Set the framework
Dharmendra PRADHAN
Minister of State for Petroleum and Natural Gas

Clear way forward
N.K. VERMA
Managing Director
ONGC VIDESH

Refineries redefined
B. ASHOK
Chairman and Managing Director
INDIAN OIL CORPORATION
ONGC Videsh Limited celebrates its journey of 50 glorious years in March 2015. What began as an overseas outreach to carry out operations in an oilfield in Iran in 1965, has today blossomed into modern India’s flagship international petroleum company with interests in 36 oil and gas assets in 17 countries.

Today ONGC Videsh is India’s second-largest E&P Company, both in terms of oil production and oil and gas reserve holdings. In July 2013, it was ranked the most globalized multinational company by Indian School of Business along with Brazil’s Fundacao Dom Cabral.

"ONGC Videsh strives to create value by achieving international best stand in its exploratory efforts and by adding barrels through intensive technology-focused practices in exploration."

Narendra K. Verma, CEO

Committed to long-term partnerships and high HSE standards.
As we make a better place for ourselves in the world, we also make the world a better place to live.

Indigenous "Oilzapper" technology to bio-remediate oil sludge in refinery.

100 MW Wind Farm to tap vast wind potential - in first phase 50.5 MW is commissioned. 50 MW is planned in second phase.
Ground water recharging through rain water harvesting at 29 LPG bottling plants & 40 POL locations.

Energy efficiency initiatives at refineries saved about 25,535 MT Fuel.

HP stands for Sustainable Development.

HPCL is a Government of India Enterprise with a Navratna Status, a Forbes 2000 and Global Fortune 500 company. But it doesn’t simply end at that. We push the boundaries to make our mark as an organization that not only works hard to meet and beat global benchmarks, but also strives to protect the environment. We stand for a better future, for a better tomorrow.

Hindustan Petroleum Corporation Ltd. (A Government of India Enterprise)

www.hindustanpetroleum.com
ONGC Petro additions Limited

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OPalene HDPE
Capacity - 700 KTA

Capacity - 360 KTA

OPalene LLDPE
Capacity - 340 KTA

C/o Dahej SEZ Ltd., P.O.Dahej, Taluka-Vagra,
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Keeping India on the move.

At 96th position, we are the highest ranked Indian company among Fortune's Global 500. With 10 refineries of 65 MMTPA capacity and a pipeline network of over 11,200 kms, we are India's leading refiner and carrier of crude and products.

Our nationwide network of more than 42,000 customer touch points makes us the largest energy supplier in the country and our state-of-the-art R&D centre possesses research excellence in delivering eco-friendly & sustainable technology solutions. With foray into petrochemicals, E&P and natural gas, we are India's biggest integrated petroleum company.

www.iocl.com
Diplomacy and Politics

Since his 2014 victory, a series of reforms to promote oil and gas industry growth have been enacted by newly elected Prime Minister Narendra Modi. These reforms addressed India’s antiquated oil subsidy programme and the nation’s gas deregulation and were implemented following the global oil price drop. The new administration has also promoted international hydrocarbons asset development.

Exploration and Production

Following 10 years of steady decline, India has taken proactive steps to revitalise its exploration and production sector, increasing the price of domestically produced gas. The Ministry of Petroleum and Natural Gas created contracting mechanisms in order to lure oil and gasfield operators to its extensive hydrocarbons reserves. India has also cut much of the red tape involved in its oil and gas contracting process, allowing stalled projects to proceed.
India’s growing population has impacted natural gas demand in both the domestic and commercial sectors, and power plants are often short of feedstock. To bridge the gap between supply and demand, the government has enacted a series of natural gas pricing reforms to incentivise domestic exploration. India has also diversified its LNG import partnerships, looking to countries such as the US, Australia, Qatar and Russia to meet the market’s rising needs.

The Year’s Focus: Make in India
To help bolster India’s economy, Prime Minister Narendra Modi has launched the Make in India initiative. The goal of the programme is to revive the country’s neglected manufacturing sector by facilitating investment, promoting innovation and modernising infrastructure. The availability of cheaper goods locally will benefit the oil and gas industry.

Engineering & Construction
In recent years, Indian engineering, procurement and construction companies have travelled far beyond the borders of their home country, a result of waning domestic demand. Indian enterprises have thrived abroad, winning landmark contracts in countries such as Kuwait and Saudi Arabia. With a number of lucrative projects being announced in India, these companies are using their experience to compete with international players on their home turf.
India has committed to the expansion of its petrochemicals sector, already the largest in Asia, as well as the revitalisation of its fertilisers production. Demand for both petrochemicals and fertilisers is growing, but these sectors face natural gas feedstock deficits. To address this issue, the Indian government has implemented a gas-pooling scheme, in addition to investing in the Talcher complex, an innovative coal-to-gas conversion plant.
THE YEAR IN REVIEW

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Minister of State for Petroleum and Natural Gas
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What parts of India’s oil and gas supply chain have opportunities for investment?

India’s oil and gas industry is expected to grow with the country’s economy and the accompanying demand for energy. Immediate investment opportunities exist in the upstream, midstream and downstream sectors.

Potential investment areas include the exploration and production of conventional and unconventional oil and gas, such as coal bed methane, shale gas and underground coal gasification. The government will soon invite bids for a fresh round of exploration and production with a world-class policy framework.

India needs substantial investments in its gas industry. Prime Minister Narendra Modi has made the formation of a national gas grid a top priority through the addition of 15,000 kilometres of gas pipelines. The expansion of the gas grid will also provide the necessary infrastructure for further investments in enhanced production of domestic gas and a higher volume of LNG imports. Investment opportunities are also present in LNG import and liquefaction facilities.

How is the new Indian government addressing oil and gas investors’ concerns?

Despite the government’s policy of allowing 100-percent foreign direct investment in the country’s hydrocarbons industry, international investors have been reluctant to invest in India. Major hindrances have included a policy blockade and a lack of clarity on major regulations such as production-sharing contracts, the pricing of commodities and subsidy mechanisms. Prime Minister Narendra Modi’s government is committed to implementing an operational framework that will incentivise domestic exploration and production through appropriate fiscal policies and incentives, a transparent and stable regulatory regime, a reliable monitoring mechanism and a facilitating business environment.

The Ministry of Petroleum and Natural Gas is taking measures to advance along those fronts. In October 2014, the government deregulated diesel and announced a revised formula for pricing domestically produced gas.

The issues of fuel subsidies and remunerative pricing for domestic gas had been on the table for a long time, and both of these steps will add new potential to the Indian oil and gas industry. Domestic hydrocarbons production is on a much surer footing after resolving these issues.

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“India’s 26 sedimentary basins have not been exploited to optimum levels, and we plan to encourage their exploration.”

The Who’s Who of the Global Energy Industry

The Year in Review

Interview

Minister of State for Petroleum and Natural Gas Dharmendra Pradhan talks to TOGY about India’s hydrocarbons potential and the ministry’s efforts to attract further investments to the domestic industry. While the country is the fourth-largest energy consumer internationally, its sedimentary basins remain underexplored and its oil and gas production has been relatively stagnant.

IN FIGURES

India’s estimated coal bed methane reserves

2.6 tcm

India’s estimated shale gas reserves

8.5 tcm-59.5 tcm

Targeted yearly regasified LNG import capacity by 2017

32.5 million tonnes

The Who’s Who of the Global Energy Industry
How important are unconventional resources?
The Directorate General of Hydrocarbons has estimated the country has coal bed methane resources to the tune of 92 tcf (2.61 tcm). We have to tap and monetise every possible source of energy in unconventional hydrocarbons.

India’s shale gas reserves could be anywhere between 300 tcf (8.5 tcm) and 2,100 tcf (59.5 tcm). While coal bed methane production is underway, under the current agreement, exploration of shale gas is being carried out by the Oil and Natural Gas Corporation (ONGC) alongside Oil India. The first shale well was drilled by ONGC in Jambusar (Cambay Basin) in November 2013.

A new uniform licensing policy is in the works. It will allow unconventional oil and gas in a block to be harnessed along with conventional resources. The National Gas Hydrate programme phase two has been launched to collect more data on hydrates to encourage exploitation.

How is the gas supply deficit being addressed?
The government has adopted a two-pronged approach to address the gas supply deficit. On one side, India’s gas production will be increased. ONGC will raise its gas output by more than 80 percent by the year 2019. Infrastructure to import greater volumes of LNG will also be built. This includes setting up new LNG terminals, raising existing terminal capacity and expanding the gas grid.

India’s LNG regasification capacity is at 22 million tonnes per year. The targeted yearly capacity from 2015 to 2016 is 25 million tonnes and 32.5 million tonnes from 2016 to 2017. LNG terminals have been proposed on both the east and west coasts of India, and some of these projects, such as Kakinada and Ennore, have reached advanced stages of the planning phase.

How will domestic production be increased?
Besides exploration, we need to fully monetise our discoveries and bring them on stream. At the same time, we need to carry out a capital- and technology-intensive drive to improve recovery at existing and maturing fields. Extra focus will be given to small and marginal fields.

In 2015, we are planning to auction 69 small and marginal oil and gasfields to private companies with a new revenue-sharing model.

How can the new natural gas pricing formula incentivise upstream investments?
The rationalisation of gas prices in line with international practices has been a major initiative of the government. Gas is the fuel of the future. In the global energy basket, gas has a 24-percent share, whereas in India, this figure is only 8 percent. Locating, producing, sourcing and using gas is imperative to meet growing energy needs.

The issue of remunerative pricing for domestic gas finds has long been pending. With the announcement of a new gas pricing formula, the domestic oil and gas industry is on a much surer footing to monetise gas discoveries. The government is also working on a suitable formula for giving a premium on gas to be produced from deepwater and ultra-deepwater, as well as high-pressure and high-temperature fields.

What is the best way to address under-recoveries made by oil marketing companies?
Public sector oil marketing firms incur losses on the sales of subsidised domestic liquefied petroleum, gas and kerosene sold through the public distribution system.

The government has taken several steps to address these losses. Effective since October 18, 2014, the price of diesel at the retail- and refinery-gate level is determined by the market. The government also decided to relaunch the modified direct benefit transfer of the LPG consumer subsidies on November 15, 2014 in 54 districts, and in the entire country by January 1, 2015.

While public oil marketing companies had a gross under-recovery on sales of controlled petroleum products during fiscal year 2013/14 (April-March) amounting to Rs1.4 trillion ($23 billion), this gross under-recovery is expected to come down substantially to around Rs720 billion ($11.5 billion) during 2014/15.

What role can the private sector play in the ministry’s strategic goals?
Our government endeavours to ensure maximum exploitation and utilisation of our natural resources, especially in the field of energy. For this, we will take all necessary measures, including encouraging private players, to achieve our targets.

We welcome global majors to participate in all sectors of the industry. Outside investment is one of the 25 major thrust areas of the Make In India initiative of the new government aimed at bringing back international investors to manufacture, research and set up their facilities here.

“***We need to carry out a capital- and technology-intensive drive to improve recovery at existing and maturing fields.***”

Prime Minister Modi is committed to incentivising domestic exploration and production
Supporting Sustainable Future

The Petroleum Federation of India promotes interests of the hydrocarbon industry in line with national policies, through a self-regulatory environment. It acts as the industry interface with government and regulatory authorities, represents it on committees and helps in evolution of policies and regulations. It functions through knowledge committees and experts to submit recommendations regularly. In sync with today’s rapidly changing dynamics in the global oil and gas sector, PetroFed effectively identifies key issues and works towards futuristic solutions.

www.petrofed.org
ONGC Videsh has become India’s flagship exploration and production entity overseas. The company’s Perspective Plan 2030 has set a goal to increase its production to 20 million tonnes of oil equivalent and 60 million tonnes of oil equivalent by fiscal year 2018/19 (April-March) and 2029/30, respectively. As of March 2015, ONGC Videsh had 36 oil and gas assets in 17 countries and was producing about 12 percent of India’s hydrocarbons output. In late 2014, the company was awarded exploration block 14TAR-R1 by the government of New Zealand.

Essar Oil is at the forefront of India’s efforts to develop unconventional natural gas reserves such as coal bed methane (CBM) and shale gas. The company possesses the country’s largest CBM acreage, which covers more than 2,700 square kilometres. At Essar Oil’s Raniganj CBM asset, the company has deployed a fleet of drilling rigs and four hydrofracturing units. In April 2015, the production of natural gas at the Raniganj asset surpassed 500,000 cubic metres (17.7 mcf) per day, placing Essar Oil in the position of the largest CBM producer in the country.

In March 2015, the Indian Oil Corporation opened the crude line from its Paradip refinery’s crude pump house to atmospheric and vacuum unit, marking the start of the refinery’s commissioning. The Paradip refinery will be India’s most modern, with a complexity index of 12.2, a capacity of 15 million tonnes per year and more than 20 processing units. The complex is designed to process high-sulphur crude oil and the cheaper heavy high-sulphur Maya, Ratawi and Kuwait Export Crude oils, the latter of which has a crude blend of around 27 degrees API.

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Cairn India started its polymer injection project at the Mangala field in its onshore Rajasthan block. Among the largest polymer flood enhanced oil recovery programmes in the world, the project is part of the company’s $2.4-billion development of the Mangala field, which produces 150,000 barrels of oil per day. Cairn India plans to drill 141 new wells: 117 injectors and 24 producers. The company used a chemical flooding process in the Bhagyam and Aishwariya fields, which are located near Mangala, in the second phase of the project.

The year in review

MAN OF THE YEAR

DHARMENDRA PRADHAN

An active member of the Bharatiya Janata Party, Dharmendra Pradhan was appointed India’s minister of state for petroleum and natural gas in May 2014. In his new role, Pradhan brought change to an oil and gas industry plagued by policy uncertainty and depleting production. Over the past year, Pradhan has overseen landmark reforms that have transformed India’s hydrocarbons industry, such as the increase of gas prices to $5.61 per million British thermal units and the deregulation of diesel in October 2014. Pradhan supports the Give it Up movement, which encourages people to donate their subsidy LPG cylinders in order to provide LPG to rural populations.

Indian Energy Year in Review 2015

Politics
- Official name: Republic of India
- Political system: Federal republic
- Head of state: President Pranab Mukherjee
- Head of government: Prime Minister Narendra Modi
- Capital city: New Delhi

Demographics
- Population: 1,236,344,631 (2014 estimate)
- Population growth rate: 1.25 percent (2014 estimate)
- Major languages: Hindi, English (subsidiary official language), Bengali, Telegu, Marathi, Tamil, Urdu, Gujarati, Malayalam, Kannada, Oriya, Punjabi, Assamese, Kashmiri, Sindhi, Sanskrit

Economy
- Currency: Rupee (Rs1:$0.0159)
- GDP: $2.05 trillion (2014)
- Labour force: 502 million (2014 estimate)
- Inflation rate: 8 percent (2014 estimate)
- Natural resources: Coal (fourth-largest reserves in the world), metals, minerals, rare earth elements, natural gas
- Main industries: Textiles, chemicals, food processing, steel, transport equipment, cement, mining, hydrocarbons, machinery, software
- Exports: $343 billion (2014 estimate)
- Imports: $508 billion (2014 estimate)
- Export destinations: UAE (12.0 percent), US (12.0 percent), Singapore (4.5 percent), China (4.4 percent), Hong Kong (4 percent) (2013)
- Import origins: China (11 percent), UAE (7.8 percent), Saudi Arabia (6.9 percent), Switzerland (6 percent), US (4.9 percent)

Geography
- Area: 3,287,263 square kilometres
- Coastline: 7,000 kilometres

Energy
- 2015 proven oil reserves: 5.7 billion barrels
- 2014 oil production: 895,000 barrels of oil per day
- 2015 proven gas reserves: 1.33 tcm (47 tcf)
- 2013/14 gas production: 3.54 bcm