8% |
| Lubricants & Greases | 408 | -0.3% | 6.8% |
| FO & LSHS | 557 | -2.7% | 10.8% |
| Bitumen | 722 | 23.0% | 28.4% |
| Petroleum coke | 1,144 | -14.9% | 14.0% |
| Others | 1,198 | -16.7% | -12.0% |
| **TOTAL** | **18,838** | **2.4%** | **10.0%** |

Source: PPAC

## Natural Gas Market

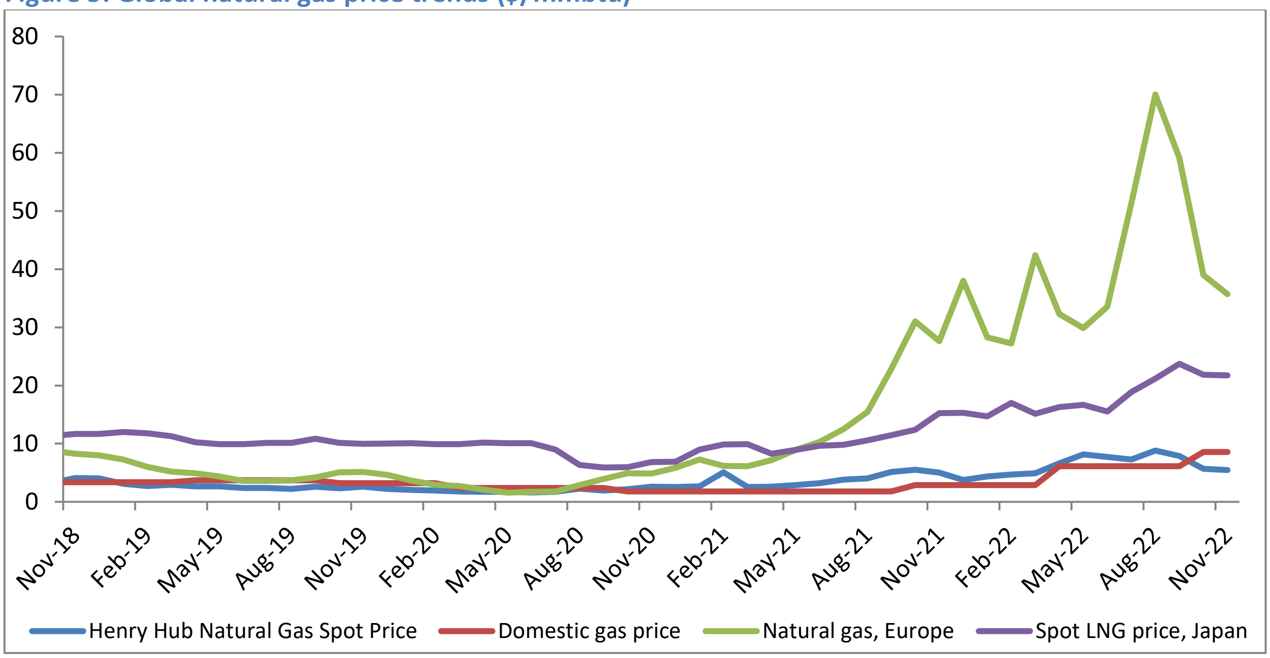
### Natural Gas Price – Monthly Review

- Natural gas spot prices at the U.S. Henry Hub benchmark averaged $5.45 per million British thermal units (MMBtu) in November 2022. Natural gas prices are plunging as US natural gas production ramps-up and warmer weather forecast that reduces the demand of natural gas for heating purposes.
- The natural gas spot price at the Title Transfer Facility (TTF) in the Netherlands in Europe has been trading at averaged $35.72 per MMBtu. Gas prices in the Europe has declined due to reduced demand for natural gas and lining up of new supply to replace pipeline natural gas from Russia. On the supply side, there is a rise in LNG imports from the US and other parts of the world, that are offloaded via existing LNG import terminals and a growing list of floating storage and regasification units (FSRU). On the demand side, ongoing efforts are there by consumers and businesses to reduce consumption of natural gas and power, due to the spike in energy costs. Also, some power generation has shifted from natural gas to coal.
- Japan Liquefied Natural Gas Import Price is averaging at $21.74 per MMBtu for November 2022, down from $21.84 per MMBtu last month. Japan's Ministry of Economy, Trade and Industry (METI) is planning to build a strategic LNG reserve to ensure that the country has enough natural gas to meet domestic demand. The Ministry's proposal is primarily aimed at preventing gas shortages and preparing Japan, one of the world's largest buyers of liquefied natural gas, for battling Europe for cargoes in the years ahead as the continent displaces Russian imports. The

proposal asks Japanese LNG importers to secure supply via term contracts. Importers would be free to sell their "buffer" LNG cargoes into the international market when not required. During any fuel shortage emergencies, though, the government would ask sellers to redirect the LNG to regional power and gas companies that are most in need.

- The price of domestically produced natural gas is $8.57 per million British thermal unit (MMBtu) from October 1, 2022 to March 31, 2023. The price of domestic gas price has been hiked by 40% from the previous revision which was $6.1 per MMBtu for April 1, 2022, to September 30, 2022. The domestic gas price increase was driven by the significant run-up in the prices of gas at global gas hubs. Further, the maximum sale price allowed to natural gas production from deep-water, ultra-deep-water, high pressure and high-temperature discoveries was increased from $9.92 per MMBtu to $12.46 per MMBtu.

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



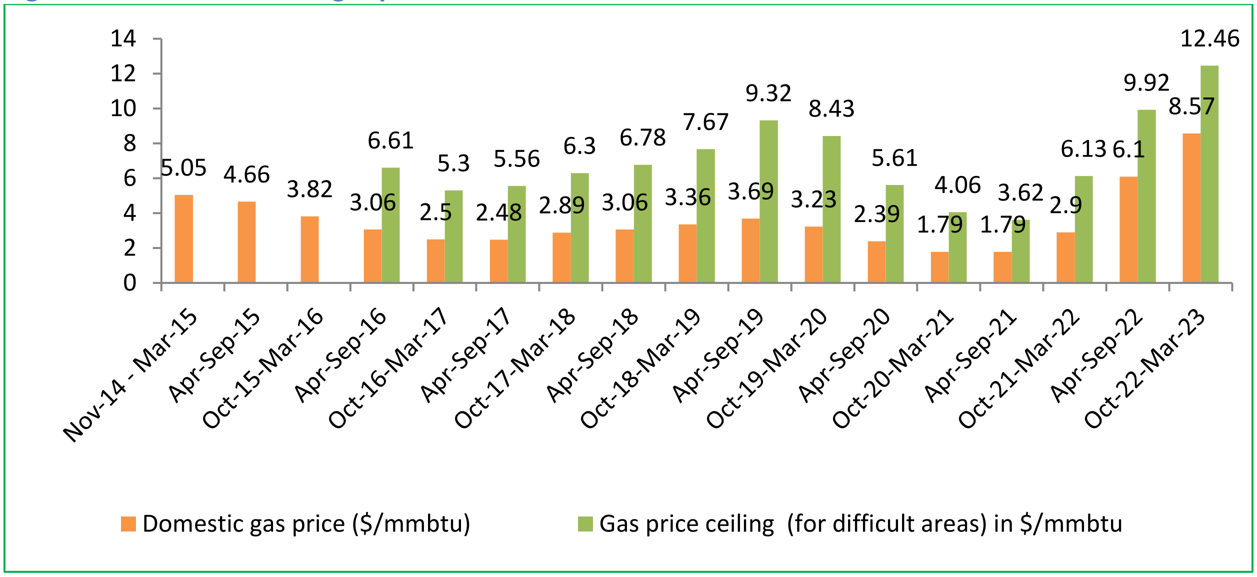

Source: EIA, World Bank

**Table 6: Gas price**

| Natural Gas | Price ($/MMBTU) in November 2022 | MoM (%) change | YoY (%) change |
|---|---|---|---|
| **India, Domestic gas price** | 8.57 | 0% | 195.5% |
| **India, Gas price ceiling – difficult areas** | 12.46 | 0% | 103.3% |
| **Henry Hub** | 5.45 | -3.7% | 7.9% |
| **Natural Gas, Europe** | 35.72 | -8.5% | 29.3% |
| **Liquefied Natural Gas, Japan** | 21.74 | -0.5% | 42.6% |

Source: EIA, PPAC, World Bank

**Figure 6: Domestic natural gas price**




Source: PPAC

**Indian Gas Market**

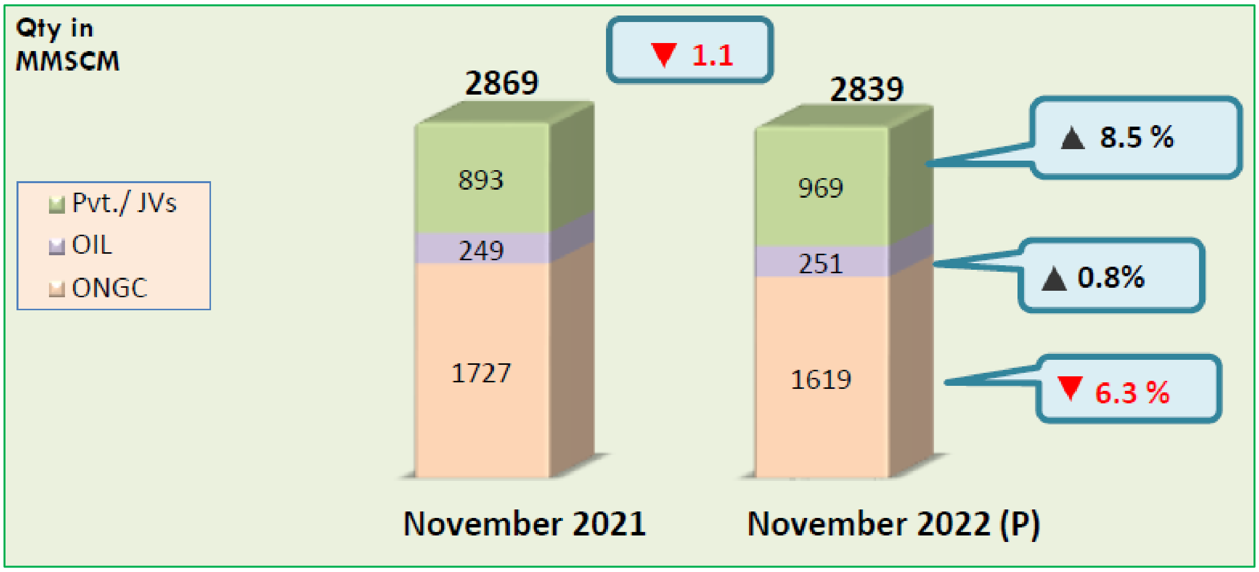
- Gross production of natural gas for the month of November 2022 was 2839 MMSCM (decrease of 1.1% over the corresponding month of the previous year).
- Total imports of LNG (provisional) during the month of November 2022 were 2322 MMSCM (decrease of 5.9% over the corresponding month of the previous year).
- Natural gas available for sale during November 2022 was 4652 MMSCM (decrease of 2.9% over the corresponding month of the previous year).
- Total consumption during November 2022 was 4720 MMSCM (provisional). Major consumers were fertilizer (36%), City Gas Distribution (CGD) (20%), Power (14%), Refinery (6%) and Petrochemicals (3%).

## Monthly Report on Natural gas production, imports and consumption – November 2022

### 1. Domestic Natural Gas Gross Production:

Domestic natural gas gross production for the month of November 2022 was 2839 MMSCM (decrease of 1.1% over the corresponding month of the previous year).

**Figure 7: Domestic natural gas Gross production (Qty in MMSCM)**

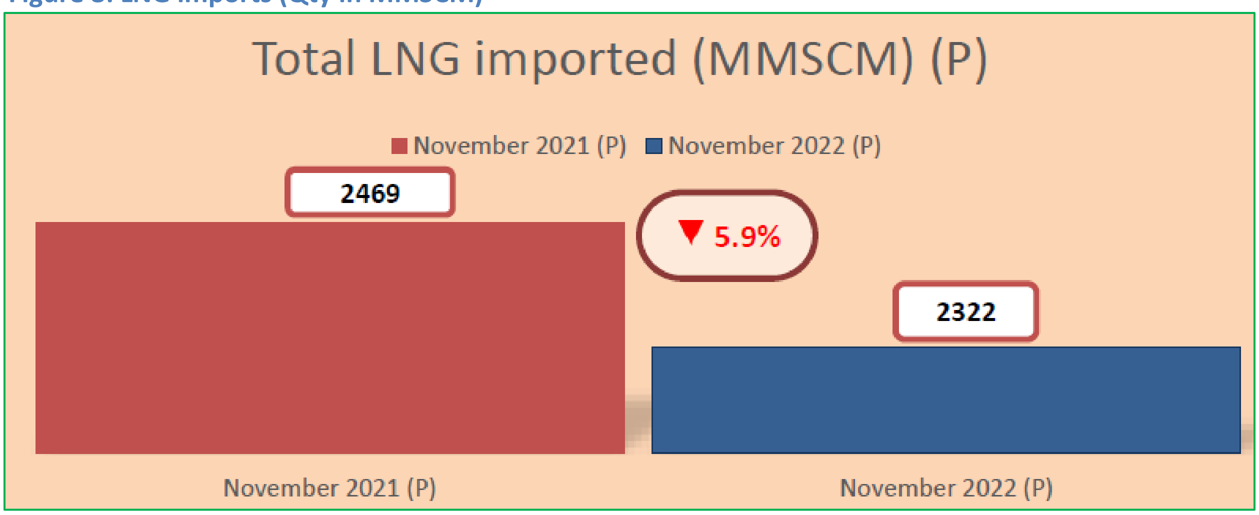



Source: PPAC

**2. LNG imports:**

Total imports of LNG (provisional) during the month of November 2022 were 2322 MMSCM (decrease of 5.9% over the corresponding month of the previous year) 2469 MMSCM.

**Figure 8: LNG imports (Qty in MMSCM)**

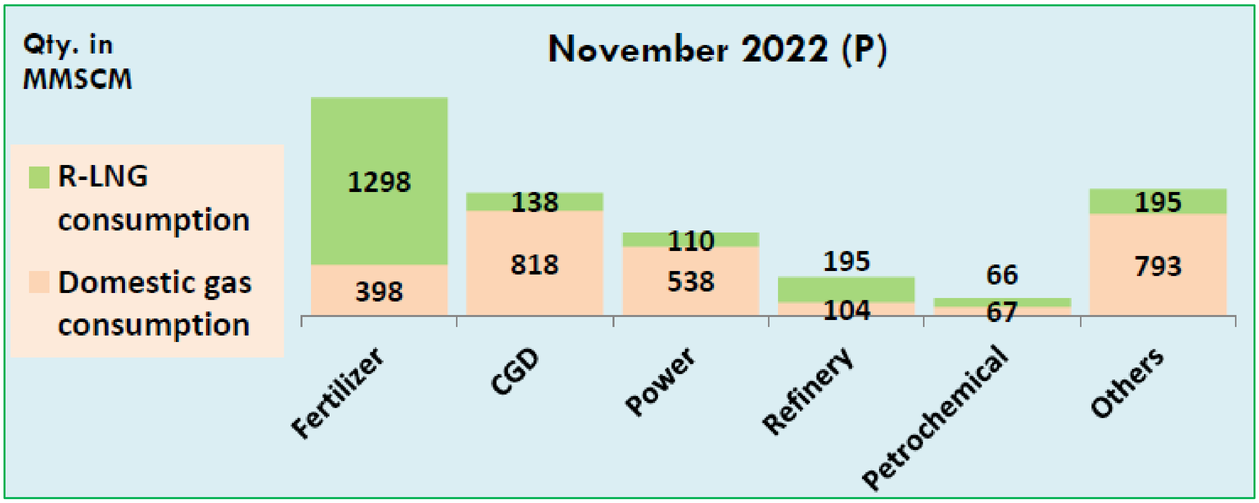



Source: PPAC

**3. Sectoral Consumption of Natural Gas:**

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

**Figure 9: Sectoral Consumption of Natural Gas (Qty in MMSCM) in November 2022**




Source: PPAC

## Key developments in Oil & Gas sector

- **Monthly Production Report for November, 2022**

**1. Production of Crude Oil**

Indigenous crude oil and condensate production during November 2022 was down by 1.1% than that of November 2021 as compared to a de-growth of 2.2% during October 2022. OIL registered a growth of 8.8% and ONGC registered a growth of 0.186% during November 2022 as compared to November 2021. PSC registered de-growth of 8.5% during November 2022 as compared to November 2021. De-growth of 1.4% was registered in the total crude oil and condensate production during April - November 2022 over the corresponding period of the previous year.

**2. Production of Natural Gas**

Gross production of natural gas for the month of November 2022 (P) was 2839 MMSCM which was lower by 1.1% compared with the corresponding month of the previous year. The cumulative gross production of natural gas of 22904 MMSCM for the current financial year till November 2022 was higher by 0.6% compared with the corresponding period of the previous year.

**3. Crude Oil Processed (Crude Throughput)**

Crude oil processed during November 2022 was 19.6 MMT, which was 8.9% lower than November 2021 as compared to a de-growth of 2.6% during October 2022. Growth of 6.8% was registered in the total crude oil processing during April-November 2022 over the corresponding period of the previous year.

4. **Production of Petroleum Products**

Production of petroleum products saw a de-growth of 9.3% during November 2022 over November 2021 as compared to a de-growth of 3.1% during October 2022. Growth of 5.7% was registered in the total POL production during April-November 2022 over the corresponding period of the previous year.

## Key Policy developments in Energy sector

- **Ministry of Power signed Memorandum of Understanding (MoU) with Defence Research and Development Organization (DRDO) for Implementation of Early Warning System for Vulnerable Hydro Projects/Power Stations**

Ministry of Power signed a Memorandum of Understanding (MoU) with Defence Research and Development Organization (DRDO), Ministry of Defence for Implementation of Early Warning System for Vulnerable Hydro Projects/Power Stations. The MoU was signed by Shi Alok Kumar, Secretary, Ministry of Power and Dr. Samir V Kamat, Secretary, Department of Defence (R&D) & Chairman, DRDO.

Ministry of Power and DRDO will jointly work towards developing suitable mitigation measures against avalanches, landslides, glaciers, glacial lakes and other geo-hazards. The expertise of DRDO will also be utilized in developing comprehensive Early Warning System for vulnerable hydro projects/ power stations in hilly regions. Separate and specific tasks will be formulated between DRDO & respective project developer(s) in agreement with broad understanding developed through this MoU.

- **Ministry of Power issued order for waiver of ISTS charges on transmission of electricity generated from new hydro-power projects as a further step to realize the Government's commitment to achieve its power requirement from renewable energy sources**

Ministry of Power issued an order for the waiver of Inter-State Transmission system (ISTS) charges on transmission of electricity generated from new hydro-power projects. The said waiver is already available to solar and wind power projects.

Government has set an ambitious plan to have 500 GW of generation capacity from non-fossil energy-based sources by 2030. Hydro power projects, being clean, green and sustainable will be of paramount importance in the clean energy transition journey. They are also essential for the integration of solar and wind power, which are intermittent in nature.

In acknowledgement of the aforesaid inherent qualities of hydro-power, Government of India declared hydro power projects as the renewable source of power in March, 2019, However, waiver of inter-state transmission charges, provided to solar and wind projects had not been extended to hydro power projects.

In order to remove this discrepancy and to provide a level playing field to hydro projects, Ministry of Power in Government of India decided to extend the waiver of ISTS Charges on the transmission of power from new hydro power projects, for which construction work is awarded and PPA is signed on or before 30.06.2025.

ISTS charges shall be levied for transmission of power from Hydro Power Projects where construction work is awarded and PPA is signed after 30.06.2025 as per the following trajectory:

| S. No | Award of construction work + Signing of PPA | ISTS charges |
|---|---|---|
| 1. | 01.07.25 to 30.06.26 | 25% of applicable ISTS charges |
| 2. | 01.07.26 to 30.06.27 | 50% of applicable ISTS charges |
| 3. | 01.07.27 to 30.06.28 | 75% of applicable ISTS charges |
| 4. | from 01.07.28 | 100% of applicable ISTS charges |

The waiver/or concessional charges as shown in table above shall be applicable for a period of 18 years from the date of commissioning of the hydro power plants. The waiver shall be allowed for Inter-state transmission charges only and not losses. The waiver would be made applicable from prospective date.

This step is expected to provide a boost to the hydro sector, which will also help improve India's water security and bring development benefits to hilly states namely North Eastern States, Uttarakhand, Jammu and Kashmir, Himachal Pradesh etc. where most of the hydro potential is located.

- **Ministry of Power issued revised policy on biomass utilization for power generation through co-firing in coal-based power plants**

Ministry of Power issued revised policy on biomass utilization for power generation through co-firing in coal-based power plants on 08.10.2021. This policy mandates the use of 5% biomass pellets made primarily of agro-residue along with coal in thermal power plants with effect from one year from the date of issuance of this policy. As per this policy, the obligation to use biomass pellets in thermal power plants shall increase to 7% with effect from two years after the date of issuance of this policy.

Co-firing of agro-residue pellets with coal has started in 39 thermal power plants. Cumulative biomass usage up to 30.11.2022 was 85477 MT.

- **Parliament passed The Energy Conservation Amendment Bill**

The Energy Conservation Amendment Bill has been passed by the Parliament. The Bill includes provisions for putting in place a carbon market. As per the framework laid down by Conference of the Parties (COP); if any carbon credit is sold outside the country; it cannot be used for meeting the Nationally determined contributions (NDCs) of the originating country. Carbon credit will on priority be used within the country to meet our NDCs. In specific cases; where carbon credits are created by high technology expensive assets, these may be permitted to be externally marketed by the National Designated Authority created by Government which shall exercise and perform functions that inter-alia include to receive projects for evaluation and approval of host party.

The Generation Expansion Planning studies carried out by the Central Electricity Authority (CEA) for 2029 -30 reveals that the share of non-fossil fuel-based generation capacity in the total installed capacity of the Country is likely to increase from around 42% as on Oct, 2022 to more than 64% by 2029-30. This would reduce the dependence on fossil fuel in electricity generation.

The fossil fuel-based power plants are mandated to comply with the emission norms prescribed by the Ministry of Environment, Forest and Climate Change (MoEF&CC) from time to time.

- **Government raised windfall tax on crude oil, export of diesel, ATF**

The government has raised the windfall profit tax levied on domestically produced crude oil as well as on the export of diesel and ATF, in line with firming international oil prices. The levy on crude oil produced by companies such as Oil and Natural Gas Corporation (ONGC) has been increased to ₹2,100 per tonne from ₹1,700 per tonne as per the order dated January 2, 2023.

The government has also raised the tax on the export of diesel to ₹6.5 per litre, from ₹5 and the same on overseas shipments of ATF to ₹4.5 a litre, from ₹1.5 a litre. The new tax rates are effective from January 3, 2023.

Tax rates were cut at the last review on December 16, 2022, following a decline in global crude oil prices. International oil prices have since then firmed up, necessitating the raising of windfall tax.

- **Department for Promotion of Industry and Internal Trade's (DPIIT) dynamic reform exercised Business Reforms Action Plan (BRAP) strives to promote Ease of Doing Business, boosts competitive federalism**

To promote FDI in the country, the Government has put in place an investor-friendly policy, wherein most sectors except certain strategically important sectors are open for 100% FDI under the automatic route.

Policy on FDI is reviewed on an ongoing basis, to ensure that India remains attractive and investor friendly destination. Changes are made in the policy after detailed consultations with stakeholders including apex industry chambers, associations, sectoral ministries/ departments and representatives of industries/groups and other organizations. Government has recently undertaken a number of reforms across sectors like Defence, Petroleum and Natural Gas, Insurance etc.

The Department for Promotion of Industry and Internal Trade (DPIIT) is the Nodal Department for coordinating the initiatives under Ease of Doing Business which are aimed at creating an investor-friendly ecosystems across the country. In addition to ongoing schemes of various Departments and Ministries, Government has also undertaken various steps to boost domestic and foreign investments in India. These include the introduction of Goods and Services Tax, reduction in corporate taxes, financial market reforms, consolidation of public sector banks, Foreign Direct Investment (FDI) policy reforms, reduction in compliance burden, various policy measures to boost domestic manufacturing, to name a few.

DPIIT, in coordination with States and Union Territories (UTs), is spearheading various reforms to improve the business regulatory environment in the country. DPIIT undertakes a dynamic reform exercise called Business Reforms Action Plan (BRAP), wherein all States and UTs are assessed on the basis of implementation of designated reform parameters. The focus of the reforms has been on streamlining the existing regulations and processes and eliminating unnecessary requirements and procedures. The Action Plan for the year 2022 covers 352 reform points.

All the States and UTs, including Jharkhand, Delhi and West Bengal have also participated actively in this exercise over the years and reforms implemented by them are recorded on the BRAP Portal (https://eodb.dpiit.gov.in/). The exercise boosts competitive federalism among the States/UTs and thereby helps to further facilitate investor-friendly ecosystems across the country.

Comprehensive reforms have been undertaken by the Public Sector Banks (PSBs) under Enhanced Access and Service Excellence reforms agenda to improve the ease of doing business including, *inter alia*, the following:

i. Setting up of Loan Management Systems and Centralised Processing Centres, resulting in retail loan disbursement turnaround time reducing from 31 days to 10 days
ii. Enhancement of access to mobile and Internet banking by PSBs through increase in average number of services offered, customer-friendly features, and regional languages available on the customer interface
iii. Introduction of end-to-end automated digital lending in most of the larger PSBs for unsecured personal loans, loans to micro-enterprises and renewal of loans to MSMEs
iv. Enablement of digital retail loan request initiation through digital channels in all large PSBs
v. Thrust on customer-need-driven, analytics-based credit offers by large PSBs

The objective of amalgamation of the banks was to facilitate consolidation among PSBs to create strong and competitive banks capable of achieving economies of scale and realization of synergy benefits with wider product and service offering to customers. As a result of this effort, customers of amalgamated banks received access to increased number of branches and ATMs from which they can now avail banking services.

Customers have also received access to a larger bouquet of products and services through harmonization of the same across banks being amalgamated together and enhanced their lending capacity for loans of a larger size. Further, the increased scale and customer base in the amalgamated banks has also enabled banks to opening/reorganizing controlling offices and processing centers, equipping them for better customer serving.

- **Scheme for Intellectual Property (IP) protection revised to upgrade the professional charges of the facilitators**

To protect and promote Intellectual Property Rights (IPR) of Startups and to encourage innovation and creativity among them, Government of India had launched a Scheme for facilitating Start-Ups Intellectual Property Protection (SIPP) in 2016. The scheme facilitated startups in filing and processing of their patent, design or trademark application through the assistance of IP Facilitators, whose fee was borne by the Office of the Controller General of Patents Designs and Trademarks, Department for Promotion of Industry and Internal Trade, Government of India. After its successful implementation resulting in a significant increase in IP fillings by Startups the Scheme was extended for a period of three years till 31st March 2023.

To further encourage the IP facilitators to provide quality services to Startups in order to increase the number of IP Applications filed by startups, the scheme has now been revised and facilitation fees has been notably increased by at least 100%. The revised scheme is applicable from 02 November 2022 and revised fees structure vis-à-vis the old scheme is as under:

| Stage of Payment | | Patents | | Trademarks | | Designs | |
|---|---|---|---|---|---|---|---|
| **FEE (in INR)** | | **2016** | **2022** | **2016** | **2022** | **2016** | **2022** |
| **At the time of filing of Application** | | 10,000 | 15,000 | 2,000 | 3,000 | 2,000 | 3,000 |
| **At the time of final disposal of Applications** | **Without Opposition** | 10,000 | 25,000 | 2,000 | 5000 | 2,000 | 5,000 |
| | **With Opposition** | 15,000 | 35,000 | 4,000 | 10000 | 4,000 | 10,000 |

In addition to above scheme, IP filling by startups are also encouraged by providing with fee rebates under respective IP legislations. Startups are provided 80% fee rebate in filing patent applications and 50% fee rebate in filling trademark application. In addition, there are also provisions for fast-track examination of patent applications.

Resultantly, there has been a significant increase in IP activities by Startups in last 6 years:

- Patent applications filed by Startups have increased from 179 in 2016-17 to 1500 in 2021-22
- Trade Mark applications filed by Startups have increased from 4 in 2016-17 to 8649 in 2021-22
- From 2016-17 to October 2022, 7430 patent applications and 28749 Trade mark applications have been filed by Startups

As on 30 September 2022, INR 380.81 Lakhs have been disbursed as fees to the facilitators assisting the Startups in IP fillings. The revised fee structure will further augment the filing of IP applications by the Startups through the assistance of IP facilitators offering effective and quality service.

***********

*Research, analysis & compilation by:*

***Economic Policy & Planning Team -FIPI***

*Email: pankhuri@fipi.org.in*

Note: The information contained herein is compiled from various sources considered reliable, but its accuracy and completeness are not warranted, nor are the opinions and analyses that are based on it. FIPI is not responsible for any errors or omissions, nor shall it be liable for any loss or damage incurred by reliance on information or any statement contained herein. While reasonable care has been exercised to ensure that no copyrights are infringed, in case there is any omission or oversight in this regard, we may please be informed immediately.