# Non-conventional Energy can Play a Key Role in Bridging the Demand Gap in India

**The Indian oil & gas industry could look forward to a completely deregulated environment**

CEO, Essar Oil Ltd, LK Gupta elaborates on how the conventional oil and gas market is developing in light of alternative energy sources and details on what the R&D initiatives for the next few years should focus on.

Source: Essar Oil Ltd

**"India has put an ambitious target of energy self sufficiency by 2030 and I am sure non-conventional will play a big role in meeting this."**

**CEO, Essar Oil Ltd, LK Gupta**

***You have had quite a few ups in the first half of the year right from your revenues surging up to ₹52,113 crore to exporting record amounts of diesel fuel. What were the reasons behind this exceptional growth especially in this gloomy economic climate that surrounds the industry?***

**LK GUPTA:** Our gross revenue for the six month period ending Sep '13 surged to ₹52,113 crore, which was up 15 per cent against H1FY14. The refinery has continued to operate above its rated capacity, delivering a throughput of 10.32 MMT in H1FY14, which is eight per cent higher than H1FY13. This is the key reason behind a healthy growth in topline. Due to a very timely and good monsoon this year (which has impacted domestic diesel demand) the export of diesel has increased substantially. We have been successful in placing our products in the domestic and international markets as we are able to produce the products meeting varying tough requirements. Going forward, we expect the domestic demand situation to improve and for our exports of diesel to accordingly come down.

***With a new gas price regime starting from April 1st 2014, tell us the benefits it has for a company such as yours.***

**GUPTA:** On the Exploration and Production (E&P) side, with a new gas price regime kicking in from 1 April 2014, it is expected to be much better from the current $4.2/mmbtu. We see this as a welcome reform, which would boost investments in the E&P sector (followed by ramp up in production), curb expensive imports, promote exploration and increase government revenues. This will also be positive for E&P companies as their profitability will increase and also the new gas fields will become viable. In an energy deficit nation like ours, we are playing a significant role in meeting the growing energy requirements of the country. Essar Oil has reserves and resources of nearly 1.7 billion barrels of oil equivalent.

***Tell us of your Vadinar refinery and how unique it is in its complexity and ability to produce value-added products.***

**GUPTA:** Vadinar Refinery started commercial production in 2008 with a nameplate capacity of 10.5 MMTPA and complexity of 5.8. We undertook massive expansion and optimization projects, which increased the capacity to 20 MMTPA and complexity of 11.2. Today, our refinery is India's second largest single location refinery and amongst the most complex globally. Till date, we have invested over ₹24,000 crore in the refinery complex, which is a state-of-the-art super site and comparable to any such facility anywhere in the world. For the last five consecutive quarters, our refinery is operating at over 100 per cent capacity. It has the capability to produce petrol and diesel that meets the latest Euro IV and Euro V emission standards. A higher complexity means that on one hand we are able to process the so called dirtier crude, also known as heavy and ultra heavy crude, which are normally available at a discount to the benchmark crudes, on the other, we are also able to produce high value Euro IV and V products. During the first half of the current fiscal, the refinery processed 92 per cent heavy and ultra heavy crude in its crude diet, against 85 per cent in H1FY13. Till date, our refinery has successfully processed more than 50 varieties of crude from across the world, including some of the 'toughest crudes'. However, any talk on operations cannot be complete without talking on the health and safety parameters. Our refinery had achieved 2008 Loss Time Injury (LTI) free days as on 30 September 2013, which demonstrates a very high focus on safety.

*"For the last five consecutive quarters, the Vadinar Refinery Complex is operating at over 100 per cent capacity. It has the capability to produce petrol and diesel that meets the latest Euro IV and Euro V emission standards."*

*LK Gupta*

***Tell us in brief of your Optima Plus Project?***

**GUPTA:** Essar Oil is undertaking a series of low capex and short gestation optimization projects across its refinery and marketing value chain under the banner of Optima Plus, which upon completion would provide a GRM uplift of about $1-1.5 per barrel over a period of three years. These projects include setting up one more hydrogen manufacturing unit and facilities for conversion of existing Vacuum Gas Oil (VGO) into more valuable distillates.

***How do you see the conventional oil and gas market developing in light of alternative energy?***

**GUPTA:** Essar Oil is focused on the non-conventional gas sources like Coal Bed Methane (CBM), and going forward, when the policy permits, shale. In an energy hungry country like India, non-conventional energy can play a key role in bridging the demand gap. CBM could be a promising energy solution for India, which has large deposits of coal and limited oil & gas reserves. India has the fourth-largest proven coal reserves in the world and holds significant prospects for exploration and exploitation of CBM. Under the CBM policy, 33 exploration blocks have been awarded and of the total available coal-bearing area of 26,000 sq km for CBM exploration in the country, exploration has been initiated in about 17,000 sq km. The prognosticated CBM resources in the country are about 92 trillion cubic feet (TCF), out of which only 8.92 TCF have so far been established. Commercial production of CBM in India has now become a reality with current CBM gas production of about 0.28 Million Metric Standard Cubic Metres per Day (MMSCMD). Similarly, India has a lot of potential in Shale. Essar Oil has a portfolio of five CBM blocks with a total of 10 TCF or about 1.7 billion barrels of oil equivalent of reserves and prospective resources, making it the largest CBM player in the country.

***Compared to US and European counterparts, do you agree that Indian players are trailing behind in terms of innovation and R&D capabilities in the oil & gas industry?***

**GUPTA:** I think that the government of India is looking at promoting an inclusive plan for the development and investments in R&D activities in the oil & gas sector. The big investors in R&D were traditionally the super majors (e.g. ExxonMobil, BP, Shell, Chevron). They in turn subcontracted some of their oilfield requirements to specialists, such as Schlumberger and Petrofac, who can do it more efficiently and integrate the whole system. At the same time, these specialist companies are investing in R&D and technologies themselves, so they are bringing alliances into the package. With increasing competition, innovation is going to be a key differentiator and hence going forward, I foresee increased investment in the R&D sector by the oil & gas sector. Some key areas on which R&D is expected to be focused are fuel conservation/efficiency improvement, reduction of carbon emissions and innovations to diversify the domestic product portfolio.

***Kindly elucidate on the kind of innovations one can expect from the oil & gas industry. What is Essar's contribution at this end?***

**GUPTA:** Innovation runs in Essar Oil's DNA. We always question everything that is presented to us and challenge ourselves in doing it differently, more efficiently. We have institutionalized our quest for innovation by running annual contests within the organization wherein innovative ideas across the value chain are rewarded and implemented. Quest for innovation is a continuous process for us and is already delivering tangible results.

***Looking at the abundance of shale gas supplies in North America, and Asia being a large net importer of crude oil, how would Asian oil & gas players respond to this overall dynamic?***

**GUPTA:** Shale gas has changed the global energy dynamics and may potentially make US, which not too long back was the world's largest importer of oil & gas, into a net exporter in the not too distant future. This development is already having a huge impact on the global energy market, with the balance of power gradually shifting away from the OPEC nations. Asian countries will also get the advantage of shale boom in US, which on one hand is lowering global gas prices and on the other, making such exploration technology available for others to invest in exploring their own shale resources. Even India has put an ambitious target of energy self sufficiency by 2030 and I am sure non-conventional resources will play a big role in meeting this.

***What can one expect from the Indian oil & gas industry in the months to come?***

**GUPTA:** Over the next couple of months, the sector could look forward to a completely deregulated environment, with fuel being priced as per international prices. The government is implementing gradual increase of diesel prices to bring it at par with global prices. Once price parity is reached, this would open up a huge opportunity for the private sector, which has invested substantially in setting up a nationwide retail network. This would increase competition and benefit the end consumer. This would also bring about a natural demand management as the products prices would be market linked.

The interview is conducted by Deputy Editor, PROCESS India, Indira Rao. E-mail: indira.rao@vogel.de.