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## SUMMARY

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- 96 Trillion Cubic Feet of estimated shale gas reserves.
  - 47 Trillion Cubic Feet of proven natural gas reserves.
  - 740 MMT of proven oil reserves.
  - Fourth largest consumer of crude oil and petroleum products in the world.
  - Second largest refiner in Asia.
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## REASONS TO INVEST

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- Growing economy and population growth are the main drivers for oil & gas demand, increasing every year.
- Import content in oil & gas sector is in the range of 15% for refinery to 70% for upstream.
- Government has approved natural gas pricing Formula. International prices for majority of petroleum products
- Surplus refining capacity and present refining capacity of about 4.3 million barrels per day.
- Gas Pipeline network of 15,000 kilometre exists and construction of another 15,000 Kilometre of gas pipeline network is in progress. Several industries are increasing consumption of natural gas in operations.
- Several domestic companies such as the Oil and Natural Gas Corporation, Reliance Industries Limited and Gujarat State Petroleum have found natural gas in deep waters.
- Several private companies have emerged as important players in the past decade. Cairn India, a subsidiary of British company Cairn Energy, produces more than 20% of India's crude oil production through its operation of major stakes in the Rajasthan and Gujarat regions and Krishna-Godavari basin.
- It is a transparent and level playing field for Indian private/foreign investors and national oil companies – both enjoy the same fiscal and contract terms.
- 61% of the prognosticated reserves of 28,000 MMT are yet to be harnessed.
- Supportive Government Regime – ease of doing business
- Proposed Uniform Licensing Policy - Rights to explore all type of hydrocarbons – conventional and non-conventional. Other fiscal incentives for ultra deepwater blocks.

## OIL AND GAS

- Prospectively - every fifth block is hydrocarbon discovery block under NELP where E&P inputs were provided for.
- Private companies such as Reliance Industries Limited and Essar Oil have become major refiners.
- Despite being a net importer of crude oil, India has become a net exporter of petroleum products by investing in refineries designed for export, particularly in Gujarat.
- RLNG regasification facility is likely increase to 32.5 MMTPA by 2017-18 from a current level of 22 MMTPA.
- Investment opportunities are in Upstream, gas pipeline, CGD network, LNG Terminal, Petrochemical and Refinery.

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## STATISTICS

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- The oil and gas industry ranks amongst India's six core industries.
- India was the fourth largest consumer of crude oil and petroleum products in the world in 2014, after the United States, China and Japan.
- Oil imports constitute about 78.6% of India's total domestic oil consumption in 2014-15.
- Oil and gas contributes about 35.5% to primary energy consumption.
- During 2014, natural gas constituted about 7.1% of the energy mix.
- India had 47 Trillion cubic feet of proven natural gas reserves at the beginning of 2014. Approximately 34% of total reserves are located onshore, while 66% are offshore.
- India has 215.066 MMTPA of refining capacity, making it the second largest refiner in Asia after China. Private joint venture companies own about 44% of total capacity.
- India increasingly relies on imported LNG; the country was the fourth-largest LNG importer in 2014 and accounted for 5.7% of global imports.

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## GROWTH DRIVERS

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- As part of International Energy Outlook 2013, EIA projects in India and China will account for about half of global energy demand growth through 2040, with India's energy demand growing at 3% per year.
- India held nearly 800 MMT of proven oil reserves at the beginning of 2014, mostly in the western part of the country.
- About 44% of reserves are onshore resources, while 56% are offshore. The country's natural gas pipeline network amounted to over 15,340 kms in 2013 and a proposed expansion of 30,000 kms is envisaged by 2018-19.

- Gas Initial is in place for CDM established at 10 TCF with the possibility of an upside.
- The government has decided to set up strategic storage of 5.03 MMT of crude oil at three locations – Visakhapatnam, Mangalore and Padur.
- The government unveiled plans to add another 91 Million barrels to its crude oil capacity to protect India from supply disruptions by 2017.
- India projects an increase of the country's refining capacity to 307.366 MMTPA by 2017 based on its current Five Year Plan (2012-17) to meet rising domestic demands and export markets.
- The government is in the process of determining the structure of petroleum contracts between the government and companies. The current system includes a production-sharing mechanism, allowing producers to recover exploration costs during production before sharing profits with the government.
- In recent years, major discoveries in the Barmer basin in Rajasthan and the offshore Krishna-Godavari basin by smaller companies such as the Gujarat State Petroleum Corporation and Andhra Pradesh Gas Infrastructure Corporation hold some potential to diversify the country's production.

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## **FDI POLICY**

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- Exploration activities of oil and natural gas fields, infrastructure related to marketing of petroleum products and natural gas, marketing of natural gas and petroleum products, petroleum products' pipelines, natural gas pipelines, LNG regasification infrastructure, market study, formulation and petroleum refining in private sector, subject to the existing sectoral policy and regulatory framework in the oil marketing sector and the policy of the government or private participation in exploration of oil and the discovered fields of natural oil companies - 100% FDI, automatic route.
- Petroleum refining by PSU, without disinvestment or dilution of domestic equity in existing PSUs - 49% automatic route.

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## **SECTOR POLICY**

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- The Integrated Energy Policy, 2006 outlines goals for dealing with challenges faced by India's energy sector.
- The Petroleum and Natural Gas Regulatory Board Act, 2006 regulates refining, processing, storage, transportation, distribution, marketing and the sale of petroleum, petroleum products and natural gas.
- The Auto Fuel Policy, 2003 provides a roadmap to comply with various vehicular emission norms and corresponding fuel quality upgrading requirements over a period of time.
- The National Biofuel Policy, 2009 promotes bio-fuel usage, the Government of India has provided a 12.36% concession on excise duty on bio-ethanol and exempted bio-diesel from excise duty.
- The National Exploration Licensing Policy, 1999 provides a contract framework for the exploration and

production of hydrocarbons. Licenses for exploration are awarded through a competitive bidding system – nine rounds of bidding were completed as of 2011.

- 52 Blocks proposed to be offered under N.E.L.P.X . The offer is de-risked to the extent of all necessary statutory clearances having been pre-obtained.
- The Coal Bed Methane Policy, 1997 encourages exploration and production of Coal Bed Methane as a new eco-friendly source of energy.
- The Petroleum Rules, 1976 contains provisions for regulations governing pollution, safety and other operating standards.
- The Policy on Shale Gas & Oil, 2013 allows companies to apply for shale gas and oil rights in their petroleum exploration licenses and petroleum mining leases.
- The Oilfields (Regulation and Development) Act, 1948 provides for regulation and development of hydrocarbon resources.
- Petroleum and Natural Gas Rules, 1959 governs the issuance of petroleum exploration licenses and lease and other details relating to exploration and production.

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## **FINANCIAL SUPPORT**

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### **FISCAL INCENTIVES:**

- All exploration and drilling costs are 100% tax-deductible. Such costs are aggregated until the year of commencement of commercial production.
- A special deduction is available for provisions made for site restoration expenses if the amount is deposited in a designated bank account. The deduction is the lower of the following amounts: the amount deposited in a separate bank account or site restoration account, or 20% of the profits of the business in the relevant financial year.

### **STATE INCENTIVES:**

- Apart from the above, each state in India offers additional incentives for industrial projects. Incentives are provided in areas such as subsidised land cost, the relaxation of stamp duty on sale/lease of land, power tariff incentives, concessional rates of interest on loans, investment subsidies and/or tax incentives, backward areas subsidies, special incentive packages for mega projects.

### **EXPORT INCENTIVES:**

- Under the Exports Promotion Capital Goods Scheme, the import of capital goods at a zero basic custom duty is allowed for export purposes. Capital goods for the pre/post production stage are also permitted. The exports are to be effected equivalent to six times the duty saved on capital goods. Exports are to be completed in six years.

### **FOCUS MARKET SCHEME:**

→ The basic objective is to offset high freight cost and other externalities to select international markets. A benefit of 3% transferable duty-free credit entitlement for specified countries has been envisaged; special focus markets get 4% benefits.

### **AREA-BASED INCENTIVES:**

→ Incentives for units in Special Economic Zones (SEZs) and National Investment and Manufacturing Zones (NIMZs) are specified in respective acts. Plans have been made for the setting up of projects in special areas such as the North-east, Jammu & Kashmir, Himachal Pradesh and Uttarakhand.

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## **INVESTMENT OPPORTUNITIES**

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### **OFFERING OF EXPLORATION BLOCKS**

→ 52 exploration blocks are likely to be offered. Rights to explore all type of hydrocarbons – conventional and non-conventional in these blocks being proposed.

### **SHALE:**

→ India has technically recoverable shale gas resources of nearly 96 Trillion cubic feet.

### **UNDERGROUND COAL GASIFICATION:**

→ Coal gasification has been identified as one of the end uses under the government's captive mining policy.

### **OPPORTUNITIES FOR E&P SERVICES AND EQUIPMENT COMPANIES:**

→ 48% of the country's sedimentary area is yet to be explored. Government has taken an ambitious appraisal programme for acquisition of 48,243 km of 2D seismic covering an area of 9.09 lakh sq. km in all Indian sedimentary basins.

### **OPPORTUNITIES FOR PIPELINE TRANSPORTATIONS:**

→ Compared to advanced economies like the US, where more than 60% of petroleum product movement happens by pipeline, in India, currently, only 35% of product movement happens over pipelines. The city gas and distribution sector offers opportunities for both incumbents and new companies. The Petroleum and Natural Gas Regulatory Board allows the following incentives to authorised entities: the infrastructure exclusivity is available to the authorised entity for a period of 25 years. Exclusivity for the activity of marketing of natural gas is allowed to the authorised entity for a period of five years. For incumbents, the marketing exclusivity extends to a period of three years.

### **THE REFINING SECTOR:**

→ India is already a refining hub with 22 refineries and expansions planned for tapping foreign investment in export-oriented infrastructure, including product pipelines and export terminals.

### **OPPORTUNITIES FOR FOREIGN INVESTMENTS AND TECHNOLOGY PARTNERSHIPS IN THE UPSTREAM SECTOR:**

→ Securing supplies is expected to remain on top of India's energy agenda for the foreseeable future. While exploration activity has taken place onland and in shallow basins across the country, it is believed by many that deep water and ultra-deep water oil and gas resources hold the key to substantially increasing domestic production. This creates a plethora of opportunities for strategic investors having relevant technical expertise and financial muscle.

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## FOREIGN INVESTORS

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- British Petroleum (UK)
- Cairn Energy (India)
- Shell (UK)
- BG Group (Scotland)
- Niko Resources (Canada)

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## AGENCIES

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- Ministry of Petroleum & Natural Gas
  - Oil Industry Development Board
  - Petroleum Conservation Research Association
  - Directorate General of Hydrocarbons
  - Petroleum Planning & Analysis Cell
  - Petroleum & Natural Gas Regulatory Board
  - Centre For High Technology
  - Oil Industry Safety Directorate
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