



MAXIMISING INDIA'S ENERGY POTENTIAL

INTERVIEW WITH SUDHIR VASUDEVA
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What is the energy scenario in India, especially with regard to hydrocarbons, and what challenges do you foresee?

While the present global economic distress has not spared India, driven by fundamentals, the country's GDP growth rate is still expected to exceed 7 per cent. As a result, the oil and gas industry is also expected to continue its role in fuelling this growth.

India is currently the 4th largest consumer of primary energy, after China, the USA and Russia. It is also the 4th largest consumer of oil and the 12th largest consumer of gas, and its consumption rate is still growing rapidly. With the economy projected to grow at a steady rate in the range of 7-9 per cent in the near term, per capita energy consumption is bound to increase, and so will the demand for energy.

India will require all forms of energy in the desired quantity and quality to sustain growth. However, for a country with 17 per cent of the world's population, 0.6 per cent of its oil reserves and 0.8 per cent of its natural gas, the task of matching energy requirements with economic growth is a daunting one.

Total hydrocarbon resources in India, inclusive of deepwater, are estimated at around 28 billion tonnes of oil and oil-equivalent of gas (O+OEG), of which, as of 1 April 2011, initial in-place resources of 10.11 billion tonnes and ultimate reserves of 3.79 billion tonnes have been established. However, converting prognosticated resources into proven reserves, and bringing them to production through intensive exploration and innovative production methods, is a major challenge for the Indian upstream sector.

As India's leading exploration and production (E&P) company, what steps is ONGC taking toward strengthening the country's long-term energy security?

The development or growth of any nation, especially of a developing country, is directly related to its energy consumption. ONGC, being the leading energy contributor of India has been playing a pivotal role in ensuring the growth of our nation. Oil and gas together

comprise over 45 per cent of India's primary energy basket. Of the total oil consumption, India's indigenous contribution in terms of oil production is about 25 per cent, whereas about 75 per cent is imported. And in the case of gas, the present scenario is precisely the reverse; about 75 per cent is indigenously sourced and about 25 per cent is imported. ONGC produces about 60 per cent of the total indigenous oil and gas at present. It is a matter of pride for us that our pioneers have shaped the energy landscape of the nation by discovering 6 out of the 7 producing basins of India. Through its 370-odd discoveries to date, ONGC has established about 2.4 billion tonnes of hydrocarbon reserves, of which 1.506 billion tonnes has already been produced and has contributed toward the growth of our nation.

In order to secure further energy assurance for the country, ONGC, through its wholly-owned subsidiary ONGC Videsh Limited (OVL), has forayed abroad to acquire equity oil and is presently operating 33 E&P projects in 15 countries. Today, ONGC and OVL combined source about 1.27 million barrels of oil and oil equivalent gas daily for 1.2 billion Indians. In addition, ONGC has extended its core competency to explore new sources of energy in the form of coal bed methane



ONGC PRODUCES 60 PER CENT
OF INDIA'S OIL AND GAS

(CBM), underground coal gasification (UCG), shale gas and gas hydrates, and has also ventured into new and renewable sources of energy.

Global natural gas reserves are of the order of 187 tcf and it has a low carbon footprint as well; how is India placed with regard to utilising this eco-friendly fuel?

Dependence on oil needs to be drastically reduced by utilising gas wherever possible. For this reason, gas infrastructure in India needs to be developed expeditiously.

India is seeking to supplement domestic natural gas supply through other options such as cross-border gas pipelines and LNG to enhance the availability of natural gas. However, India would have to develop commensurate supply and distribution infrastructure as well to utilise imported gas. The pipeline network in India is currently one of the least extensive amongst gas consuming countries; however a national gas grid is being implemented in phases to open up new markets for this eco-friendly fuel.

Unconventional sources such as coal bed methane, underground coal gasification, gas hydrates, shale gas, etc, have huge potential. The Indian upstream industry is keen to monetise these resources; however it will require substantial investment, technology infusion and innovation, as well as an enabling policy framework.

After the shale gas revolution in the USA, India too is keen to monetise its shale gas resources. Rough estimates

have pegged the reserves of gas in shale deposits across the country at 63 trillion cubic feet (tcf), which is much higher than the reserves of conventional gas available in India. ONGC discovered shale gas in Damodar Valley in January 2011 and has drilled 4 wells as an R&D effort. ONGC has identified the Gondwana, Krishna Godavari, Cauvery, Cambay and Indo-Gangetic basins as a potential shale gas province and is awaiting a National Shale Gas Policy, which is likely to be announced this year, to prioritise its efforts toward shale gas exploration.

In addition, India is endowed with substantial coal reserves that can be monetised using coal bed methane and underground coal gasification. Then we have methane gas hydrates in the KG and Mahanadi basins, the Kerala-Konkan basin and offshore Andaman. The total prognosticated gas resource from gas hydrates in the country is placed at 1894 tcm. So there are substantial upsides to the domestic gas scenario and we at ONGC are active on all fronts, i.e. CBM, UCG, and shale gas, as well as in gas hydrates.

ONGC has a number of joint ventures in India and some abroad. What has been ONGC's experience of cooperation with IOCs, given that IOC-NOC cooperation is a major topic for IEF activities?

The experience has been most satisfactory. Whether an NOC or an IOC, we are business entities and work together to achieve common goals under a well-established commercial framework. Working together enables the use of complementary skills and competencies. While IOCs invariably possess better technology and management practices, NOCs have access to reserves, local business acumen, better understanding of local regulatory frameworks and a social charter focused on community development around operational areas. Together, this combination has delivered on its promise and we remain extremely sanguine about this relationship in monetising global oil and gas reserves, especially under the prevailing regime of 'exigent hydrocarbons' and unconventional hydrocarbons that needs a healthy infusion of cutting-edge technology as well as capital. ■



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