



INDIAN OIL & GAS: ENDLESS POSSIBILITIES

As the Indian economy grows, so does its appetite for energy. The majority of the energy India will use in the coming decade is expected to come from hydrocarbons, and the government remains determined to boost the supply of domestically produced oil and gas. GE is ideally positioned to play a major role in what promises to be a rapid expansion of all aspects of the Indian oil and gas sector.



Over the last several decades India has been among the world's fastest growing economies, with GDP more than tripling between 2002 and 2012. However, with the country's expanding economy comes an increasing demand for energy and, if current trends continue, India will be the world's third largest energy consumer by 2020.

Nearly half of the country's energy comes from oil and gas, and officials in New Delhi are eager to boost domestic oil and gas supplies to feed the growing economy. However, India has fallen behind its goals for domestic production. In 2007, the government put in place an ambitious plan that called for the country to produce 206.8 million tons of crude oil over the five-year period ending in 2012, but the nation's production fell short by nearly 30 million tons.

As a technology leader GE Oil & Gas is well positioned to foster growth in India's domestic production by providing advanced technological solutions and services for all aspects of the oil and gas sector. GE Oil & Gas can make an impact in the upstream, midstream, and downstream segments while at the same time harnessing innovation from other GE businesses like aviation and healthcare to find solutions to some of the technical issues that have limited the development of India's domestic hydrocarbon production.

Poised for expansion

Much of the challenge comes from a lack of direct foreign investment, with total FDI in hydrocarbon exploration and production at only \$2.5 billion since 2005. The lack of investment is especially disappointing considering the government's various attempts to increase the activity in India's upstream oil and gas sector, including an overhaul of investment laws in the late 1990s.

Despite these challenges, several factors suggest the Indian oil and gas sector may be poised for major expansion in the



GE offers a broad array of products and services including solutions for pipelines.

coming years. Currently the country produces around 815,000 barrels of oil a day from proven reserves totaling 15 billion barrels of oil equivalent (BBOE) and almost 6 billion barrels of oil. Existing production rates suggest India will exhaust its proven reserves within the next 25 years, giving the government yet another reason to encourage more domestic exploration.

GE Oil & Gas can provide the technological support for the needed expansion by providing everything from wire-line and drilling measurement solutions to guaranteeing pipeline integrity.

Enormous potential

The domestic oil and gas sector holds an enormous amount of potential.

Continued high oil prices mean that India is increasingly committed to reducing import costs by growing its domestic supply. At the same time, the country holds vast potential for exploration. Barely 22 percent of the country's sedimentary basins have been explored, and a series of large deepwater blocks remain essentially untouched. Additionally, although the government has awarded 247 total blocks over the last 13 years, only 16 of the blocks have been developed.

But ensuring long-term energy self-sufficiency will be a formidable task for India given the magnitude of the country's energy needs, the large investments required, and the complexity of technologies involved. In addition, the combination of underexplored acreage, a red hot domestic market, and a determined government suggest the country may be on the brink of unlocking this potential.