Research

CRISIL
An S&P Global Company

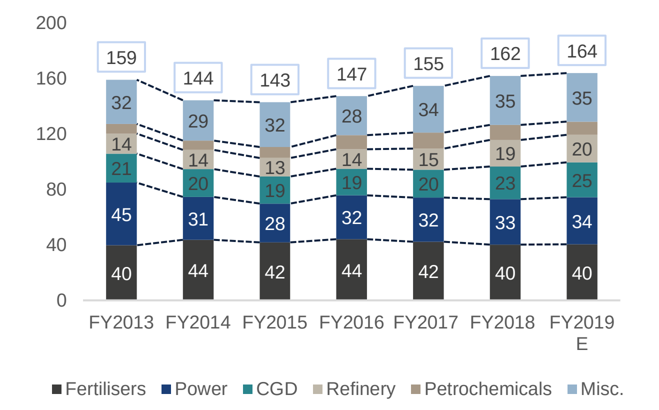
City gas distribution and fertiliser sector to drive gas demand

Government push for cleaner fuel to fuel the demand

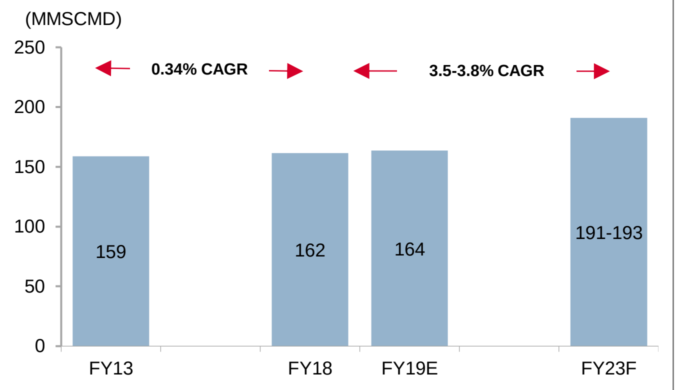
February 2019

Screenshots

Gas demand driven by CGD and refineries in past two years
1

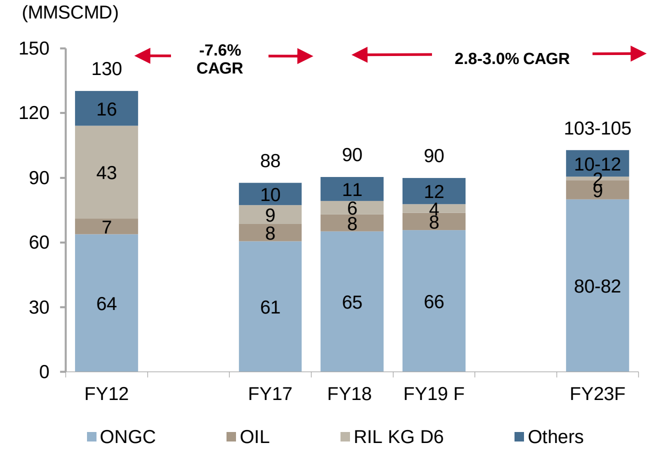


Gas demand to continue to rise
2

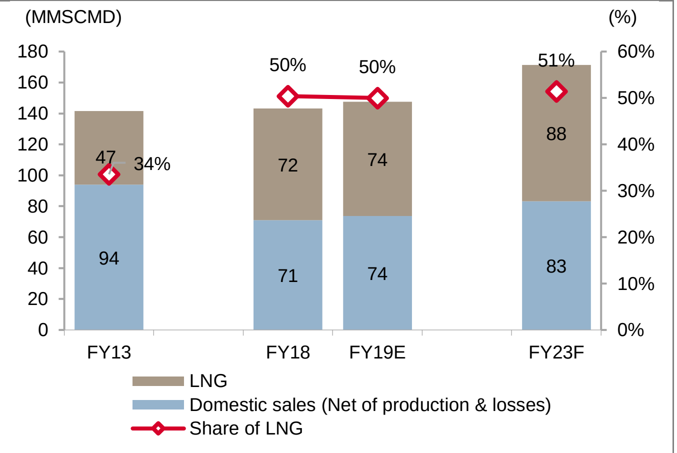


Source: MoPNG, PPAC, CRISIL Research

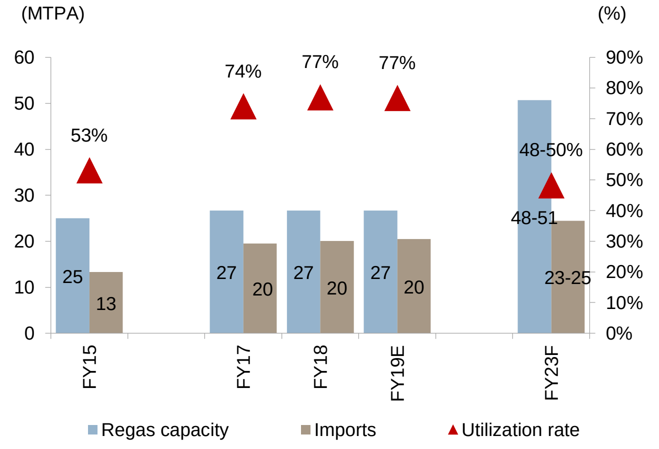
Gas demand to outpace production
3



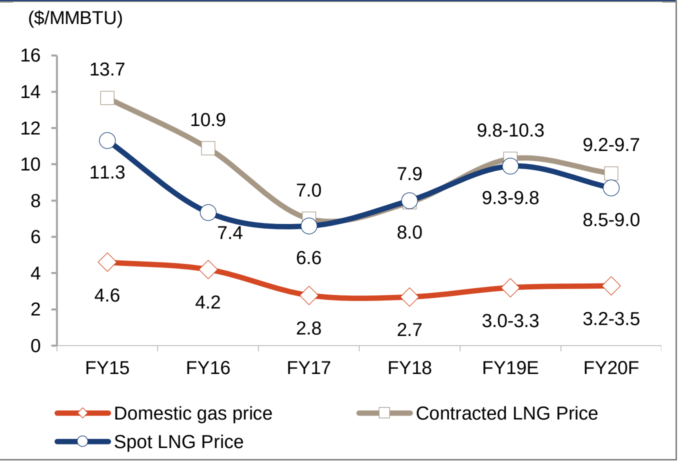
Dependence on LNG to remain
4



Utilisation rates of terminals to nosedive
5



Domestic gas and LNG prices to be range -bound
6



Fertiliser and CGD sectors to drive gas demand

Gas demand is expected to grow at ~3.5% CAGR between fiscals 2018 and 2023 to 191-193 MMSCMD. The main push for incremental demand is expected to come from the fertiliser and city gas distribution (CGD) sectors.

The conversion of naphtha-based urea plants, commissioning of new capacities under the New Urea Investment Policy, and the revival of urea plants are projected to drive gas demand from the fertiliser sector.

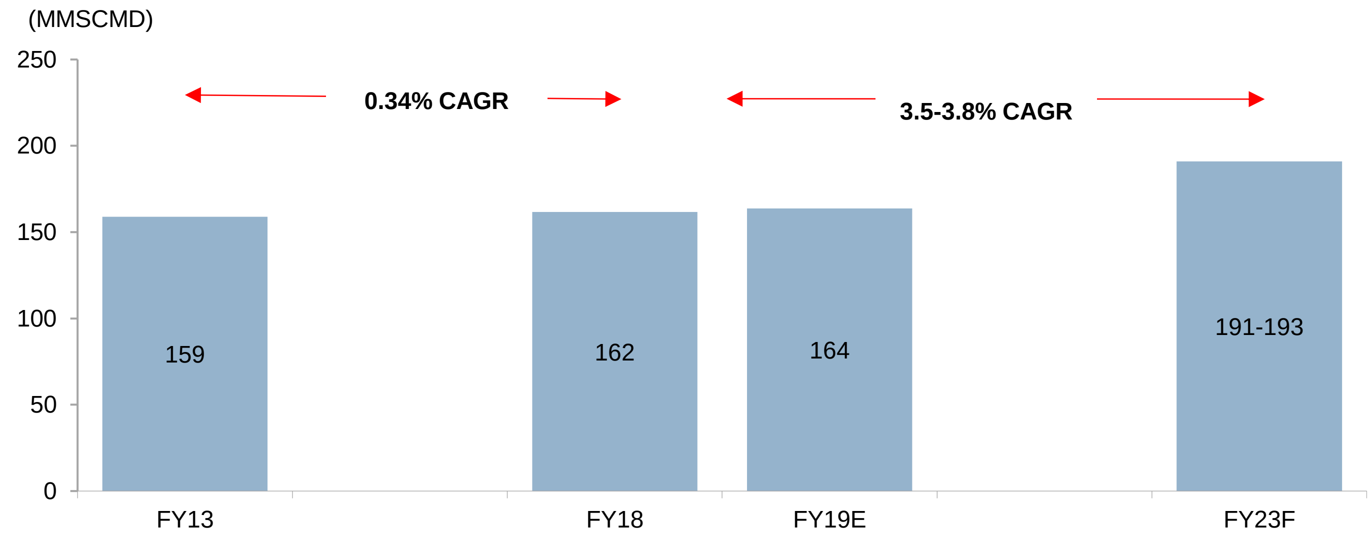
Moreover, regulatory push for CGD, including priority allocation of domestic gas for the compressed natural gas and domestic piped natural gas (PNG) segments, connecting more cities and districts to the gas pipeline infrastructure, along with a ban of polluting fuels such as fuel oil (FO) and petcoke in Haryana, Rajasthan and Uttar Pradesh will push demand upward. The industrial PNG segment is expected to see a shift from alternative fuels as well, because of better competitiveness in comparison with liquefied petroleum gas and the ban of FO in the northern region. It is expected that the ban on polluting fuels would be extended to other states to combat environmental-related issues and growing awareness towards it.

On the other hand, demand from the power generation sector is expected to be subdued or only marginally improve, owing to accessibility and affordability challenges. Poor competitiveness of gas vis-à-vis coal and renewable sources, along with weak finances of power distribution companies, is expected to limit the usage of gas by power generators.

CRISIL Research believes reintroduction of regulatory reforms, along with improved domestic gas supply, is necessary to revive gas demand from the power sector. It is noteworthy that although gas demand by the power sector increased 3.5% on-year to 32.9 MMSCMD in fiscal 2018, from 31.8 MMSCMD in fiscal 2017 (despite the absence of any government policy support for the sector), this was most likely because of lower spot prices of LNG.

In a recent development, there has been a push to restart the LNG subsidy scheme to supply gas to stranded gas-based power plants. Along with the subsidy proposal, gas supply from newly commissioned fields of ONGC (Vashistha+S1, Daman fields, etc.) would positively impact the sector from fiscal 2020.

Overall gas demand trend



E: Estimated; F: Forecast

Source: PPAC, MoPNG, CRISIL Research

Government initiatives to support domestic gas output

In a bid to increase falling domestic gas output, the government has allowed 'premium price' for new gas discoveries in challenging areas such as high-pressure, high-temperature, deepwater and ultra-deepwater concessions. However, to ensure end-user affordability, the Centre has put a price ceiling based on alternative fuels. We expect the introduction of this policy to incentivise exploration and production of gas from challenging areas, which are more expensive to tap vis-à-vis conventional gas.

The government has also introduced a new hydrocarbon exploration and licensing policy (HELP) for oil and gas exploration. A key alteration involves a shift to a revenue-sharing model from the current cost-recovery model. It also provides marketing and pricing freedom for natural gas. This policy is expected to expedite the process of gas production by simplifying the terms of the product-sharing contract between the producer and the government.

The government has already announced successful bidders for the first round of HELP, which started in May 2018, in which 55 exploration blocks were offered for auction. As many as 41 blocks were awarded to Vedanta Ltd, nine to Oil India Ltd, two blocks to Oil and Natural Gas Corporation Ltd (ONGC), and one each to Bharat Petro Resources Ltd, Gail (India) Ltd and Hindustan Oil Exploration Company Ltd. OALP round- II bidding process has already initiated in January, 2019. The previous auction round was eight years ago under the New Exploration and Licensing Policy regime. Moreover, the government had conducted bidding of small and marginal fields under Discovered Small Fields Round 2016.

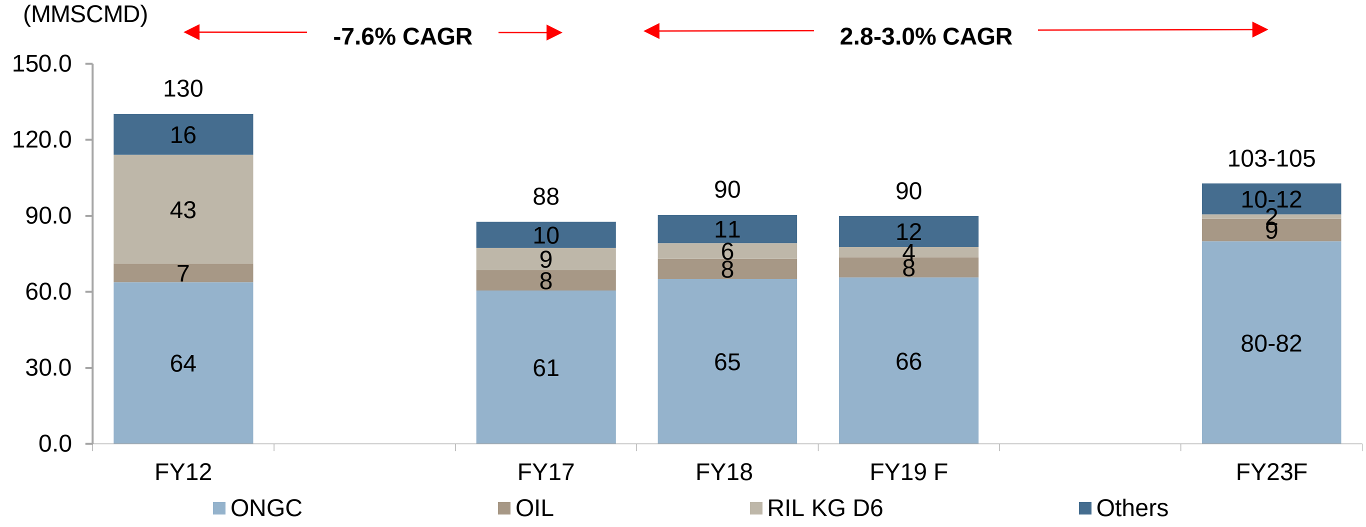
Natural gas production to witness a modest improvement from fiscal 2020

CRISIL Research believes domestic natural gas production has bottomed out and will increase at 2.8-3.0% CAGR between fiscals 2018 and 2023 to 103-105 million metric standard cubic meter per day (MMSCMD).

ONGC is expected to account for a major share of the incremental output, with production set to commence from several new fields from fiscal 2019 in phased manner. These include marginal fields in the eastern offshore regions, such as S2AB and G-1, as well as new development projects in the western offshore areas, such as the Daman (production already started in 2018) and South Bassein fields. In addition, the anticipated commissioning of fields in Krishna Godavari (KG) D5 block in fiscal 2021 is expected to further support natural gas production.

Reliance Industries Ltd and BP Plc recently announced incremental investment in the KG Basin assets to shore up domestic natural gas output. However, given the subdued domestic gas prices, progress in these projects remains a key monitorable.

Domestic gas production trend



F: Forecast

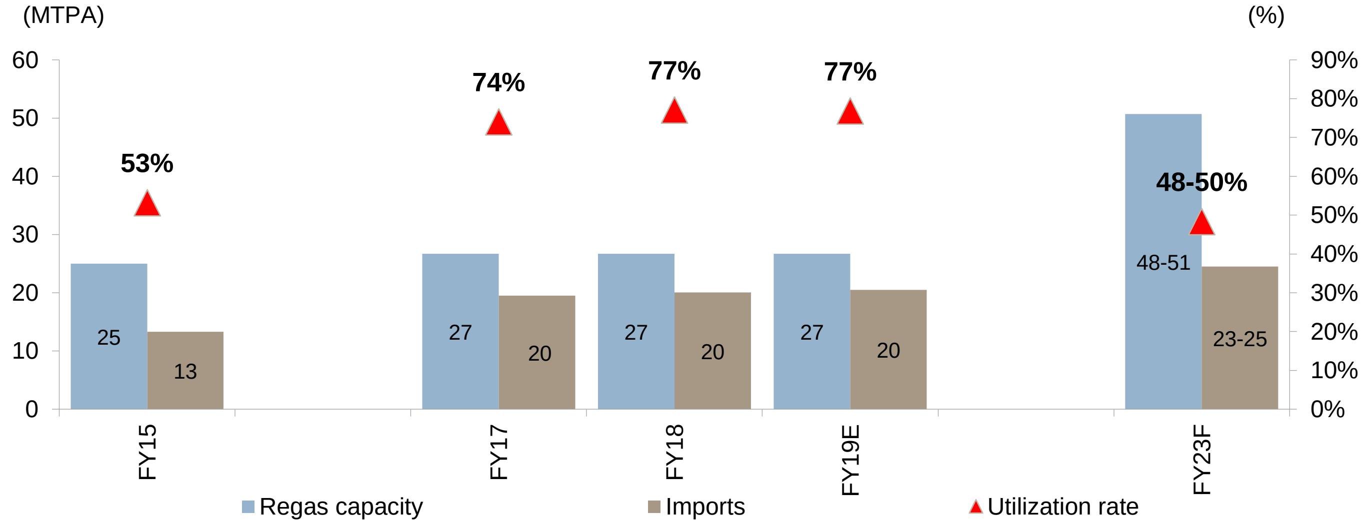
Source: Ministry of Petroleum and Natural Gas (MoPNG), CRISIL Research

Utilisation of terminals to remain ~50% in the medium term despite rising LNG usage

Given the sustained domestic gas deficit, CRISIL Research expects LNG demand to increase at 4.0-4.3% CAGR from fiscal 2018 to 2023, to 24.4- 24.7 million tonnes per annum (MTPA). Over the period, installed re-gasification capacity is forecast to increase to ~50 MTPA from 26.7 MTPA (considering operational terminals only). Consequently, average utilisation of LNG terminals is set to fall to ~50% in fiscal 2023 from ~77% in fiscal 2018, and ~71% over the previous five year period.

While terminals such as Dahej, which have long-term off-take contracts, will continue to operate at utilisation levels of ~100%, the utilisation of new greenfield projects is likely to be low, impacting their returns.

Utilisation trend of re-gasification terminals



E: Estimated; F: Forecast

Source: CRISIL Research

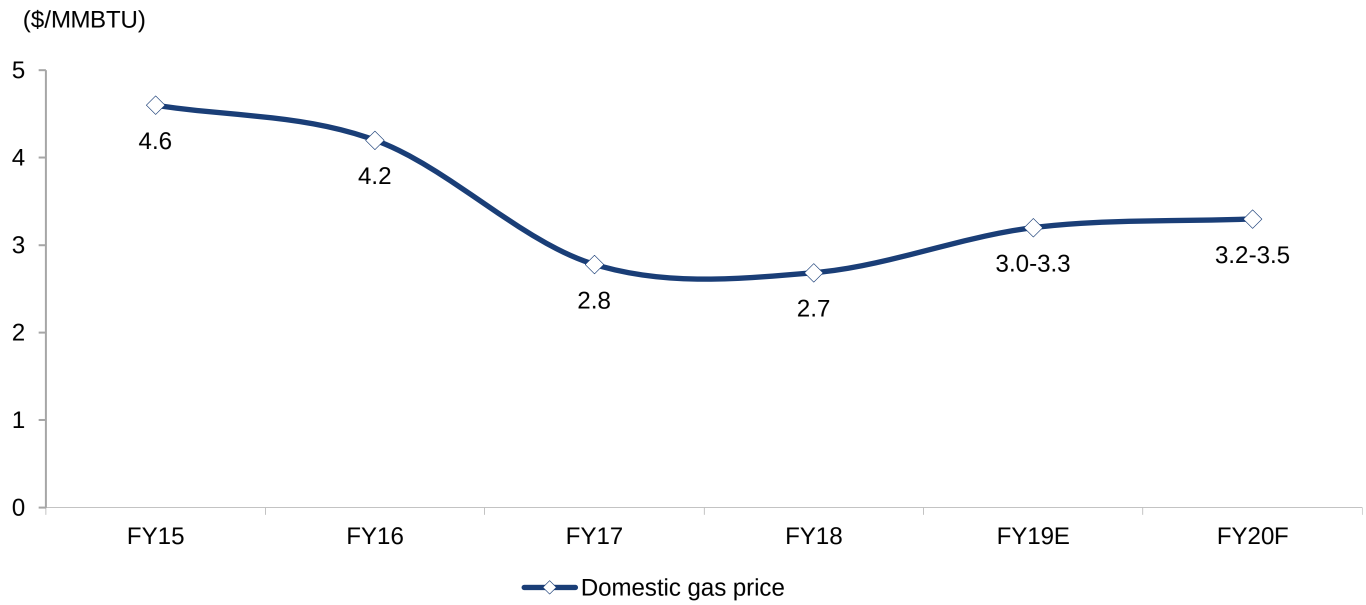
Domestic gas price to hover at $3.2-3.5 per MMBTU up to fiscal 2020

The price of domestic gas in India is determined as per a pricing formula that takes into consideration the prevailing natural gas price in international hubs.

From $3.06 per million metric British thermal unit (MMBTU) on gross calorific value basis between April and September 2018, the government increased the gas price to $3.36 per MMBTU in the latest half-yearly price revision, i.e. for October 2018 to March 2019, tracking the increase in prices at various global benchmark hubs due to increase in demand and increase in alternate fuel prices.

In the medium term, gas prices are expected to range from $3.2 to $3.5 per MMBTU as a result of increase in demand.

Domestic gas price trend



E: Estimated; F: Forecast

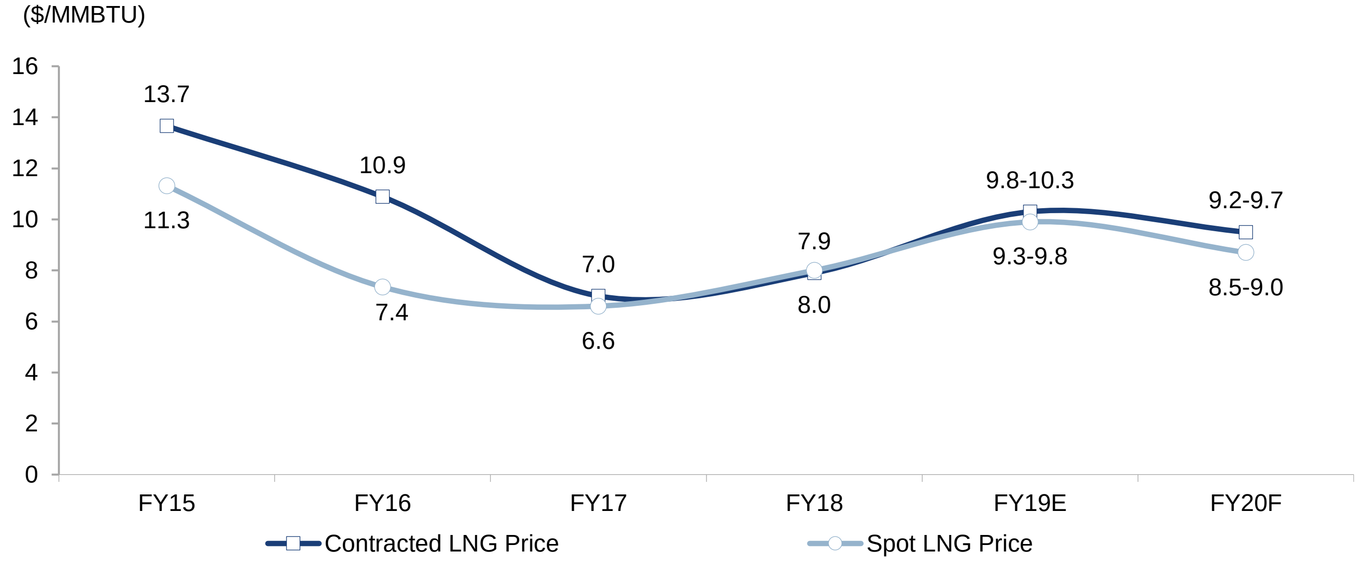
Source: Petroleum Planning & Analysis Cell (PPAC), CRISIL Research

Spot LNG prices are projected to increase as well, rising from ~$8 per MMBTU to $8.5-9.0 per MMBTU over the next two years with increasing LNG demand. Prices would remain at ~$8 per MMBTU in the shoulder months (March-September) and increase to $10-11 per MMBTU during the peak season (October to February). A further rise will be truncated because of subdued alternate fuel prices along with demand-supply dynamics. So far, gas demand in Europe has marginally increased because of increasing penetration of solar and wind energy, and the availability of cheaper coal.

However, in the medium term, gas demand is expected to increase as developed European nations plans to move away from coal and nuclear sources.

On the other hand, contracted LNG prices in India are expected to be range bound owing to steady crude oil prices, which is the key determinant of contracted LNG pricing. Crude oil prices have been under pressure since the mid-2014 highs. After breaching $86 per barrel in October, 2018, prices have stabilised at ~$60 per barrel. Though there are supply-related disruption risks owing to US sanctions on Iran and Venezuela, and unrest in Libya and Nigeria, we expect crude oil prices to remain range bound with subdued demand growth as a result of slower economic growth. In 2019, we expect crude oil prices to range $63-68 per barrel.

LNG price trend



E: Estimated; F: Forecast

Source: CRISIL Research

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