

### Black-gold coast

We recently published our new research product, *Inside India*, which comprises a series of maps exploring a variety of the country's aspects. Today, we showcase a map of the country's oil resources.

India is heavily dependent on oil imports, which constitute around 30% of its import bill. This proportion is set to decline in the years ahead, on account of a change in the energy mix and an expected 25% increase in oil production from new fields.



India consumes about 120m tonnes of refined oil products annually, compared with China's 350m tonnes. Although both India and China are net importers of oil, India's crude oil production, at 37m tonnes annually, is substantially lower than that of China (180m tonnes) even in relative terms. Thus, India imports about 70% of the oil it consumes; oil remains the single-largest line of imports, constituting 30% of total imports. Oil currently constitutes roughly 28% of the country's energy basket, but this proportion is likely to fall to 18-20% by FY11-12 on account of a step jump in domestic gas production. Net oil imports as a proportion of GDP are also expected to fall significantly due to the change in energy mix and an expected 25% jump in crude oil production from new oil fields, especially that of Cairn Energy.

#### New Exploration Licensing Policy (NELP)

The two state-owned companies, Oil & Natural Gas Corporation (ONGC) and Oil India Ltd (OIL), together account for 84% of the country's oil production. They have had limited exploration success in the recent past. The government kicked off a New Exploration Licensing Policy (NELP) more than a decade back, to attract private sector investments in the sector. In the past six rounds of NELP awards, more than 950sq km of acreages, both on-shore and off-shore, have been awarded. The big oil & gas finds that some of these private sector participants have had, proves that NELP has

been efficacious. ONGC also ventured outside India to acquire assets abroad and that strategy has also worked. Its 100% subsidiary now has effective ownership of 260 MTOE spread across Russia, North Africa and Vietnam.

#### Large net exporter of refined products

India will remain a large net exporter of refined products, given the excess capacity relative to demand. At an expected gross refining margin (GRM) of US\$6-8/bbl, the net value addition on the excess capacity would work out to US\$3.5-4.5bn by FY10, about 5-7% of the net oil import bill (at current prices) in FY10. Over the past 10 years, India's oil demand grew at 3.5% CAGR vs. GDP growth CAGR of 6.5%. This trend is unlikely to change in the near-term, as gas will form an increasing part of the country's energy basket.

India currently has 19 refineries, with a total refining capacity of 47mtpa, of which 70% is in the public sector. The commissioning of large new capacities in the next two years will take the country's refining capacity to ~200mtpa, assuming seamless execution.

India has a total oil pipeline length of 9,300km, of which 4,000km is for crude oil and the rest for refined products. IOC (Indian Oil Company) owns almost 100% of the oil pipeline infrastructure. Almost all the key consumption centres are linked through pipelines from the most contiguous refinery, although railways too play a major role in oil transportation.

Refined products are principally marketed by state-owned oil companies (Indian Oil Corporation, Bharat Petroleum Corporation, Hindustan Petroleum Corporation), though Reliance has a limited number of outlets to sell retail fuels. Prices of gasoline, gas-oil, LPG and kerosene are still fixed by the government. These controlled products together constitute 70% of total oil consumption. The net-of-tax selling prices of these controlled products are 10-40% below their landed cost of imports; thus, these products are heavily subsidised. The estimated subsidy bill in FY08 is US\$17bn. Typically, the government absorbs one-third of the subsidy and the balance is absorbed by the oil companies. The downstream oil companies—IOC, BPCL and HPCL—have seen a sharp erosion in profitability in recent years, as their share of subsidy has been quite high relative to their profits.





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**SELL:** Absolute return of  $< -10\%$

**Market Performer:** Absolute return of  $-10\%$  to  $+10\%$

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