

## Directors' review (refineries)



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Director (Refineries)

During a period when crude oil prices reached a peak on the back of sustained volatility, IndianOil Refineries adopted several innovative strategies and technologies aimed at improving refinery margins and profitability. Practices like stream sharing and processing cheaper crudes were undertaken with the help of new operational strategies. As the nation's flagship energy company, IndianOil is committed to providing the vital energy needed for economic development and thereby fuelling the dreams and aspirations of the people of India. According to International Energy Agency (IEA) projections, the world could potentially consume around 40% more energy in 2030 compared to the present level, and

much of this demand will come from emerging economies like China and India.

To meet future needs, IndianOil is building adequate refining capacity through capacity expansions of existing refineries and setting-up a grassroots refinery at Paradip. We are also implementing technologies to meet the demand for middle distillates and improve the quality of India's petroleum products. We have achieved overall capacity utilisation of 102% during 2009-10, against the average global refinery capacity utilisation of 82%. This is the third consecutive year in which we have crossed the 100% capacity utilisation mark despite the planned revamps / M&I shutdowns for implementation of various projects, including those for quality upgradation of products. In 2009-10, IndianOil Refineries also achieved the highest combined distillate yield of 75.3 wt% while registering a crude throughput of 50.7 million metric tonnes.

With the continued commitment in energy efficiency management, our refineries achieved the lowest ever overall specific energy consumption of 62 MBN<sup>1</sup> during 2009-10 against the earlier best of 64 MBN in 2008-09. This splendid performance of our refineries is far superior to the industry average of 68 MBN (provisional) during 2009-10. This significant reduction in specific energy consumption could be achieved due to a savings of about 82,000 SRFT (Standard Refinery Fuel Tonnes) through the implementation of various energy conservation schemes. The reduction is equivalent to monetary savings of Rs. 180 crore and a CO<sub>2</sub> reduction of 0.005 MT per MT of crude processed.

The MS / HSD quality improvement projects at Panipat, Mathura and Haldia Refineries have been completed for the production and supply of Bharat Stage-IV grade Motor Spirit and High Speed Diesel, and projects at other Refineries are progressing towards completion. Under the Clean Development Mechanism (CDM) initiative, projects at Digboi, Haldia, Barauni and Gujarat Refineries have been

registered with UNFCCC<sup>2</sup> with potential CER<sup>3</sup> (Certified Emission Reduction) of 56,374.

IndianOil has commissioned India's largest Naphtha Cracker Complex at Panipat, built at a cost of Rs.14,439 crore in 46 months, a timeline which compares favourably with the global standard for the execution of similar capacity plants. The Naphtha Cracker is designed to produce 8,57,000 tonnes per annum of ethylene, utilising the surplus Naphtha which was earlier being exported. The Naphtha Cracker Complex along with the PX-PTA units will have a synergistic impact in the growth of downstream industries for the production of Polyester Staple Fibre (PSF), Polyester Filament Yarn (PFY), Textiles and Polymers. The main products from Naphtha Cracker plant are LLDPE, HDPE, PP and MEG, which find an extensive application in the manufacture of heavy duty and general purpose films, packaging films and several end use products.

In a historic milestone, IndianOil also commissioned the prestigious Once Through Hydrocracker Unit at Haldia (OHCU) during the year setting a new benchmark in project execution. The time span of 57 days from its mechanical completion to actual commissioning is the shortest time and among the best achieved by any refinery globally. The crude processing capacity of the Haldia Refinery was also enhanced from 6 MMTPA to 7.5 MMTPA. With the capacity expansion at Panipat Refinery to 15 MMTPA heading towards a successful completion by October 2010, the total refining capacity of IndianOil will go up to 54.2 MMTPA while the group refining capacity will touch 65.7 MMTPA. IndianOil is further augmenting its refining capacity by setting up a 15 MMTPA refinery at Paradip at a cost of Rs. 29,777 crore. The unit will be highly complex and configured to process 100% heavy, high-sulphur cheaper crudes for better profitability. The refinery is scheduled for commissioning by mid 2012. With the energy needs of the nation growing in the future, IndianOil will continue to invest in refining assets to meet future demand.

<sup>1</sup> MBTU/Bbl/NRGF or Thousand British Thermal Units/ Barrel/Energy Factor

<sup>2</sup> United Nations framework convention on climate change

<sup>3</sup> One CER equals 1 tonne of CO<sub>2</sub>



Enhancing refining capacity for future needs