

## **ENERGY SCENARIO**

US government's Energy Information Agency (EIA) reported in early September that production had fallen further and faster than predicted earlier. The EIA also projected US production of 8.8 mbd for 2016, about 800,000 b/d less than earlier peak production. Long term investments in unconventional oil exploration have also been curtailed, since these are not viable unless prices are over \$60/b. According to reports, oil majors have postponed investments of about \$200 billion in 46 projects, denying considerable new supplies to the market. For instance, the development of Mexico's reserves of about 20 billion barrels has been indefinitely postponed.

Iran has reserves of about 158 billion barrels of oil, about 10% of world reserves (as also 34 trillion cubic metres of gas, nearly 20% of world reserves). Its production in 2011, before sanctions targeted its oil industry, was 3.6 mbd; this fell to about 2.8 mbd today, of which 1.1-1.2 mbd is exported. When sanctions are lifted Iran would add to the supply of crude oil. Other countries that could increase world supply if their security situation stabilizes are Iraq and Libya. Meanwhile Saudi Arabia, OPEC producers and Russia are not reducing output. In fact Russia's Rosneft has signed agreements with India's ONGC and ESSAR which will increase supply of Russian crude in years to come.

Another aspect adding uncertainty to the market is the global slowdown especially in China and Europe. Finally there is the irreversible campaign to search and find alternative and

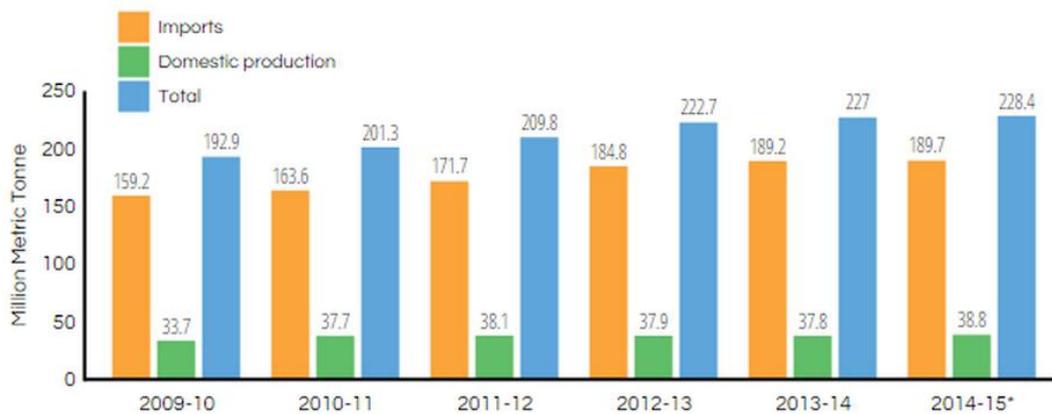
renewable sources of energy that are taking the world away from fossil fuels like crude oil and coal.

Latin American crude is increasingly exported to Asian markets, with 10% of China's total crude imports coming from Latin America in 2013. Venezuela, Colombia and Brazil – China's top three Latin American suppliers – contributed almost 350,000 barrels per day of Chinese crude imports in 2014. China's persistent interest in developing trans-regional infrastructure could eventually carry more energy resources to Pacific ports.

In 2011, India's proven balance of recoverable oil reserves was reported at 9.04 billion barrels, ranking it nineteenth worldwide. Inadequate quantities of reserves, when compared with other major consumers, have been compounded by a slow rate of exploitation and recovery. By 2011, 12 per cent of India's sedimentary basins remained unexplored, while a further 22 per cent were classified as 'poorly explored' (DGH 2012)

PM Modi had in 2014 set a target of cutting India's oil import dependence by 10 per cent to 67 per cent by 2022. The target was set keeping in mind the 77 per cent import reliance in 2013-14. Import dependence has since risen to 80 per cent and is expected to touch 90 per cent in next two decades and the country needs to diversify its energy basket through use of alternative fuels, an India Tech-PwC report has said. India spent \$138.3 billion on the same in fiscal year 2014-15.

India's Oil Imports & Domestic Production, FY 2010 - FY 2015



Source: Ministry of Petroleum and Natural Gas; Figures in Million Metric Tonne; Note: \*Estimated

Two objectives are clear for India: reduction of dependence on fossil fuels, through renewable energy; and increase of oil equity holdings abroad, to bring down outflows on account of oil import. Both objectives are being addressed in collaboration with Latin America. Indian companies are present in the renewable sector: Suzlon in wind energy; Praj in ethanol and several others who are working on solar and other forms of renewable energy.

India has adopted aggressive targets for renewable energy generation: for solar 100,000 MW (2022); wind 60,000 MW (2022) and nuclear energy 20,000 MW (2020). Its target is to generate 175 Gigawatts of renewable energy by 2022. As per 'carbon Budget' estimates, if the world is to achieve the target of only 2\* C rise in temperatures, the total carbon emission by 2100 should be below 270 gigawatt tons. Going by current commitments, the developed world will exceed its per capita share before 2020!

Indian investments in the hydrocarbons sector in Latin America have grown in Venezuela, Brazil and Colombia. Mexico is the next frontier

Latin America has for some decades been a net exporter of fossil fuels, particularly crude oil, but also coal. Crude oil plays a major role in exports of Venezuela and Ecuador. Recent discoveries of huge reserves in Brazil, changes of policy in Mexico, and incentivized investment in Colombia, not to mention the possibilities in the Cuban offshore, present a scenario of expectation that may well affect the economic trajectory of some Latin American countries.

This scenario could also complicate the economic and commercial relationship between India and that region. We already see signs of this in the trade figures.

Crude oil accounts for over 30 percent of trade between India and Latin America, and the bulk of trade with Brazil, Mexico, Colombia, Ecuador and Venezuela. Imports from Venezuela fell from almost \$14 billion in 2013-14 to \$11.6 billion in 2014-15, and further to \$2.36 billion in April-July 2015. Imports from Colombia in 2014-15 fell to \$2,135 million from \$4,970 million in 2013-14. In the case of Mexico, imports were \$3,393 million in 2014-15 versus \$3672.5 million in 2013-14. In the first four months of this financial year – April-July 2015, India imported \$27.74 billion worth of crude oil worldwide. Imports from Latin America amounted to \$3.8 billion or less than 14 percent.

## **SUZLON IN LATIN AMERICA 2015**

14 gw GLOBAL CAPACITY

9GW INDIA

869 MW LAC

Provides ontegrated wind services which include: wind siting; survey; EPC; operation and maintenance.

Establishing 400MW manufacturing facility in Brazil.

Mexico market is being explored for another possible manufacturing site.