Second consecutive reduction in domestic gas price: Positive for user industries, however dampener for gas production

Analyst Contacts

K. Ravichandran
ravichandran@icraindia.com
+91-44-4596 4301

Girishkumar Kadam
girishkumar@icraindia.com
+91-22-6179 6341

Media Contacts

Naznin Prodhani

Naznin.prodhani@icraindia.com

0124-4545860

In October 2014, the Government of India approved the modified Rangarajan formula for pricing of domestic gas with effect from November 1, 2014. The modified Rangarajan formula prices domestic gas based on the volume weighted price of UK's NBP, US's Henry Hub, Alberta (Canada) and Russian gas[1]. The price and volume data used for calculation of the gas price is trailing four quarters data with one quarter lag. This new price was valid till March 31, 2015 and is revised bi-annually thereafter. As per the aforementioned formula, the gas price works out to US$ 3.82/mmbtu (GCV basis) for the six-month period, October 1, 2015 to March 31, 2016 which is a 18% reduction from the gas price of US$ 4.66/mmbtu (GCV basis) applicable for the period April 1, 2015 to September 30, 2015. On an NCV basis the gas price reduces from US$ 5.12/mmbtu to US$ 4.20/mmbtu over the aforementioned periods. ICRA believes the gas price reduction has significant implications for different sectors especially considering the fact that the latest reduction brings the price to almost the level it was prior to implementation of the modified Rangarajan formula thereby negating all gains post implementation of the aforementioned formula. The impact on the upstream industry and some of the major consuming industries is as mentioned below:

Upstream Sector:

Reduction in domestic gas price to disincentivise upstream exploration and development

The reduction in gas price for domestically produced gas affects Upstream producers adversely as it i) reduces the profitability of the gas produced from the existing fields and ii) adversely impacts the viability of new exploration and development projects. Considering that increase in gas price had been the demand of the Upstream industry for a long time, the reduction in gas price to earlier APM levels adversely impacts the gas exploration and development With most of the conventional and unconventional resources in the country being present in the more challenging and higher cost offshore areas, the effective rollback of prices to earlier levels will challenge the incumbents' ability to justify the viability of exploration and development projects for increasing production levels. While fixing domestic gas price in October 2014

Website
www.icra.in

[1] The Henry Hub is a distribution hub on the natural gas pipeline system, Louisiana, USA and lends its name to the pricing point for natural gas futures contracts traded on the New York Mercantile Exchange and the OTC Swaps traded on the Intercontinental Exchange (ICE).

The National Balancing Point (NBP), is a virtual trading location for the sale and purchase and exchange of UK natural gas. It is the pricing and delivery point for the ICE natural gas futures contract.

The Alberta Natural Gas Reference Price is a monthly weighted average field price of all Alberta gas sales, as determined by the Alberta Department of Energy through a survey of actual sales transactions

the GoI had indicated its intention to provide a premium on gas price for all future discoveries in ultra deepwater, deepwater and high-pressure-high-temperature offshore blocks; however the quantum of premium was not announced. Subsequently, instead of fixing a premium, the GoI has been reported to be considering allowing gas fields to sell part of the natural gas produced from deep water and complex fields in the open market. The lack of clarity on the price premium for gas produced from complex offshore fields would be a dampener especially considering that most of the domestic prospects would fall in this category.

Furthermore, with domestic gas price trending down, the response to the forthcoming NELP round could get impacted with companies factoring in gas prices that could fall to CY 2010 levels even as there has been run up in costs of manpower, oil fields services, contractors etc. To incentivise exploration and production from tough geologies and encourage participation in the future NELP rounds the GoI would need to provide clarity on the price premium as envisaged earlier at the time of implementation of the modified Rangarajan formula.

...and at the same time adversely impacting the profitability of Upstream gas producers

ICRA Research estimates that with every US$ 1/mmbtu fall in domestic gas price, the annual impact on the profit before tax of ONGC is expected to be Rs. ~38 billion, while the impact for RIL and OIL would be Rs. ~8.6 billion and Rs. ~5.8 billion respectively. However any depreciation of INR against the USD would partially offset the negative impact on the profitability in Rupee terms. While the state owned upstream companies may not go slow with their E&P capex plans, private producers are likely to have a rethink on their field developmental plans if the soft price regime were to continue. Overall, with weak price signals, domestic gas supplies will continue to fall short of demand, which is a credit negative for the consumers over the long term as they will have to increasingly use costlier R-LNG, even while they gain marginally in the near term through decline in gas prices.

Power Sector:

Domestic gas based cost of power generation to decline by about 11%; remains sensitive to both volatility in international gas price & INR-USD exchange rate

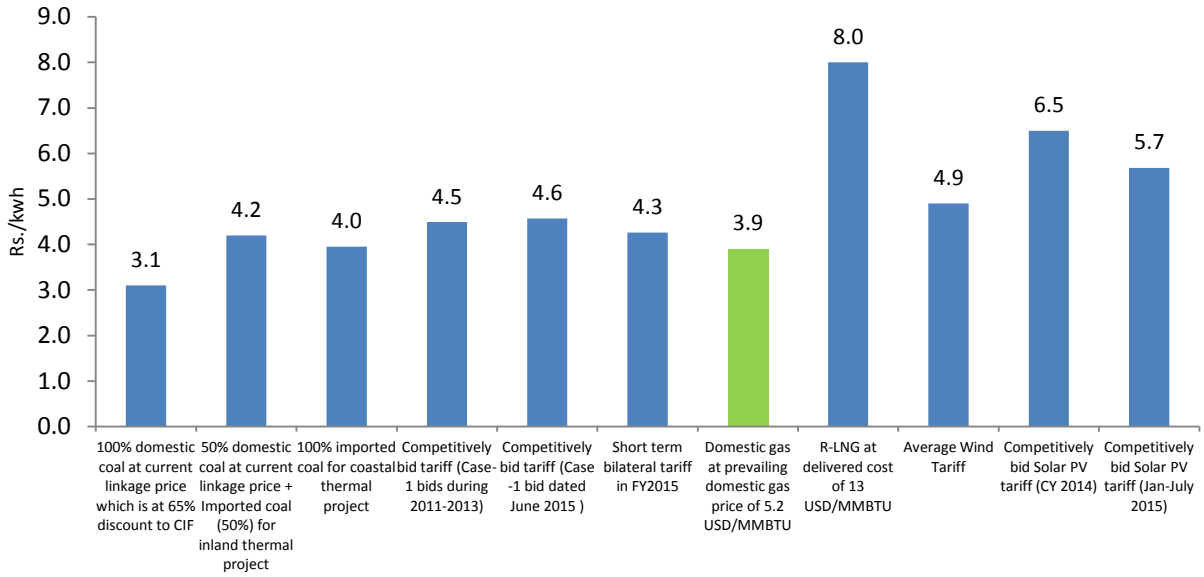
With downward revision in domestic gas price, overall cost of domestic gas based power generation is estimated at 3.9 Rs/kwh for a standard power plant, which reflects a decline of about 11% over that with gas at earlier delivered cost of about US$ 6.1/mmbtu. For every US$ 1/mmbtu increase in cost of gas, cost of generation shows an increase of 50 paise/unit, under the assumption of prevailing exchange rate, while for depreciation of INR against USD by 1 INR, cost of generation shows an increase of 4 paisa/unit. As a result, cost of power generation will remain vulnerable to volatility in gas prices internationally as well as the INR-USD exchange rate.

With deterioration in domestic gas availability since March 2011 & alternate fuel (R-LNG) being not cost competitive against other thermal sources, average PLF for gas based capacity on all India basis in FY 2014-15 declined sharply to 20.8% as against 66.2% in FY 2010-11. As a result, share of gas based power generation in the overall electricity generation on all India basis has declined from 13% in FY 2011 to 4% in FY 2015. In case domestic gas availability were to remain at the current level for the power sector, decline in the gas price would lead to savings of 1.8 paisa/kwh for the distribution utilities on all India basis at delivered gas cost (i.e. at US$ 5.2/mmbtu) & at INR/USD rate of 66. This in turn will constitute a relief of about 0.4% in the overall cost of power supply for the distribution utilities on all India basis.

While domestic coal remains the most cost competitive source for power generation, cost competitiveness for domestic gas based projects has improved within thermal segment especially against the competitively bid tariffs for thermal based projects over last 12 month period. This has been due to reduction in the domestic gas price level[2], although this benefit has been moderated due to INR depreciation against the USD during the same period.

[2] GCV based

Chart 1: Comparison for overall cost of power generation under different fuel-mix Scenarios



Source: ICRA Research & Estimates ; CERC Market Monitoring Report for Average Short Term bilateral tariff; Assumptions: Domestic Coal Linkage based plant assumed at a hinterland location with about 900 km distance from linked mine & about 1200 km distance from port; domestic coal price assumed (i.e. 850 Rs./MT at pit-head) as per CIL's pricing notification for GCV range of 3700-4000 Kcal/Kg; Inland rail transportation cost at Rs. 1.25/km/MT; Station Heat rate = 2250 Kcal/kwh; GCV for Imported Coal = 4200 Kcal/Kg; FOB – Indonesia for GCV of 4200 Kcal/Kg = 35 USD/MT; Levellised fixed cost of generation inclusive of return on equity = 1.85 Rs./kwh based on CERC's normative tariff principles & capital cost at Rs. 60 million/MW; Exchange rate at 66 INR/USD; Tariff Regulations for Wind based generation across the key States

Nonetheless, fuel supply risk remains significantly high for domestic gas based projects

ICRA however notes that fuel supply risk remains significantly high for gas based projects & the viability of stranded gas based projects (15 GW) remains critically dependent on an improvement in domestic gas availability. In order to allow the utilisation of stranded gas based projects, GoI has concluded allocation of Re-gasified Liquefied Natural Gas (R-LNG) based on subsidy scheme[3] in May 2015 in which 10.27 GW of stranded and under-utilized gas based capacity has won the bid for supply from June 1, 2015 to September 30, 2015. In the second round of e-auction under this scheme concluded in September, 2015, 8.3 GW of gas based capacity has won the bid for allocation of R-LNG to generate 11.03 billion units of electricity during the period from October 1, 2015 to March 31, 2016. While arrangements to supply R-LNG are in place for such capacity, we believe that current scheme is not sustainable for the stranded projects at the prevailing exchange rate (66 INR/USD) & spot R-LNG price level (US$ 8/mmbtu), even assuming a financial relief in the form of moratorium on debt servicing.

Fertiliser Sector

Lower gas prices should reduce the subsidy burden for GoI by Rs. 12-13 billion:

With the lowering of the domestic gas prices to US$ 4.20 /mmbtu (on NCV basis) for H2 FY 16 and also expected fall in the long-term R-LNG prices from the current levels of US$ 13.5/mmbtu, ICRA Research expects the pooled prices to reduce to US$ 9.1-9.3/mmbtu during H2 FY 16 from US$ 9.8-9.9/mmbtu during June-July 2015. This should lower the cost of production of urea, which in turn would reduce the subsidy burden for the Government. As per ICRA Research estimates, for a fall of every US$ 1/mmbtu in gas price, the retention price of urea would reduce by Rs. 1800-2000/ ton. Hence, expected reduction in the pooled prices to US$ 9.1-9.3 should lead to subsidy savings of ~Rs. 12-13 billion for the Government for H2 FY 16 (assuming the currency to remain stable). Lower subsidy for the industry would in turn lead to lower working capital borrowings for the companies and enable them reduce their interest cost. Further, lower pooled gas prices would favourably impact the profitability of revamped urea capacities earning IPP-

[3] Based on reverse bidding with subsidy support as bid variable (against the ceiling subsidy support level of Rs. 1.74/unit, winning bid for subsidy support remained at Rs. 1.43/unit). Plant utilisation is restricted at 30%/35% PLF based on allowed R-LNG.

based pricing. Also, the profitability of producers of non-urea fertiliser such as ammonium nitro-phosphate, which are produced using domestic gas would improve. Additionally, chemicals manufactured by integrated fertiliser-chemicals complexes may also witness improvement in profitability as cost of production will decrease while their prices are generally driven by international prices of these chemicals.

However, the industry is negatively impacted by the depreciation of the rupee against the dollar. As per ICRA Research estimates, for depreciation of INR against USD by 1 INR, the retention price increases by Rs. 250-275/ ton. Hence, going forward, the retention prices and the subsidy outlay for the Government would remain vulnerable to volatility in gas prices internationally as well as the INR-USD exchange rate. Nevertheless, lower gas prices scenario is favourable for the domestic fertiliser industry as the cost of production and working capital requirements would reduce vis-a-vis current scenario.

City Gas Distribution Sector

CNG and PNG (domestic) prices to decline, strengthening their competitiveness against auto-fuels and LPG (domestic) respectively

The reduced cost of input gas for the CGD players will result in lower CGD and PNG (domestic) gas prices. Assuming that the CGD players maintain their current absolute contribution margins in Rs/Kg and Rs/scm terms, there is a likelihood of a cut of about Rs 2.5-3/kg in CNG prices and about Rs 2/scm in PNG (domestic) prices. The cut in prices could however be lower than expected as CGD players may retain some of the contribution margin which has been lost in the last few weeks on account of depreciation of the rupee against the US dollar.

With the reduction in gas prices, CNG's competitiveness vis-à-vis auto fuels will improve and the payback period for passenger vehicles for conversion to CNG vehicles will decline marginally from 7 months to about 6.5 months. In case of PNG (domestic), the impact is likely to be more significant. While the oil marketing companies have reduced auto fuel prices on account of the decline in crude prices, the price of LPG (domestic) has been maintained and is still heavily subsidised. ICRA Research believes that while PNG (domestic) has been marginally uncompetitive against subsidised LPG on an energy equivalent basis, the cut in PNG (domestic) prices will make it competitive going forward, if LPG (domestic) prices remain unchanged.

Thus, in the case of both segments – CNG and PNG (domestic), the competitive advantage of gas over alternate fuels will improve and this augurs well for new demand creation. CGD players, while retaining their contribution margins, should benefit by way of volume growth in the CNG and PNG (domestic) segments. The other two segments - PNG (Industrial) & PNG (Commercial) segments are being serviced by the industry through sourcing of R-LNG and thus would not be impacted by the decline in domestic gas price.

October 2015

ICRA Limited

CORPORATE OFFICE
Building No. 8, 2nd Floor, Tower A, DLF Cyber City, Phase II, Gurgaon 122 002
Tel: +91 124 4545300 Fax: +91 124 4545350
Email: info@icraindia.com, Website: www.icra.in

REGISTERED OFFICE
1105, Kailash Building, 11th Floor, 26 Kasturba Gandhi Marg, New Delhi 110001
Tel: +91 11 23357940-50 Fax: +91 11 23357014

Branches: **Mumbai**: Tel.: + (91 22) 24331046/53/62/74/86/87, Fax: + (91 22) 2433 1390 o **Chennai**: Tel + (91 44) 2434 0043/9659/8080, 2433 0724/ 3293/3294, Fax + (91 44) 2434 3663 o **Kolkata**: Tel + (91 33) 2287 8839 /2287 6617/ 2283 1411/ 2280 0008, Fax + (91 33) 2287 0728 o **Bangalore**: Tel + (91 80) 2559 7401/4049 Fax + (91 80) 559 4065 o **Ahmedabad**: Tel + (91 79) 2658 4924/5049/2008, Fax + (91 79) 2658 4924 o **Hyderabad**: Tel +(91 40) 2373 5061/7251, Fax + (91 40) 2373 5152 o **Pune**: Tel + (91 20) 2552 0194/95/96, Fax + (91 20) 553 9231