

SPECIAL REPORT ON

# NATURAL GAS OPTION ON MCX

JANUARY 2022



Natural gas is a vital component of the world's energy supply. It is one of the cleanest, safest, and the most useful of all energy sources. Given its growing resource base and relatively low carbon emissions compared with other fossil fuels, natural gas is playing a greater role in the world energy mix. It is increasingly being used as a source of energy for generating electricity through gas turbines and steam turbines. CNG is commonly being used as a fuel for public transport vehicles. In addition, natural gas is used as a base ingredient in the manufacturing of ammonia, anti-freeze, fabrics, glass, steel, plastics, and paint.

**To provide a better investment and hedging tool, MCX has started the option trading in natural gas. MCX, the country's largest commodity exchange, has received SEBI approval for launching options trading on Natural Gas (1,250 MMBTU) futures with two contracts expiring next February 21 and March 24 will be available for trading from January 17.** On expiry, the first contract will devolve in futures on February 22, said the exchange. The option type is European Call & Put Options styled which can be exercised only on the expiration date. It is a fairly easy to use product and gives a lot of flexibility. The trading unit is 1250 mmBtu same as futures contract. Base price shall be theoretical price on Black 76 option pricing model on the first day of the contract. On all other days, it shall be previous day's Daily Settlement Price of the contract.

## Contract Specification for Natural Gas

- **Instrument type-** Option on Natural Gas Futures
- **Underlying quotation / base value-** ₹ / MMBtu
- **Tick size (minimum price movement)-** ₹ 0.05
- **Strike interval-** Rs. 5
- **Minimum number of strikes** - 15 In-the-money, 15 Out-of-the-money and 1 Near-the-money
- **Maximum allowable open position-** Position limits for Options would be separate from the position limits applicable on Futures Contracts. For individual clients: 120,00,000 MMBtu or 5% of the market wide open position, whichever is higher for all Natural Gas Options Contracts combined together. For a member collectively for all clients: 12,00,00,000 MMBtu or 20% of the market wide open position, whichever is higher for all Natural Gas Options Contracts combined together
- **Final Settlement Price-** Daily Settlement Price of underlying Futures Contract on the expiry day of Options Contract

## Global Natural Gas Demand

- Contracting activity slowed in 2020 after two years of strong activity in 2018-2019. The total volume of concluded contracts in 2020 was about 52 bcm, a 45% decrease compared to the 2018 peak of 90 bcm. In the first eight months of 2021 about 48 bcm of contracts were concluded. The uncertainty related to the recovery from Covid-19 continues to cast a shadow over contracting activity, but it is gradually returning to pre-pandemic levels.
- Natural gas demand is expected to reach close to 4300 bcm by 2024, adding 350 bcm or 9% compared to its 2020 low point. The global gas consumption growth rate stands at 3.6% in 2021.
- China, India and emerging Asia account for almost half of the demand growth globally in 2020-2024. Asia's gas demand growth remained robust in the first eight months of 2021, driven by cold winter weather and hot summer temperatures across Northeast Asia as well as a sharp rebound in industrial activity, especially in China. In 2021 total gas consumption in Asia is expected to increase by 7%, predominantly led by China, which alone accounts for 73% of the net growth in demand.
- In 2021 India's gas consumption is expected to grow by 3%, as high spot LNG prices dented demand in the refining and petrochemical sectors. In 2022 gas consumption is expected to decrease by 2% as continuing nuclear restarts and growing solar generation reduce demand in the power generation sector. The trend of gas demand growth may continue in 2022 as high NG prices may dent demand and can promote to switch on other renewable energy sources such as solar, hydrogen and nuclear energy.



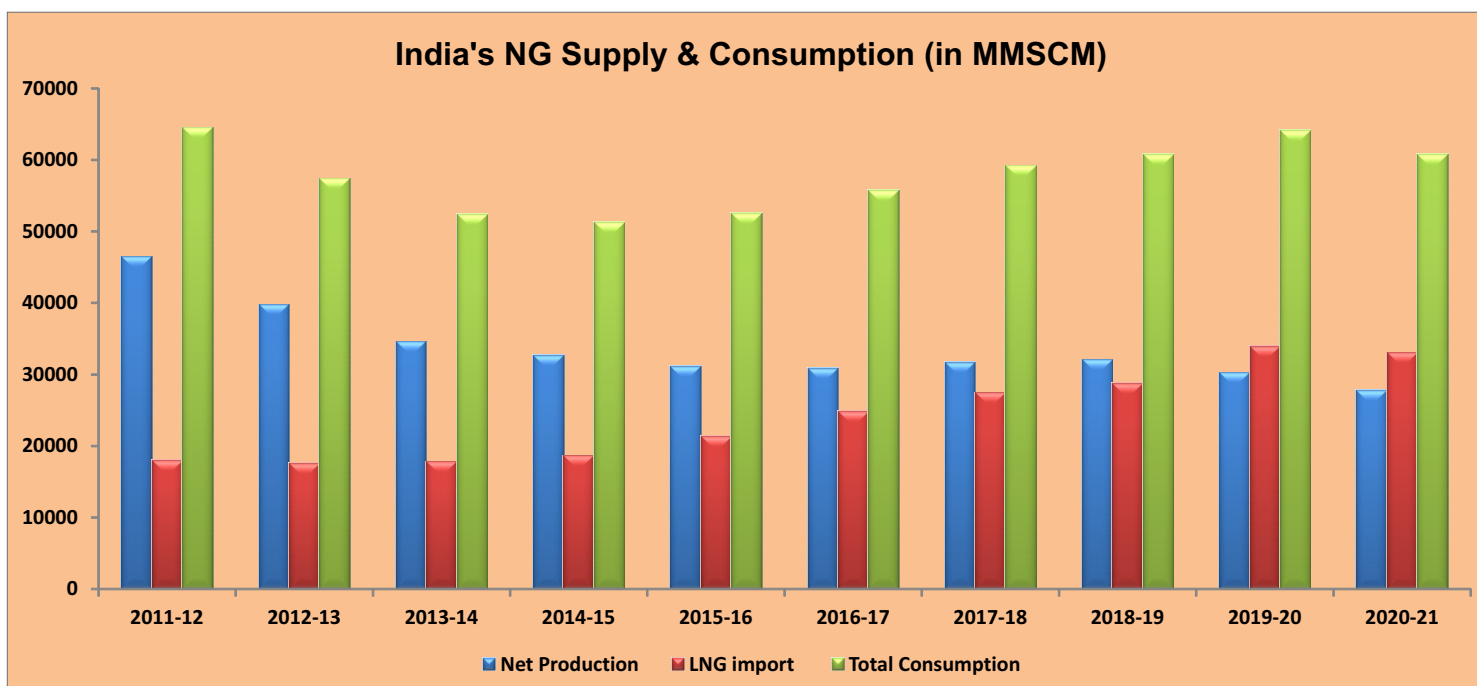
## Global Natural Gas Production

- A Gas production was less impacted by the COVID-19 pandemic than oil, with only a 2.5% decrease in 2020. EIA in its latest short term energy outlook laid out a vision of rising natural gas production and exports alongside moderating U.S. prices.
- US natural gas production, the main contributor in global gas output, is expected to remain stable in 2021 compared to 2020, with a less than 1% y-o-y increase.
- Natural gas output in Eurasia grew by an estimated 11% y-o-y in the first eight months of 2021. Strong recovery in extra-regional exports, rapidly rising domestic demand and restocking needs after a long and cold 2020/21 heating season all contributed to this strong growth in production.
- Russia's gas output rose by 12% (or 53 bcm) y-o-y in the first eight months of 2021. High natural gas prices may encourage the producers to produce more gas.

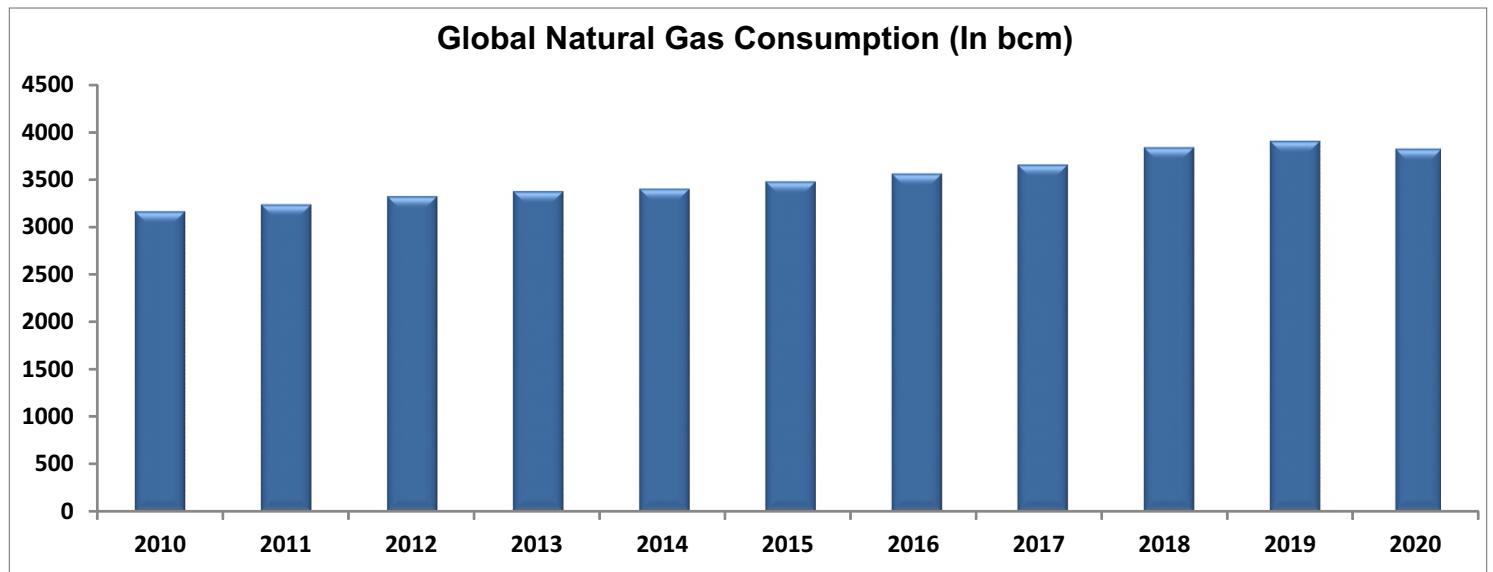
## US Natural Gas Production

- U.S. dry natural gas production averaged 93.5 Bcf/d in 2021, up 2.0 Bcf/d from 2020. Natural gas production in the forecast averages 96.0 Bcf/d for all of 2022 and then rises to 97.6 Bcf/d in 2023.
- U.S. natural gas inventories ended December 2021 at 3.2 trillion cubic feet (Tcf), 3% more than the 2016–20 average. EIA forecast inventories will end March 2022 at 1.8 Tcf, which would be 8% more than the 2017–21 average for the end of March.
- The natural gas spot price at Henry Hub averaged \$3.91 per million British thermal units (MMBtu) in 2021. Monthly average prices reached \$5.51/MMBtu in October, but they declined in November and December as mild weather prevailed across much of the country, resulting in less natural gas used for space heating. EIA expect Henry Hub spot prices will average \$3.82/MMBtu in the first quarter of 2022 and average \$3.79/MMBtu for all of 2022 and \$3.63/MMBtu in 2023.
- EIA estimate that U.S. liquefied natural gas (LNG) exports averaged 9.8 billion cubic feet per day (Bcf/d) in 2021, compared with 6.5 Bcf/d in 2020. EIA expect U.S. LNG export capacity increases will contribute to LNG exports averaging 11.5 Bcf/d in 2022 and 12.1 Bcf/d in 2023.

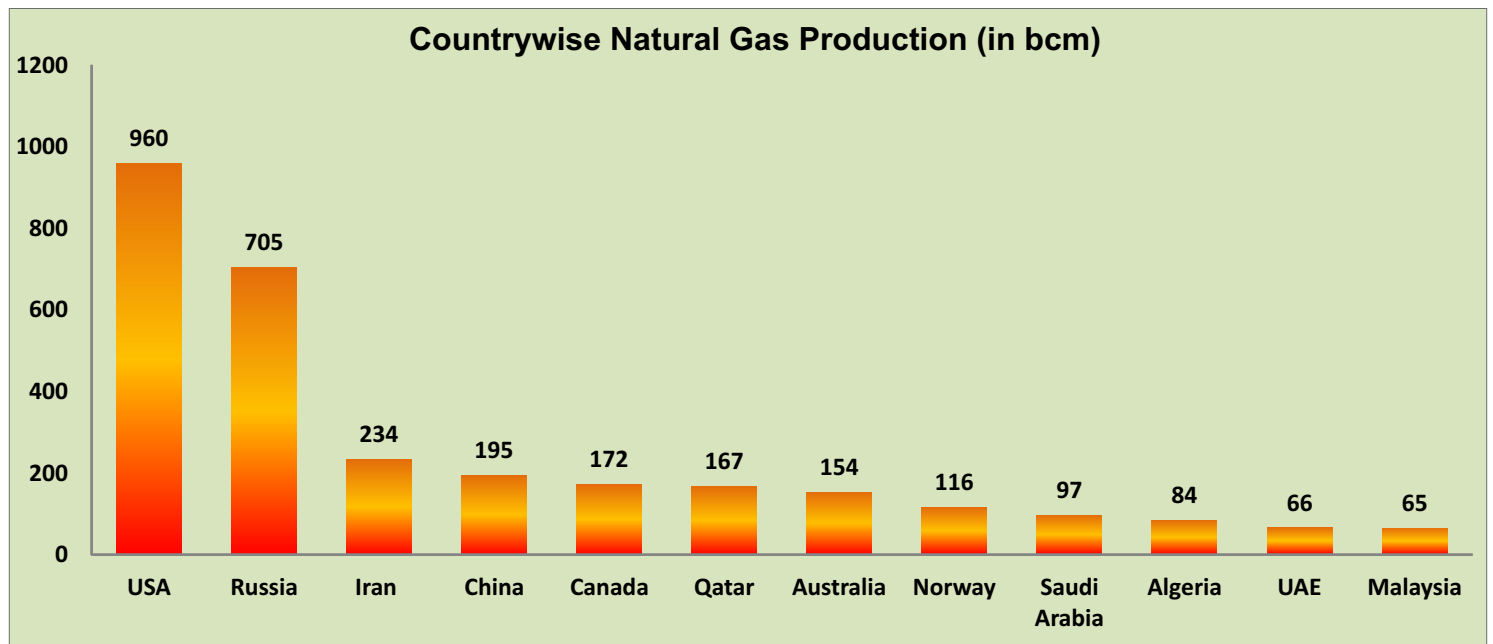
## Natural Gas Supply & Consumption in India



Source : PPAC



Source: IEA



Source: IEA

## Conclusion

Gas year 2021/22 opened on October 1st with record-high spot gas prices in Europe and Asia and lower-than-average storage inventory levels for the coming heating season. The tightening of gas markets over the past months results from a combination of robust demand growth as economies recover from 2020 lockdowns, a succession of extreme weather episodes that have generated additional gas consumption, and tighter-than-expected supply as a series of outages hampered gas production and export capacity.

In January 2022 cold winter weather in Northeast Asia – coupled with reduced availability of LNG supply and logistical constraints on LNG shipping – led to localised fuel shortages and an unprecedented spike in Asian & Eurasian spot LNG prices.

A growing and more flexible liquified natural gas (LNG) market has enabled global competition for gas supply, a situation that wasn't possible when gas was supplied by pipeline or LNG under long-term contracts. Europe and Asia are competing for the same LNG supply, pushing prices up in both markets and extending today's tight market to the United States. In 2022, prices may see further rise; however natural gas gives both side of movements so it advisable to trade with caution. One should follow weather pattern, inventories and supply side closely while trading in natural gas.

## Technical Analysis



Source: Reuters

Natural Gas at the MCX platform has settled higher at 316.10 in last week, from the previous week closing price of 292.00. Now the prices are trading above the trend line resistance of 300 levels. MACD (moving average convergence divergence) histogram prints in the green with an upward sloping trajectory which points to higher prices for Natural gas. Based on daily chart price has showed a bearish engulfing pattern and made the low 303.80 which is 61.8% Fibonacci retracement from the high to low (357.50 to 265.50). The immediate support has seen around 300 in weekly chart which it breaks further confirm the down trend towards 270/240 levels in short term basis. If the price will be sustained above the resistance levels of 357.50 then it can move towards 390/430 levels respectively. Buying is advisable for this counter near the support levels.

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