



Under the aegis of: 
Ministry of Petroleum
and Natural Gas

Conference Theme
**Leadership
Conclave**

DEPTOTECH - 2014

**XI International Oil and Gas
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PETROTECH - 2014

Conference Theme Leadership Conclave

Vision: 2030: EMERGING GLOBAL ENERGY BASKET – CHALLENGES & OPPORTUNITIES

Date / Time: Aug 23rd 2014 / 17:30 Hrs

Venue: Hotel Grand, New Delhi

Highlights

Conference Theme leadership Conclave, the curtain raiser event for PETROTECH - 2014 saw a rich discussion around India's energy needs in the future and the key priorities for meeting this new demand. This was a high profile event, attended by the who's who of the Indian Oil & Gas industry, including 9 CEOs, 20+ Directors and members from the ministry. Dr. Veerappa Moily, Honorable Union Minister for Petroleum and Natural Gas, Government of India opened the session and set the context with the vision of making India energy independent by 2030.

This was followed by an overall discussion on the Global and Indian energy sector and an interactive session on what should be the key priorities along the Oil and Gas value chain, across 5 key areas (i.e. Upstream, Refining, Petrochemicals, Gas and Technology). Participants gave their real time comments and feedback on key questions in these areas using state-of-the-art iPad™ based technology which helped generate rich debate and participation on each question.

In this note, the key highlights from the discussion are summarized:

Overall Global and Indian energy sector perspectives

The global energy demand is estimated to increase from 12,511 MTOE in 2010 to 16,698 MTOE in 2030 based on McKinsey's Global Energy Perspective base case. 90% of this demand is expected to come from non-OECD companies. In India, the demand is expected to increase from 680 MTOE in 2010 to 1508 MTOE in 2030 driven by a growth in Industry demand.

3 major global trends were discussed:

- Liquids demand share of global energy demand is expected to reduce in future driven by an increase in energy from gas, nuclear and renewable sources. In fact, the absolute volume growth for liquids is expected to be flat. However, in India, the share of liquids is expected to remain constant at 23% of primary energy demand and as a result the absolute demand is expected to increase from 156 MTOE in 2010 to 347 MTOE in 2030.
- Further, LTO could cause a major disruption in the global oil scenario obviating the need for US to import upto 3 Mbb/d that it currently imports from the GCC nations and West Africa. This could create an opportunity for India to enter into long term tie-ups that would help secure its energy future.

- Significant volatility in the prices is expected with potentially 3 price scenarios emerging. In the base case, the industry supply and demand are expected to grow in line with current industry expectations resulting in prices staying between \$90-100/bbl in 2017. In case technical disruptions and political constraints lead to reduction in oil supply below expectations then prices could increase to \$120-140/bbl. However, in case supply growth from US LTO exceeds expectations then the price could fall to \$60-70/barrel. *Overall, 65% percent of the participants believed that the base case would likely be true for 2017 with the prices continuing between \$90-100 / bbl.* As India looks to meet its energy demand it must look to build a truly global presence in oil & gas and it should invest in new resource types and technology along the value chain.

Key priorities along the Oil & Gas value chain

Upstream

- **Increasing domestic production:** With the global competition for resource access intensifying, *focus on increasing domestic production is considered a key priority among the group. A majority of the participants felt that India should continue to focus on conventional exploration, especially in North Eastern India.* Open acreage policy and investment in technology were considered key to driving conventional exploration. In addition, long term practical policies and initiatives like production sharing contracts with the private global oil companies were also discussed to be important for enabling conventional exploration.

In unconventional sources, tapping CBM and shale gas is considered the most important focus area with the group considering a more important source than deepwater, EOR/IOR and HPHT. Targeted investments in technology and partnerships would be needed to ensure that viable technology is developed to tap these sources.

- **Global resource plays:** *Almost two-thirds of the group considered gas in Africa to be the key resource play for India.* In addition, shale gas in North America and Canadian tar sands emerged as the other important global resources India could look to target. *Interestingly, only 10% of the participants believed that Middle East is an important region to look at for securing future hydrocarbon supply.* However, this should be carefully watched since long term tie-ups with the Middle East could become viable in case an LTO disruption leads to significant reduction in US imports from the Middle East. To improve international access, a majority of the group felt that better government-to-government relations and a consortium approach that would allow for bidding for bigger assets would improve access to international resources. In addition some leaders believe that adopting China's approach and offering a holistic development package in Africa could be critical to success.

However, it is also clear from the discussion that no one approach can be depended upon to meet and secure India's future demands and there is *strong consensus that progress would need to be made in all the above areas.*

Refining

Globally margins have shifted from downstream to upstream and the refining capacity is expected to be in surplus through 2020. However, *majority participants believed that India should aim for 100-120% self-sufficiency in refining which would*

mean adding 85-95 mmtpa of refining capacity by 2020. Refining capacity additions should budget for the global crude slate becoming lighter and sweeter driven largely by LTO and the expected increase in diesel and petrol share in the overall demand mix.

Price deregulation emerged as the most important initiative for making refinery investments viable. In addition, completion of refinery projects 30-40% cheaper and faster came out as the second most important focus area for making new investments viable.

Petrochemicals

Asia is expected to continue to drive global petrochemical demand accounting for 50% of new demand for petrochemicals. To keep in line with India's increasing petrochemical demand, given the growth in the economy; *the group agreed that ensuring domestic capacity growth is the most important imperative for Indian petrochemical companies.*

However, it is critical to plan capacity considering changing margins for products, especially due to threat of Chinese exports. Further, *the group agreed that investment in technology and improving capital and operational efficiency will be the key to success of Indian petrochemical companies and as much as \$1-2 per barrel reduction in cost is possible through these levers.*

Gas

India today is playing a major role in shaping global pricing due to its high import volumes. *However, need to focus on domestic gas production increase is the most important focus area, according to a majority of the participants. Deregulation of prices would be key to ensuring the viability of gas extraction.* In addition, entering into long term gas purchase contracts and taking equity positions in important assets are two other priority areas for Indian gas players.

Technology

Oil and gas industry lags other industries in the adoption of technology innovations. Globally a range of different technology options are being pursued. However, Indian oil & gas companies are not focusing on technology development. This is especially critical if India is looking to invest in assets abroad and increase production through unconventional resources.

According to the group, *increasing R&D spend and effectiveness is the most important need for Indian companies. In addition, collaborating with other players on technology development and external partnerships to access cutting edge technology are needed to kick start R&D.* Setting up a technology venture fund can be a key enabler for collaboratively developing technology in Oil & Gas.
