

GAS UTILITIES INDUSTRY

High LNG prices to persist in the near term; consumption of imported LNG moderates

SEPTEMBER 2022





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Natural gas prices had witnessed an increase since March 2021, due to a pick-up in demand amidst supply shortages and impact of adverse weather conditions. The prices have continued to witness an increase in the current fiscal due to disruptions in gas markets caused by the Russia-Ukraine conflict. The structural issues are expected to persist in the near term and prices are expected to remain high.

Domestic APM prices will witness sharp increase during next revision and may put pressure on sectors like CGD.



- Asia's spot LNG prices have soared to multi-year highs touching ~\$70/mmbtu in August 2022 from ~\$24.5/mmbtu in April 2022, while Henry Hub prices have also soared to ~\$9.85/mmbtu in August 2022 from ~\$4.36/mmbtu in March 2022. The prices have witnessed some moderation in Sep 2022, with JKM spot LNG in the range of \$39-48/mmbtu between Sep 5-Sep 9, 2022. Henry Hub prices were at \$8.12-8.52/mmbtu during this period.



- Since March 2021, natural gas prices have increased due to supply shortage, sudden pick-up in demand and adverse weather patterns. Subsequently, the further sharp increase in recent months is mainly due to disruptions in the gas market caused by Russia-Ukraine conflict, leading to changes in supply pattern, with Europe trying to reduce dependence on Russia. However, the shift to alternate sources will take time as infrastructure to support the same is under implementation. The structural issues are expected to persist in the near term and keep the prices high.



- High LNG prices have also adversely impacted the consumption of gas in India in sectors like power and industrials, while demand from CGD and the fertiliser segments has remained robust due to priority allocation of domestic gas and subsidy support respectively



- Due to sustained high prices at various hubs, the domestic APM prices are expected to witness sharp revision during the next reset in Oct 2022, which may put some pressure on the CGD sector, despite the increase in domestic gas allocation done in Aug 2022.



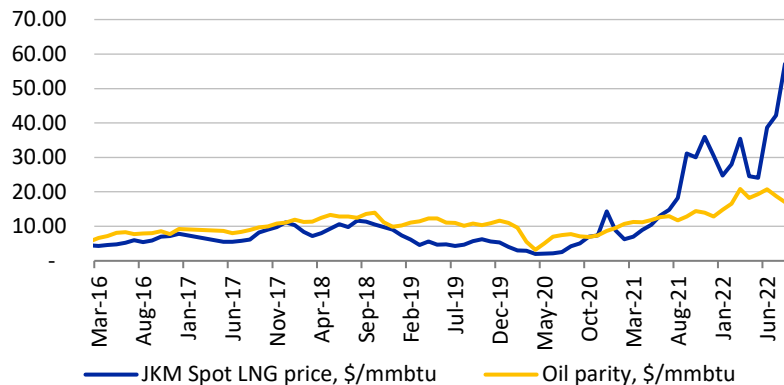
- A new committee under Mr. Kirit Parikh has been set up to review the domestic gas pricing. The recommendations of the committee will be critical for the sector. It will be favourable for the consuming sectors, if based on the revised pricing formula, as the escalation in APM prices is lower than anticipated.



Global Gas Price Trends

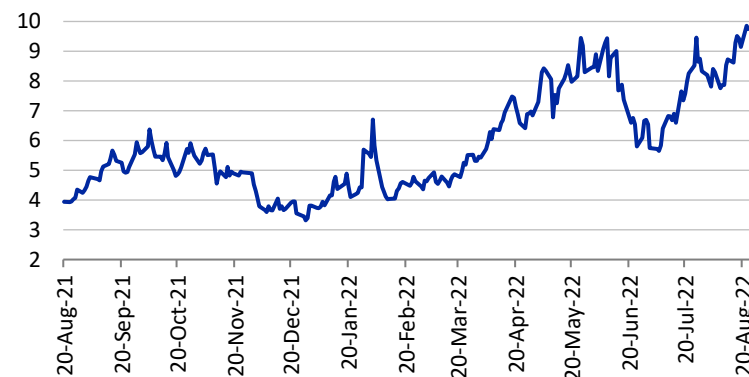
Natural gas prices remain elevated with sharp increase in recent months

Exhibit : Natural gas prices have witnessed significant increase



Source: Bloomberg, ICRA Research

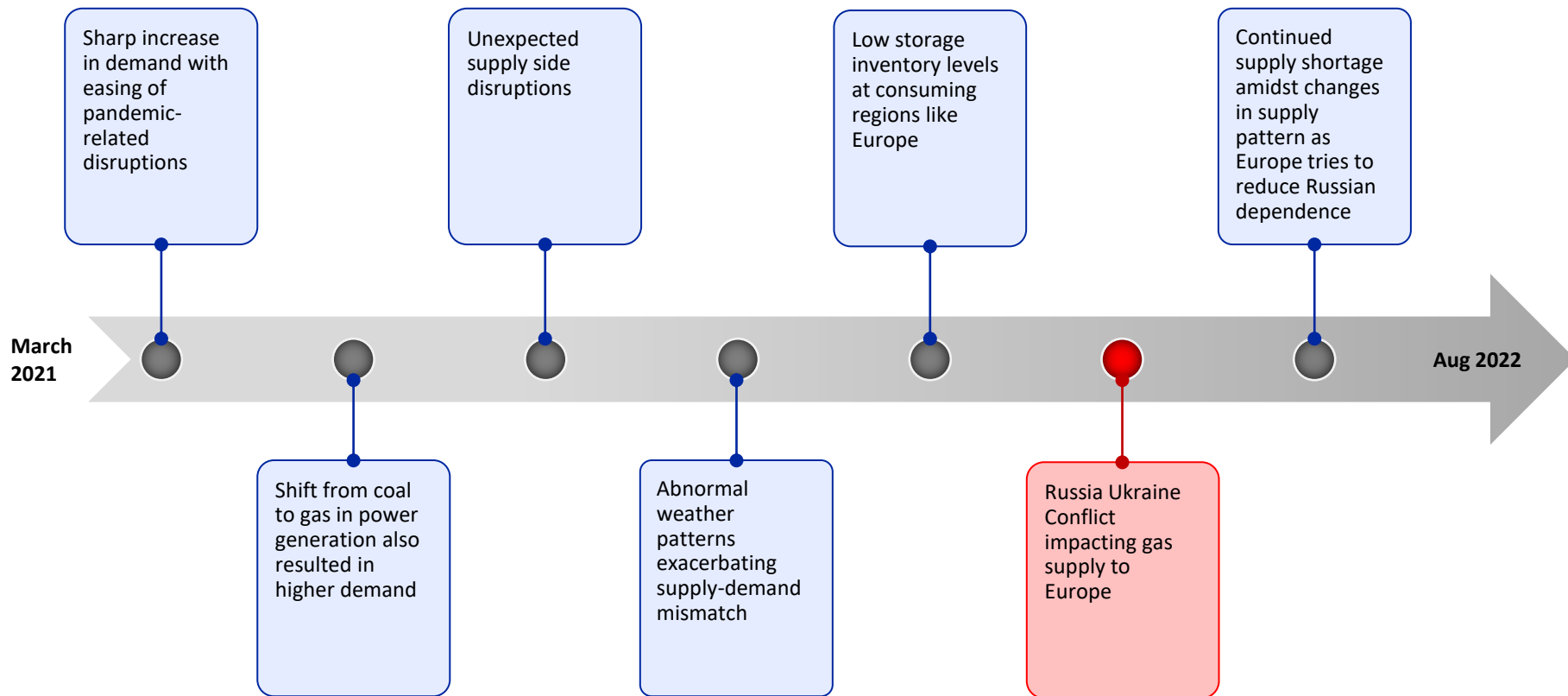
Exhibit : Henry Hub Prices (\$/mmbtu)



Source: EIA, ICRA Research

- The spot LNG prices for Asia have shot up to touch \$ 57 per mmbtu in August 2022 while the Henry Hub prices have also risen to ~\$9.3/mmbtu in August 2022. The sharp increase in gas prices since March 31, 2021 has been due to various factors and have been further exacerbated by the Russia-Ukraine conflict.

Reasons for increase in natural gas prices



High gas prices are expected to persist

High gas prices are expected to persist over the next few months due to continued supply disruptions to Europe even as winter approaches

Many EU countries are trying to shift to alternate suppliers, but this will necessitate LNG handling infrastructure to handle additional imports, which will take some time and will not be ready by high demand winter period

Russia would need to develop additional facilities to be able to export gas to non-EU regions which will take time

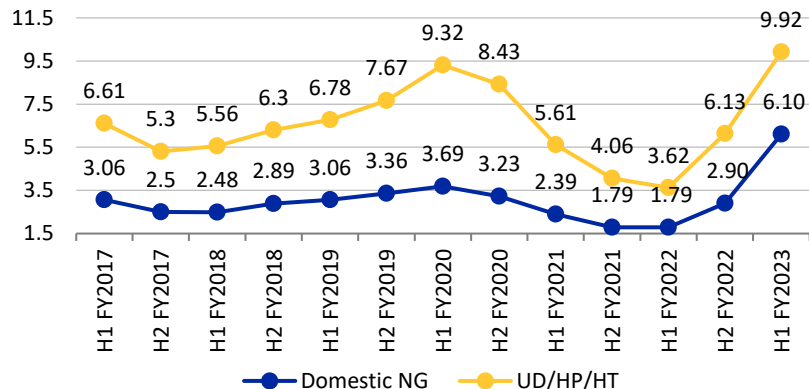
Till now Chinese demand has been low due to lockdowns. However, once lockdowns ease, the demand could increase - thereby putting upward pressure on prices



Impact on Domestic Gas Utility Sector

Sharp increase in domestic gas prices; new committee set up to review gas pricing formula

Exhibit: Trend in domestic gas prices (\$/mmbtu) GCV Basis



Source: PPAC, ICRA Research

The domestic APM gas price is determined based on following formula

$$P = \frac{VHH*PHH+VAC*PAC+VNBP*PNBP+VR*PR}{VHH+VAC+VNBP+VR}$$

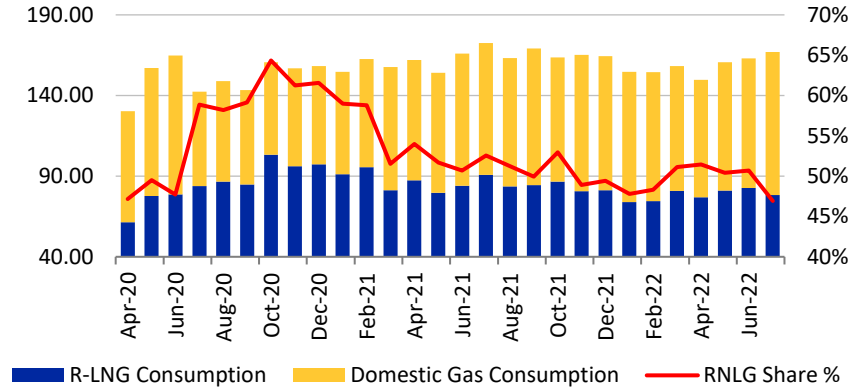
Where:

- VHH = Total annual volume of natural gas consumed in USA & Mexico
- VAC = Total annual volume of natural gas consumed in Canada
- VNBP = Total annual volume of natural gas consumed in EU and FSU, excluding Russia
- VR = Total annual volume of natural gas consumed in Russia
- PHH and PNBP are the annual average of daily prices at Henry Hub (HH) and National Balancing Point (NBP) less the transportation and treatment charges.
- PAC and PR are the annual average of monthly prices at Alberta Hub and Russia respectively less the transportation and treatment charges.

- The domestic gas prices are notified every six months based on a pricing formula linked to various international hubs. While APM gas prices are fixed for a period, a ceiling rate is announced for difficult fields.
- MOPNG has set up a committee under Mr. Kirit Parikh to review the gas pricing formula to ensure a fair price to end consumer, although its recommendations may not impact the prices for H2 FY2023.
- Given the elevated prices at various hubs the domestic gas prices may witness significant increase in H2 FY2023, by 50-60%.

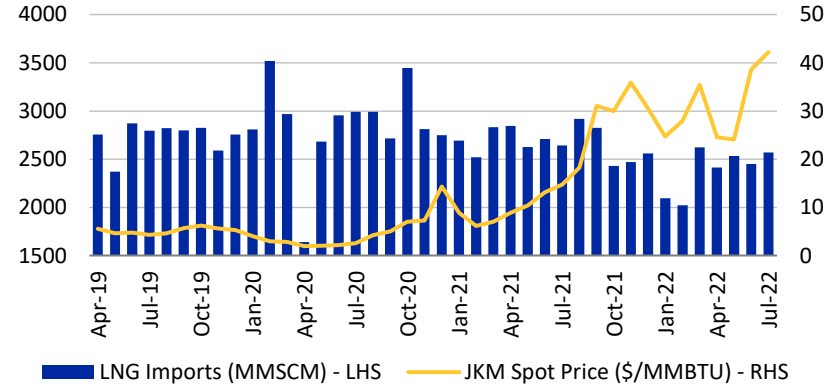
High LNG prices have resulted in moderation in imports, although domestic gas consumption has increased

Exhibit: Monthly gas consumption trend (MMSCMD)



Source: PPAC and ICRA Research

Exhibit: LNG import trend (MMSCM) vs spot prices

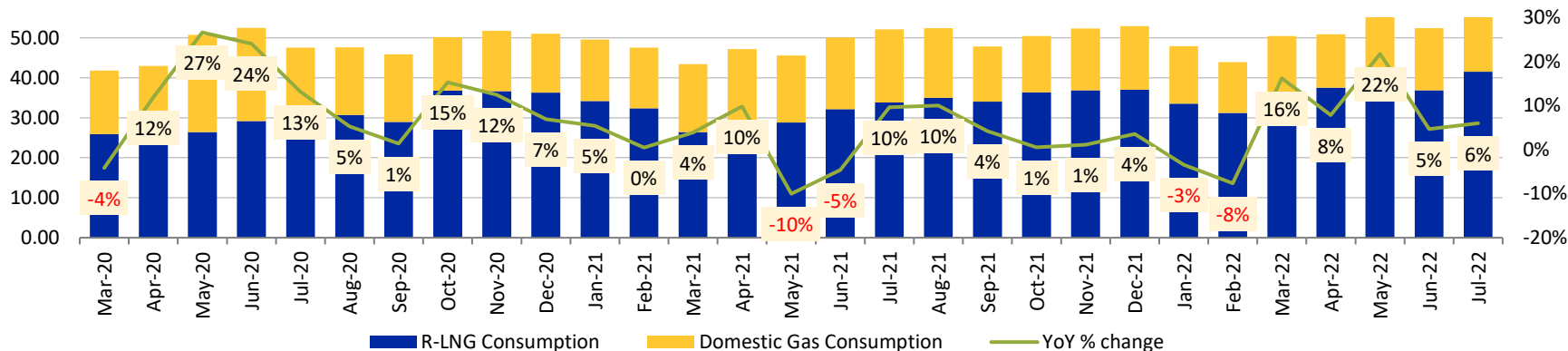


Source: PPAC and ICRA Research

- Due to sharp increase in global gas prices, there has been moderation in LNG imports in recent months
- The share of RLNG in the gas consumption mix has come down from ~55-65% during FY2021 to ~47-50% in the last few months
- Increase in domestic gas production and high spot prices have led to the decline in proportion of LNG in the overall consumption mix

Fertiliser segment demand continues to increase despite high reliance on R-LNG

Exhibit: Gas consumption trend for Fertiliser sector (MMSCMD)

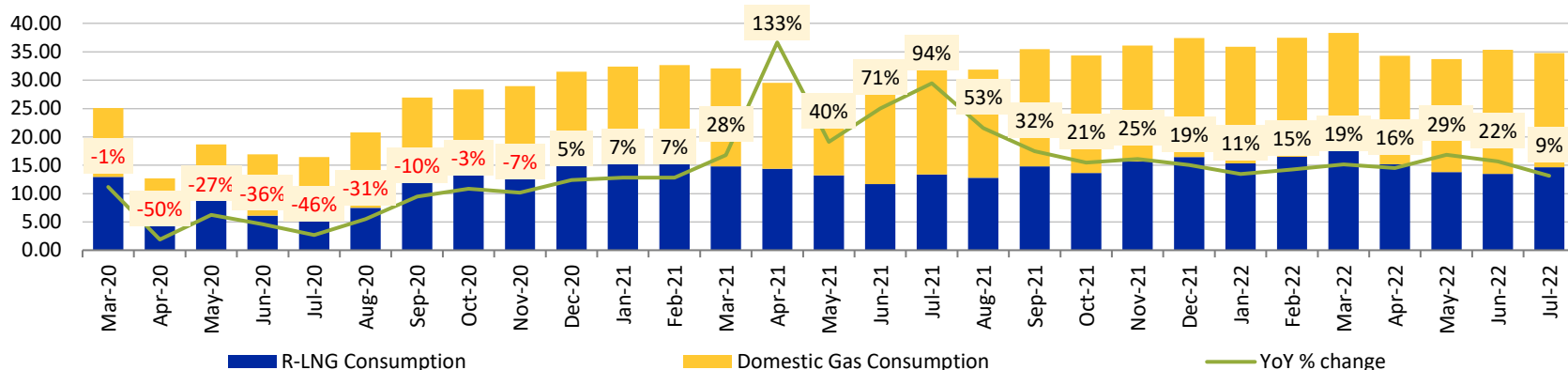


Source: PPAC and ICRA Research

- Fertiliser sector is the largest consumer of natural gas and in FY2022 accounted for ~29% of gas consumption; natural gas is mainly used as feedstock.
- The sector has high reliance on imported gas, with RLNG accounting for ~68% of gas consumption in FY2022
- Despite high dependence on imported gas, the consumption has continued to increase, which can be attributed to subsidy extended to the sector, which has mitigated the impact of high NG prices for end consumers as the Government had increased the subsidy levels
- Agriculture-being a critical sector, the subsidy support from the GoI is expected to continue; demand for NG is expected to grow with the commissioning of new fertiliser plants expected in the next 12-18 months

CGD sector demand remains robust, aided by increased domestic gas allocation

Exhibit: Gas consumption trend for CGD sector (MMSCMD)

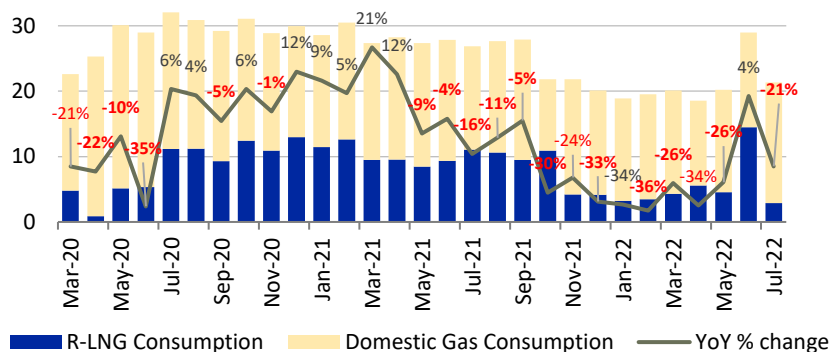


Source: PPAC and ICRA Research

- The CGD sector accounted for ~20% of gas consumption in FY2022. Nearly 50% of demand is driven by CNG and ~8-10% by PNG domestic, while remaining is driven by commercial and industrial sector (in H2 FY2022). For CNG and PNG domestic, the sector gets priority allocation of domestic APM gas. However, since H2 FY2022 due to shortfall in allocations, the companies had to rely on increasing spot purchase at high rates, which, coupled with increase in APM prices necessitated frequent retail price increase.
- The gas allocation policy was subsequently revised in May 2022 to ensure adequate gas availability for CGD sector, with gas to be pooled and supplied by GAIL, with pricing reset on a monthly basis. Around 85% of the gas used for pooling was domestic APM gas. In Aug 2022, the allocation for CNG and PNG-d sector was increased from 85% to 94% for Q2 FY2023, resulting in some moderation in costs, which was passed on to customers.
- However, the demand from commercial and industrial segment witnessed some moderation due to high gas prices and no allocation of domestic gas for these segments. Further, domestic APM prices will witness a sharp increase during the next reset and may put pressure on margins for CNG and PNG-d segment also.

Sectors like power and industrial segment witness demand decline

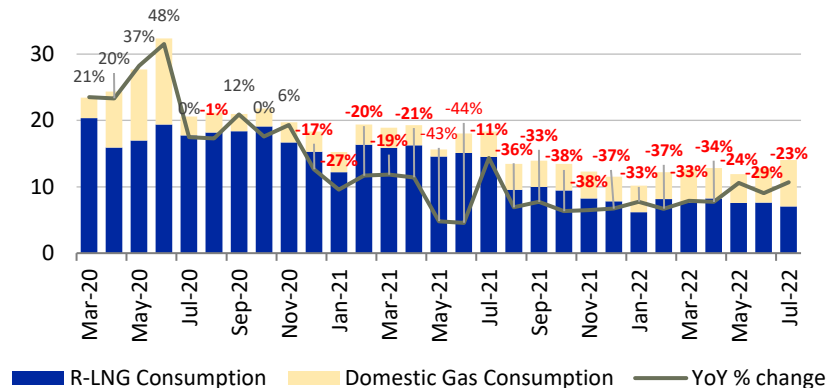
Exhibit: Gas consumption trend for Power sector (MMSCMD)



Source: PPAC and ICRA Research

- Power sector has witnessed moderation in gas consumption due to sharp increase in prices
- While the share of domestic gas consumption remains high, the moderation in overall consumption is due to non-availability of domestic gas and high imported gas prices

Exhibit: Gas consumption trend for Industrial sector (MMSCMD)



Source: PPAC and ICRA Research

- Industrial sector also witnessed a sharp moderation in consumption as they switched to alternative fuels
- This was due to high dependence on imports and sharp increase in prices reducing the competitiveness of natural gas compared to alternate fuels



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