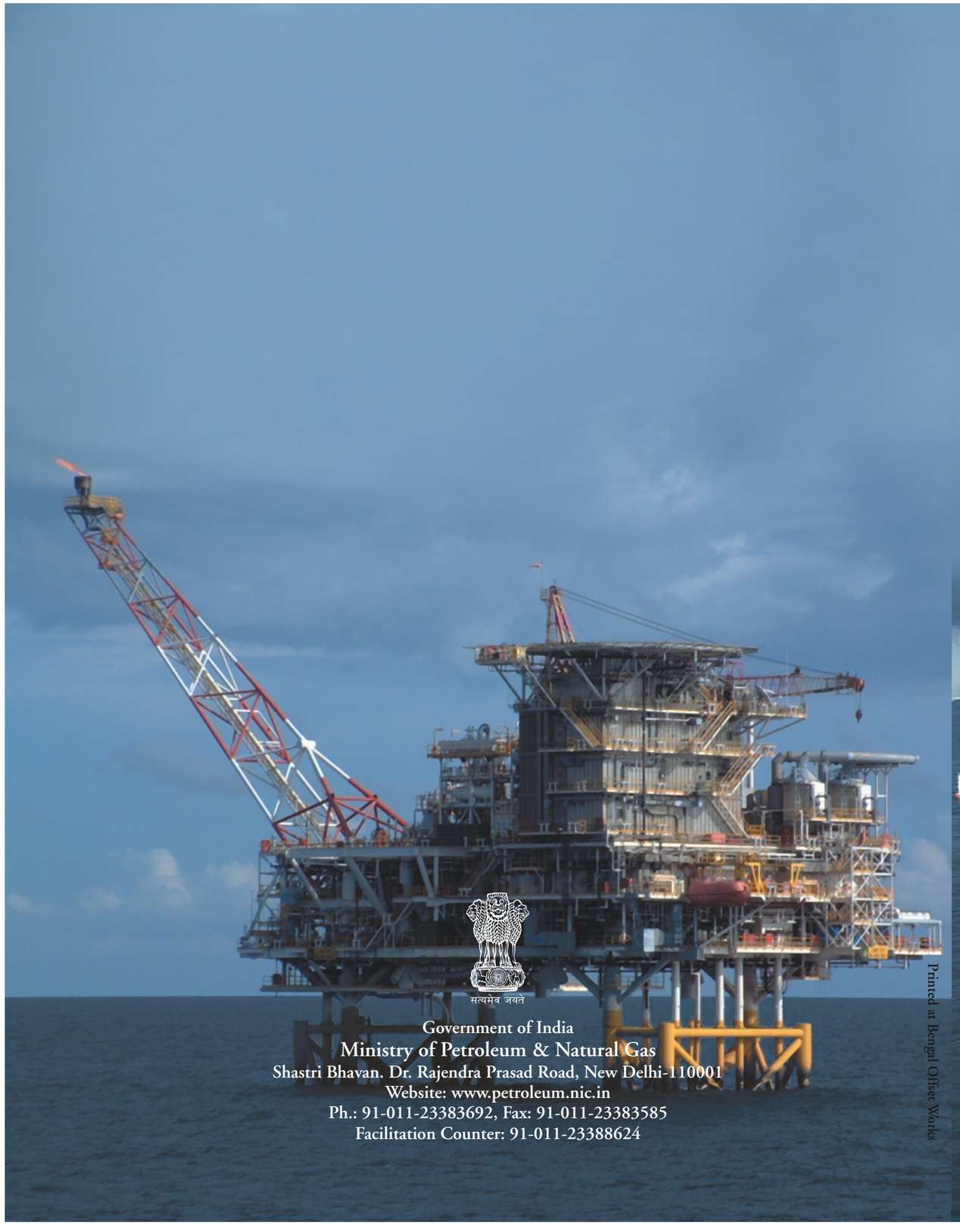


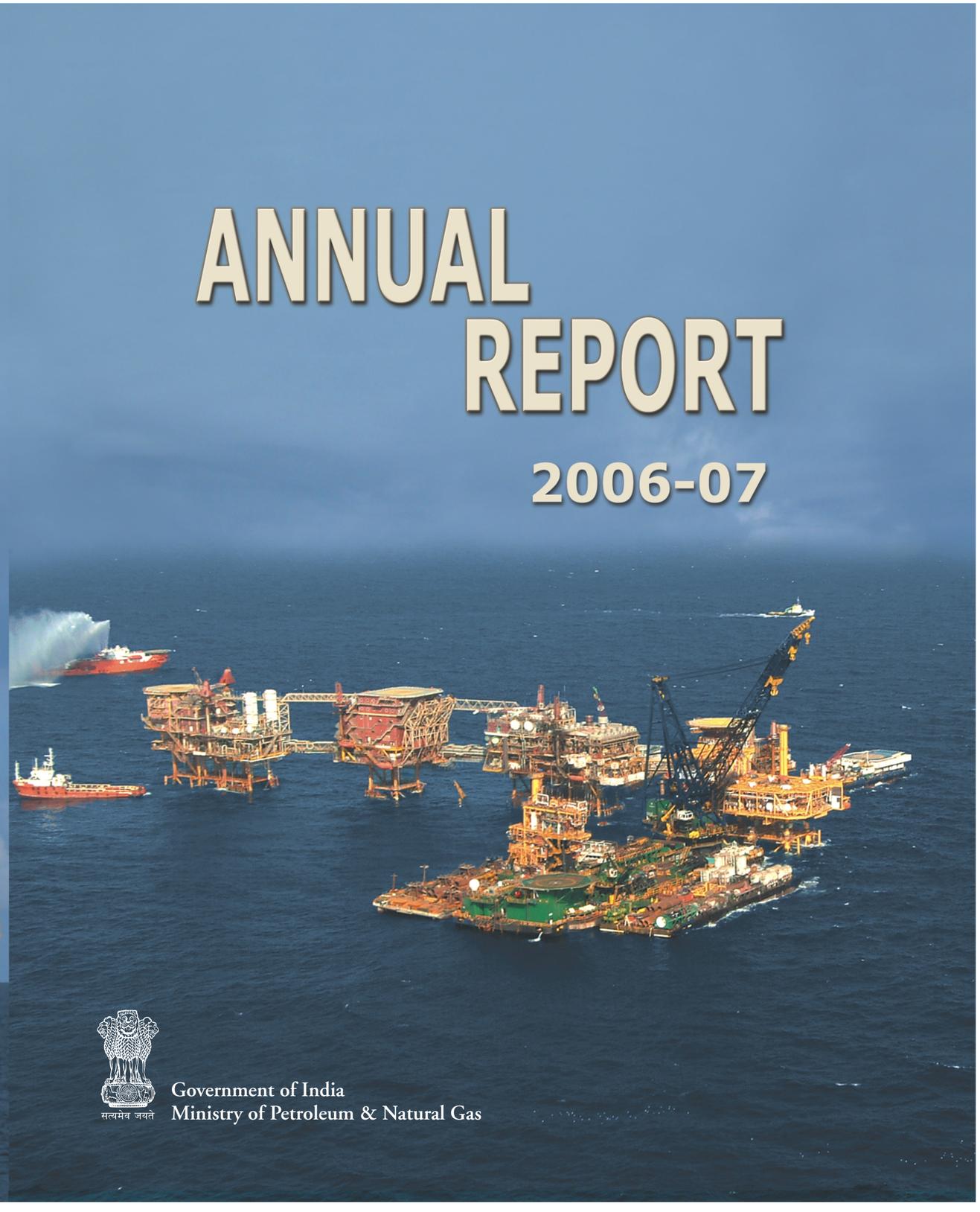
सत्यमेव जयते

Government of India
Ministry of Petroleum & Natural Gas
Shastri Bhavan. Dr. Rajendra Prasad Road, New Delhi-110001
Website: www.petroleum.nic.in
Ph.: 91-011-23383692, Fax: 91-011-23383585
Facilitation Counter: 91-011-23388624

Printed at Bengal Offset Works

ANNUAL REPORT

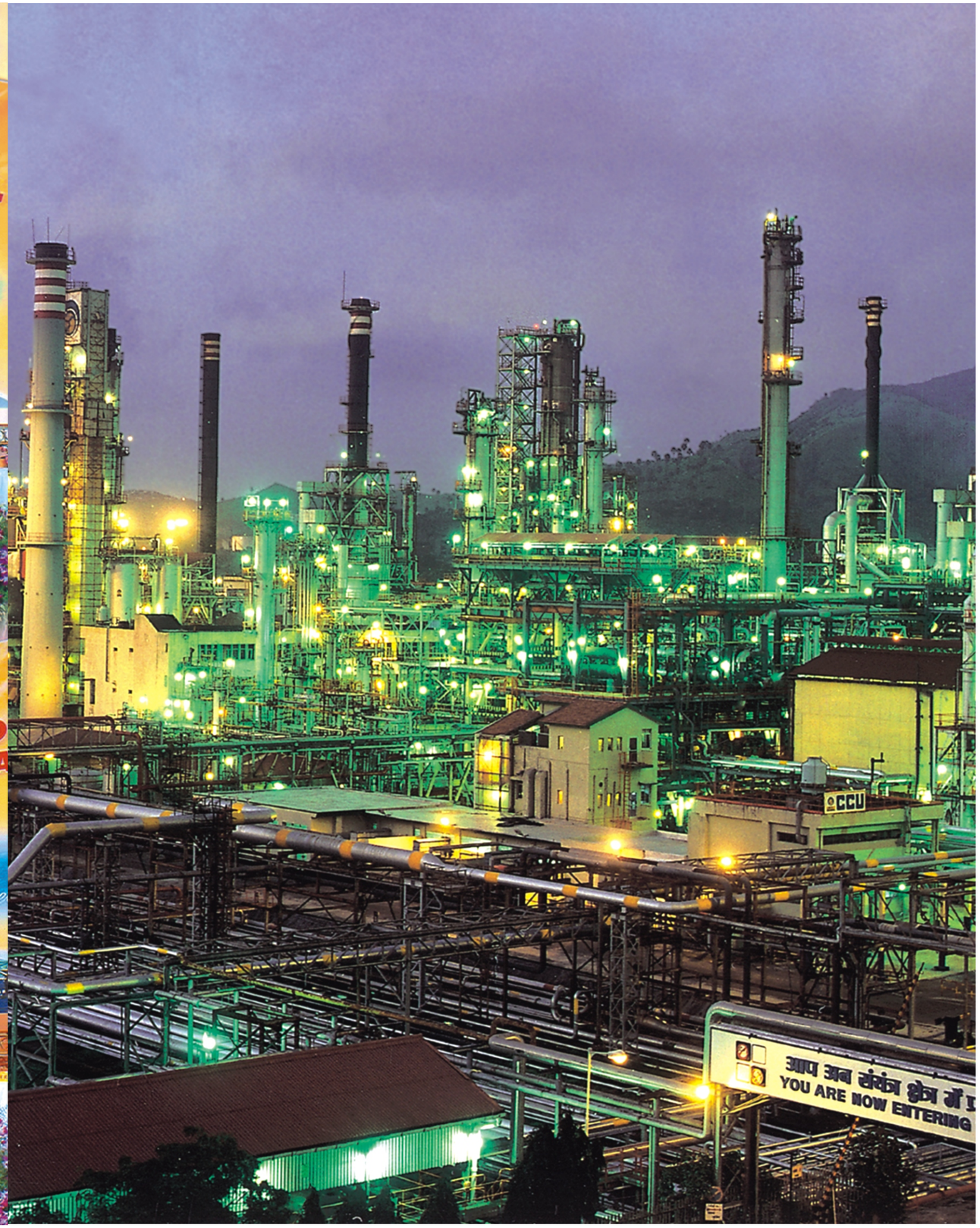
2006-07



सत्यमेव जयते

Government of India
Ministry of Petroleum & Natural Gas

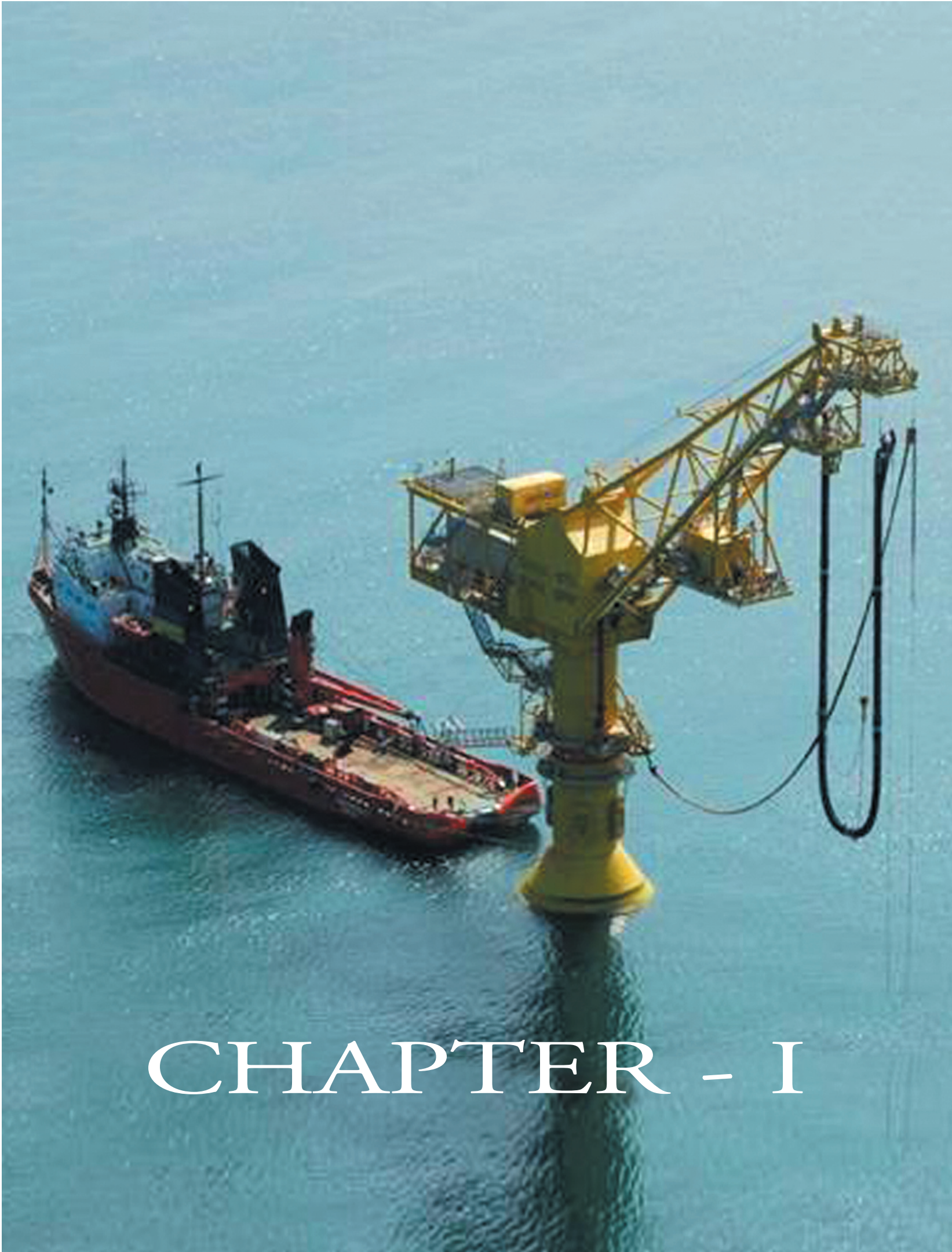

1ST SHIPMENT OF INDIA'S EQUITY OIL FROM SAKHALIN-1,
CELEBRATION OF THE ARRIVAL OF THE
2nd December 2006, Mangalore
ONGC group - strengthening India's energy security
1ST SHIPMENT OF INDIA'S EQUITY OIL FROM SA
CELEBRATION OF THE ARRIVAL O
2nd December 2006, Mangalore


CCU
आप अब संकंट क्षेत्र में
YOU ARE NOW ENTERING



CONTENTS

1	Chapter I	Introduction	3
2.	Chapter II	Exploration and Production	22
3.	Chapter III	Refining	42
4.	Chapter IV	Marketing and Distribution	50
5.	Chapter V	Other Undertakings/Organisations	82
6.	Chapter VI	Conservation of Petroleum Products	108
7.	Chapter VII	International Co-operation	118
8.	Chapter VIII	Welfare of Scheduled Castes/Scheduled Tribes, Other Backward Classes and Physically Handicapped	126
9.	Chapter IX	Welfare, Development and Empowerment of Women	132
10.	Chapter X	Development of North-Eastern Region	136
11.	Chapter XI	General	146
12.	Appendices		154



CHAPTER - I



INTRODUCTION

1.1 The Ministry of Petroleum & Natural Gas is concerned with exploration and production of oil and natural gas (including import of Liquefied Natural Gas), refining, distribution & marketing, import, export and conservation of petroleum products. The work allocated to the Ministry is given in Appendix - I. The names of the Public Sector Oil Undertakings and other organisations under the Ministry are listed in Appendix- II.

1.2 Shri Murli Deora and Shri Dinsha J. Patel continue to hold the charge as Minister of Petroleum & Natural Gas and Minister of State for Petroleum & Natural Gas, respectively.

1.3 Shri M.S. Srinivasan continues to hold the charge of Secretary in the Ministry of Petroleum & Natural Gas.

1.4 Shri Anil Razdan, Special Secretary in the Ministry of Petroleum & Natural Gas, relinquished the charge of the post with effect from the forenoon of 01.02.2007, consequent on his appointment as Secretary, Ministry of Power.

1.5 PRINCIPAL ACHIEVEMENTS

The important statistical data relating to the physical performance of the oil and gas sector is given in Appendices – III to VII.

1.6 INDIA HYDROCARBON VISION – 2025

The India Hydrocarbon Vision – 2025 Report, which encapsulates Government's long-term policy for this sector, was developed by a Group of Ministers constituted for this purpose, which included Ministers of Petroleum, Finance and External Affairs and Deputy Chairman, Planning Commission. The Report was presented to the Prime Minister in March, 2000 and also placed on the Table of both Houses of the Parliament. The long-term policy enunciated therein covers exploration, refining, marketing infrastructure, gas and all other related matters in the hydrocarbon sector.

1.7 CRUDE OIL & NATURAL GAS PRODUCTION

During 2006-07, crude oil and natural gas production in the country is expected to be about 34.83 million metric tonnes (MMT) and 33.27 billion cubic metres (BCM) respectively as against the production of 32.19 MMT of crude oil and 32.20 BCM of natural gas in 2005-06.

1.8 During X plan period, Government has undertaken concerted efforts for enhancing energy security. Appraisal of 35% of the total sedimentary basins is expected to be achieved together with acquisition of oil and



gas acreages abroad and induction of advanced technology.

1.9 In order to enhance energy security of the country, Government is encouraging Oil PSUs to aggressively pursue equity oil and gas opportunities overseas. OVL has so far made an investment commitment of over US$ 5 Billion and has an oil and gas production of 6.6 MMT (oil and oil equivalent gas) from properties abroad during 2005-06. Oil PSUs now have a presence in 18 countries - Russia, Sudan, Vietnam, Iran, Libya, Syria, Myanmar, Iraq, Egypt, Qatar, Cuba, Nigeria, Nigeria - São Tomé – Principe Joint Development Zone, Colombia, Australia, Timor, Gabon and Brazil. OVL and OIL-IOC consortium have special dispensation to invest upto Rs. 300 crore without, and more than Rs. 300 crore with, the approval of the Empowered Committee of Secretaries (ECS). During XI Five year plan period, crude oil and natural gas production is likely to be at an average of about 7 MMT per annum and 2 BCM per annum respectively.

1.10 In a significant development this year, ONGC brought home the first consignment of crude oil from Sakhalin-1 oil field in Russia, which not only marked the arrival of crude oil from the major equity oil investment in Russia but also opened up a new source/route for crude oil. The shipment of about 90,000 tonnes was ceremonially received by the Petroleum Minister Shri Murli Deora on 2nd December, 2006 at Mangalore. OVL has a 20% stake in the Sakhalin-I oil field.



Hon'ble Minister of P&NG Shri Murli Deora receives the 1st shipment of India's Equity Oil from Sakhalin-1, Russia.



1.11 New Exploration Licensing Policy (NELP) provides an international class fiscal and contract framework for Exploration and Production of Hydrocarbons. In the first six rounds of NELP spanning 2000-2006, 162 exploration blocks have been awarded. The exploration investment in the three phases for 162 blocks is estimated at about Rs. 45,000 crore, which is expected to substantially increase with discoveries of hydrocarbons. What is more important is that 37 oil & gas discoveries have been made, out of which gas discoveries in Krishna Godavari (KG) basin are the most significant, wherefrom natural gas production of about 40 Million Standard Cubic Metre per Day (MMSCMD) is likely to start by 2008-09, which will further increase to 80 MMSCMD by 2011-12.

1.12 COAL BED METHANE (CBM)

Coal Bed Methane is an environment friendly clean fuel similar to Natural Gas. To give impetus to its exploration & production, Government has formulated a CBM policy. Contracts with PSUs/Private Companies for 23 blocks under the three rounds of CBM policy and for 3 blocks on nomination basis have been signed for exploration & production of CBM. In 4 Blocks, 6 TCF CBM gas reserves have been established. Commercial production of CBM from these blocks is expected to commence in 2007-08.

1.13 IMPORTS AND EXPORTS

The quantity of crude oil & petroleum products imported during 2005-06 was 99.409 MMT and 11.677 MMT and was valued at Rs. 1, 71,702 crore and Rs. 25,575 crore respectively. In the same period, 21.505 MMT of petroleum products valued at Rs 46,785 crore were exported.

During April-November, 2006, 72.843 MMT of crude oil valued at Rs. 1,50,121 crore and 9.901 MMT of petroleum products valued at Rs 26,265 crore have been imported. During the same period 20.790 MMT of petroleum products valued at Rs. 53,451 crore have been exported. There was an increase of 14.9% in quantity and steep rise of 40.7% in value of import of crude oil during April - November, 2006 over same period of the previous year. Crude oil import during April-November, 2005 was to the tune of 63.393 MMT valued at Rs. 1,06,705 crore.

The import of petroleum products during April - November, 2006 was to the tune of 9.901 MMT valued at Rs. 26,265 crore as against 7.321 MMT valued at Rs. 15,886 crore during the corresponding period of the previous year. The imports of products during April - November, 2006 compared to the import during the corresponding period of the previous year was 35.2% higher in terms of quantity and 65.3% higher in terms of value. Export of petroleum products was higher by 64% in terms of quantity and 96.5% in terms of value during April - November, 2006 in comparison to the corresponding period of the previous year. The export of petroleum products went up to 20.790 MMT valued at Rs. 53,451 crore during April - November, 2006 as compared to 12.679 MMT, valued at Rs. 27,206 crore during the same period of the previous year.

1.14 STRATEGIC STORAGE

In order to enhance the energy security of the country and to safeguard against short term supply disruptions, Government have approved setting up of 5 Million Metric Tonnes (MMT) strategic storage at three locations, viz. Vizag (1.0 MMT), Mangalore



(1.5 MMT) and Padur (2.5 MMT). The release of crude oil will be in the event of any natural calamity or disruption in supplies or any unforeseen global event leading to scarcity of supplies/abnormal increase in prices.

The proposal involves a capital cost of approximately Rs. 2,400 crore and crude oil cost of Rs. 8,870 crore (at an average crude oil cost of $55/bbl and exchange rate of 1US $ = Rs. 44) besides operation and maintenance cost of Rs. 90 crore per annum. The capital cost which will be required during the first 5 years would be met from the existing funds available with Oil Industries Development Board (OIDB). Thereafter, in case funds are not available from the existing OIDB cess collection for the filling of the crude oil, an incremental cess of Rs. 1,000 per metric tonne would be adequate to generate about Rs. 3,000 crore per annum based on current volumes of domestic crude oil. Alternatively, based on the crude cost at $55/bbl, 2% increase in customs duty would generate about Rs. 3,000 crore per annum. A combination of both these options could also be used to generate the required quantum of funds for crude oil filling.

The Special Purpose Vehicle, namely Strategic Petroleum Reserve Limited (ISPRL), a subsidiary of OIDB has been created for implementation and management of Strategic Storage of crude oil. The construction of strategic crude oil storage is expected to commence in July, 2007 and filling of crude oil is expected to start four years later. The Status Report on implementation of the Project by ISPRL is as under:

A. Land Acquisition:

(i) The strategic storage at Vizag would be built over an area of 27 hectares. Visakhapatnam Port Trust has cleared lease of 15 hectares of land for 99 years and forwarded the proposal to Ministry of Shipping on 03.07.2006 for final approval. Eastern Naval Command (ENC) in July 2006 has sent final draft MOU for using their 12 hectares of land for a period of 99 years. Comments on the draft have been communicated to ENC, which in turn has sent the proposal to Naval Head Quarters Delhi for further clearance.



HPCL's Strategic storage of LPG in a Cavern under construction at Vishakapatnam



(ii) A part of the strategic storage would be built at Mangalore over an area of 37 hectares. The Government of Karnataka has given "in principle" clearance for land acquisition process. Identified area overlapped with that of MRPL expansion. Government of Karnataka requires consent of MRPL. EIL has sent a proposal to MRPL, with the request to issue 'No Objection' letter so that land acquisition process can be taken up by ISPRL.

(iii) The third identified location for the strategic storage is Padur in Karnataka. The land requirement for Padur site would be 77 hectares. The Geological Survey of India has furnished their vetting report on the Detailed Feasibility Report (DFR). The land acquisition process is underway.

B. Environmental clearance from Ministry of Environment & Forests (MoE&F)

Application for MoE&F's clearance has been submitted on 29.12.2005 for Visakhapatnam & Mangalore locations. Reply to the queries of MoE&F has been sent. In respect of Visakhapatnam site the consent letter of Andhra Pradesh (AP) Pollution Control Board has been sent to MoE&F for granting environmental clearance. In the DFR for Padur site the views of Pollution Control Board and MoE&F have been taken on board.

C. Pipeline route survey:

Pipeline Route Survey work at Visakhapatnam has been completed on 10th May 2006. For the other sites it is under process.

D. International co-operation:

MOUs have been signed with China, Japan and Korea for sharing their experiences in the construction of Strategic Storage of Crude Oil by exchanging information, technologies and knowledge.

1.15 INTERNATIONAL ENERGY FORUM SECRETARIAT (IEFS)

The International Energy Forum has 62 member countries. It has an Executive Board comprising of representatives of 13 countries and two organizations: IEA and OPEC. India is a member of the Executive Board of IEF. The annual contribution to the budget of IEFS is on calendar year basis and is voluntary. The total IEFS budget is apportioned amongst 62 countries based on the total trade ratio (import plus export) of crude oil and petroleum products. The Ministry has contributed US $ 62,000 to the IEF for the year 2004-05, US $ 63,000 for the year 2005-06 and US $ 72,000 for the year 2006-07.

The 10th International Energy Ministerial meeting was held in Doha, Qatar during 22-24th April 2006 and was attended by a delegation lead by Minister (P&NG). A number of bilateral meetings with other countries were held by the Minister (P&NG) on the sidelines of the Ministerial meeting.

1.16 REFINING CAPACITY

The domestic refining capacity as on 1.4.2006 was 132.47 Million Metric Tonnes Per Annum (MMTPA). The present refining capacity is



148.97 MMTPA comprising of 105.47 MMTPA by the PSUs and 43.50 MMTPA by the private sector. Availability of petroleum products during 2005-06 from domestic refineries and non-refineries was more than the domestic demand except for Liquefied Petroleum Gas (LPG). In fact, the country is net exporter of petroleum products and products like Naphtha, Petrol, Diesel and Aviation Turbine Fuel (ATF), etc. were also exported during the year. However, MS/HSD of Euro-III grade had to be imported during the year in view of implementation of Auto Fuel Policy for upgraded fuels.

1.17 NATIONAL AUTO FUEL POLICY

In line with the road map laid in the Auto Fuel Policy approved by the Government in October 2003, the following quality of fuel has been introduced all over the country:-

Fuel quality	States/cities	Date of introduction
Euro-III Petrol and Diesel	13 cities (Delhi/National Capital Region, Mumbai, Kolkata, Chennai, Bangalore, Hyderabad, Ahmedabad, Pune, Surat, Kanpur, Agra, Solapur and Lucknow)	01.04.2005
Bharat Stage-II Petrol	All over country	01.04.2005
Bharat Stage-II Diesel	All States except Rajasthan, West U.P, Uttranchal, M.P., Punjab, H.P and Jammu & Kashmir	01.04.2005
	Rajasthan	01.06.2005
	West U.P & Uttranchal	01.07.2005
	Madhya Pradesh, Himachal Pradesh & Chandigarh	01.09.2005
	Punjab and Jammu & Kashmir	01.10.2005

As per the road map provided in the Auto Fuel Policy, introduction of Euro IV equivalent norms in identified cities and Euro-III equivalent norms in the entire country is planned with effect from 01.04.2010. It is subject to review based on the assessment of the impact of Bharat Stage-II norms in the entire country and Euro-III equivalent norms in identified cities. Ministry of Environment & Forests have initiated these studies in coordination with Central Pollution Control Board. It is expected that the final report based on data for three seasons would be compiled by October 2007. The oil industry is planning for introduction of Euro-IV norms in the year 2010 in line with the Auto Fuel Policy.

1.18 CONSERVATION OF PETROLEUM PRODUCTS

India is at present one of the least energy efficient countries in the world with identified scope of reducing energy consumption by 20% to 25% in all major sectors through conservation measures. As there are millions of consumers in the country, any savings achieved by individual consumers will cumulatively amount to large quantities and obviate the need to produce or import



equivalent amount of new energy on a recurring basis. Energy conservation and energy efficiency would encompass all measures that would bring about efficient use of energy sources in all areas including production, conversion, transmission/transportation, consumption as well as measures of optimizing the demand itself.

Petroleum consumption is increasing year after year primarily in the transport sector. Increasing use of petroleum products is also responsible for environmental pollution. Deteriorating ambient air quality in the urban areas due to polluting emissions from transport vehicles has been a matter of great concern in the recent years. Apart from better quality fuels and using non-conventional energy sources through R&D initiatives and bio-fuels, improved combustion efficiency through effective conservation techniques would minimize this hazard and protect the environment.

Petroleum Conservation Research Association (PCRA) has been active in energy conservation awareness campaigns and energy services for more than two & half decades in the major economic sectors like transport, industry, agriculture and households. Starting with just petroleum, conservation of all energy sources, development, evaluation and commercialization of efficient equipment and additives, popularizing petro-crop cultivation and production of bio-fuels, environment protection and a host of other activities are part of its mandate.

PCRA's sector specific activities include energy audits and institutional training programmes for industries, specially designed driver training programmes for transport including State Transport Undertakings (STUs) and other large fleet operators, Defence Services, model depot studies for STUs, emission control and good driving habits for motorists. Similarly PCRA helps farmers, both financially and technically, to improve the efficiency of their lift irrigation pump sets. As the results of PCRA's efforts depend largely on voluntary compliance with the conservation techniques and practices, educating and motivating the concerned target groups is a big task. This is achieved through various mass media campaigns, seminars, training programmes, printed literature, essay and quiz competitions etc.

1.19 HYDROGEN AS AUTO FUEL

Hydrogen is receiving worldwide attention as a clean fuel and efficient energy storage medium for automobiles. Hydrogen can replace or supplement oil used in road transportation. Hydrogen production technologies can be both fossil fuel based and renewable resource based. However, substantial Research and Development is needed to establish use of hydrogen as an alternative fuel in a cost effective manner. For development of hydrogen as a fuel, the Ministry of Petroleum & Natural Gas set up a Hydrogen Corpus Fund with contribution from five major oil companies and OIDB. A road map has been set up by IOC (R&D), the nodal agency for the hydrogen research project, for hydrogen production, dispensing, storage application and its utilization in scooters, 3 wheelers and buses. Demonstration projects in the pipeline include using 10% hydrogen in CNG at IOC (R&D) centre at Faridabad and a similar demonstration project later in Delhi. Another Hydrogen and H2-CNG Mixture Dispensing Station is planned to be set up by IOC as a demonstration project partially funded by the Ministry of New and Renewable Energy (MNRE) (50%) and



partially from Hydrogen Corpus Fund (50%). Work for setting up of this station is expected to be set up by March 2008. Presently, in India, Hydrogen is being produced mainly from steam reforming of naphtha and natural gas in fertilizer and petroleum refining industries. Hydrogen as a by-product is also being produced in the chemical industry. Hydrogen is expensive for energy applications in comparison to the existing hydrocarbon fuels. Further, there is no infrastructure available in the country for regular use of Hydrogen as an energy carrier. Introduction of Hydrogen energy applications in the market would require an integrated system development approach. This will include all aspects of Hydrogen energy technologies such as production, storage, transportation, delivery and end use applications and associated devices. While some progress has been made in the world and in India, considerable R&D and technology development efforts are required to achieve a low cost of production of Hydrogen, its safe storage, transportation and applications including development of devices and systems which operate with Hydrogen fuel. In addition, it is necessary to create an extensive infrastructure for producing, transporting and storing large quantities of Hydrogen before its large-scale use can take place. Hydrogen operated devices/systems/ applications will have to be developed for optimal use of Hydrogen. Codes and standards are also required to address safety concerns and speedy commercialization of Hydrogen as a fuel. There are several scientific, technical and engineering challenges, which need to be resolved. Apart from R&D efforts, technology demonstration projects, pre-commercial pilot plants, manpower development etc. are required. Therefore, the Ministry of New and Renewable Energy (MNRE) has initiated the process of preparing a National Hydrogen Energy Road Map.

1.20 BIO-DIESEL PURCHASE POLICY

The Ministry of Petroleum & Natural Gas has formulated a Bio-diesel purchase policy on October 9, 2005. The Bio-diesel purchase policy is a statement of intent towards purchase of bio-diesel by the oil marketing companies. This policy, inter-alia, identifies 20 purchase centres to be set up by public sector oil marketing companies at which the companies would purchase bio-diesel, which satisfies the prescribed specifications under the Bureau of Indian Standards (BIS). The initial price at which the oil marketing companies would purchase bio-diesel has been recently revised from the existing Rs. 25 per litre to Rs. 26.50 per litre which was applicable upto December 2006 and which may be reviewed by them every six months. It has since been decided to retain the existing purchase price of Bio-diesel at Rs. 26.50 per litre. Depending upon the felt need and preparedness, the oil companies could open more purchase centres. The policy came into force on 01.01.2006.

1.21 ETHANOL-BLENDED PETROL (EBP) PROGRAMME

To reduce dependence on imported oil by way of encouraging use of indigenous sources of energy, Ministry of Petroleum & Natural Gas has notified vide GSR 705 (E) dated 27.10.2004, the scheme of 5% ethanol blended petrol, in accordance with Bureau of Indian Standards specifications, to be sold in notified areas if the price of sourcing indigenous ethanol for alternative uses, and if the delivery price of ethanol at the location is comparable to the import parity price of petrol at that location, and the indigenous ethanol



MOU for Jatropha Cultivation

industry is able to maintain the availability of ethanol for ethanol-blended petrol programme at such prices. This programme, however, could not make substantial headway for a number of reasons viz., decline in sugarcane production, restrictions on inter-state movement of ethanol and backing out by the suppliers, etc. Based on the assurance given by Indian Sugar Manufacturers' Association (ISMA) regarding adequate supplies of ethanol this year and last year inventories, the existing EBP programme has been reviewed and it has been decided to cover the entire country under 5% EBP programme (except North Eastern States, J&K, Andaman and Nicobar Islands & Lakshadeep) with effect from 1st November, 2006 subject to the condition of commercial viability in procurement of ethanol by OMCs vide notification No. GSR 580 (E) dated 20.09.2006. The requirement of ethanol for implementation for 5% EBP Programme in whole of the country is about 0.56 million KL per annum. The tenders for supply of ethanol have already been finalized for the states of Uttar Pradesh, Uttaranchal, Delhi, Goa, Bihar, Jharkhand, Karnataka, Maharashtra & Andhra Pradesh (partially). The State Government of Tamil Nadu has since stopped the supply of ethanol for the EBP programme due to storage constraints. Oil Marketing Companies could not finalize tenders in the states of Haryana, Punjab, Himachal Pradesh, Rajasthan, Orissa, Gujarat, Madhya Pradesh and Chattisgarh as EBP supplies are not commercially viable due to levy of high taxes/ levies on ethanol by the State Governments. Tenders could not be finalized in West Bengal and Kerala as the State Governments are yet to notify the applicable taxes/levies on ethanol supplies for EBP programme.

1.22 PLAN OUTLAY

The revised Plan Outlay of PSUs of Ministry of Petroleum & Natural Gas for 2006-07 is Rs. 36,863.65 crore and Budget Estimate for 2007-08 is Rs. 38,902.06 crore. These outlays will be met from the internal and extra



budgetary resources of the Public Sector Undertakings.

1.23 EARNINGS OF OIL PUBLIC SECTOR UNDERTAKINGS

The Profit Before Tax (PBT) and the Profit After Tax (PAT) earned by the Public Sector Undertakings in the oil sector during 2005-06 were Rs. 39,284.50 crore and Rs. 26,620.77 crore respectively. The PBT and PAT for 2006-07 are expected to be about Rs. 42,603.66 crore and Rs. 29, 632.10 crore respectively.

1.24 LIQUEFIED NATURAL GAS

Petronet LNG Limited (PLL) is expanding the capacity of Dahej LNG terminal from 5 MMTPA to 10 MMTPA. The expanded facility is expected to be ready by 2008-2009.

Dabhol LNG terminal, having capacity of 5 MMTPA, is expected to be fully commissioned in the year 2009.

Kochi LNG terminal with a capacity of 2.5 MMTPA is likely to be commissioned by 2009-2010. The terminal has provision for expansion up to 5 MMTPA capacity.

IOC is planning to set up an LNG terminal at Ennore, Tamilnadu. ONGC also plans to set up a terminal at Mangalore. These plans are at initial stages.

PLL has an agreement with RasGas, Qatar for import of 7.5 MMTPA (27 MMSCMD) of LNG. Out of this, at present, 5 MMTPA is being received at Dahej terminal.

IOC, GAIL and BPCL have signed Sale Purchase Agreements (SPA) with National Iranian Gas Export Company (NIGEC), Iran for import of 5 MMTPA LNG. However, NIGEC had to obtain approval of its parent company National Iranian Oil Company (NIOC) for the SPA to become effective. NIGEC have so far not conveyed approval of NIOC. The matter is being pursued with Iranian authorities.

PLL is negotiating import of 2.5 MMTPA LNG from Gorgon Australia for Kochi LNG Terminal. PLL is also holding discussions with RasGas, Qatar for import of additional LNG for Dabhol LNG terminal. GAIL is also discussing with Sonatrach, Algeria for import of LNG for the Dabhol terminal.

1.25 IMPORT OF NATURAL GAS THROUGH TRANSNATIONAL GAS PIPELINES

(a) Iran-Pakistan-India (IPI) Gas Pipeline

In pursuance of the Cabinet decision of 9.2.2005, the Government is discussing the details of the Iran – Pakistan – India (IPI) Gas Pipeline Project with the Governments of Iran and Pakistan.

A tripartite Joint Working Group (JWG) of Iran, Pakistan and India has been formed. Four meetings of the JWG have been held; the last meeting being held in Tehran on January 24 & 25, 2007.

Two separate Secretary level Joint Working Groups (JWGs), viz., India Pakistan JWG and India Iran Special JWG, have been constituted. Three meetings of India-Iran SJWG have been held; the last meeting being held on 28 and 29 December, 2005. Four meetings of India-Pakistan JWG have been held; the last meeting being held in Islamabad on February 22 & 23, 2007.



In the fourth trilateral JWG meeting held in Tehran on January 24 & 25, 2007, Iran and Pakistan sides agreed to a pricing formula, subject to the approval by their authorities. India conveyed that it would respond to the pricing formula within four weeks.

Fourth India-Pakistan JWG was held on February 22 & 23, 2007 in Islamabad. Iran attended the meeting as an observer. Details regarding transportation tariff and transit fee for passage of pipeline through Pakistan were discussed.

(b) Myanmar-India Gas Pipeline

OVL and GAIL have 30% participating interest in the project in A1 & A3 blocks in Myanmar. The then Minister (P&NG) participated in a trilateral Ministerial meeting between the Oil Ministers of Bangladesh, Myanmar and India in January 2005 at Yangon, Myanmar. In pursuance of the trilateral Joint Press Statement released after that meeting, a Techno-Commercial Working Committee (TCWC) of representatives of the three countries was constituted. The first meeting of the TCWC was held in Yangon on February 24-25, 2005. The TCWC prepared a draft MoU to be signed by the three oil Ministers after the approval of their respective Governments. However, the MoU could not be approved on account of differences between India and Bangladesh, as Bangladesh intended to raise certain bilateral issues in the trilateral MoU.

In view of the above, India is pursuing the alternative option of a pipeline from Myanmar through the north-eastern states of India. GAIL have completed a Detailed Feasibility Report for this pipeline, for evacuating Myanmar gas to India through the north eastern States. The pipeline is projected to be routed through Mizoram, Assam, West Bengal and Bihar, with pipeline length of 1575 km within the Indian territory till Gaya in Bihar.

GAIL had submitted its bid in response to an Invitation of Bid by the Ministry of Energy, Government of the Union of Myanmar for purchase of gas from Shwe & Shwe Phyu fields in A-1 block and Mya field in A-3 block in September 2006. Government of Myanmar has subsequently intimated to GAIL that they are reviewing their decision to sell this gas through the pipeline route. Myanmar is exploring other options of selling the gas and has asked for a bid for 3.5 MMTPA of Liquefied Natural Gas (LNG). GAIL has submitted its bid in December, 2006 to Myanmar in response to the same. A delegation led by Joint Secretary (MoP&NG) visited Myanmar during January 9-11, 2007. During the visit, the issue of import of natural gas from Myanmar through transnational pipeline was discussed with Ministry of Energy, Myanmar. The Myanmar side indicated that out of the presently available gas of 4.8 trillion cubic feet (tcf), their Government would like to earmark a portion for their domestic requirement and the balance gas would not be sufficient for export. Myanmar has taken up drilling in A3 block and, based on the result of drilling and quantity of gas available, it would take a decision on selling the gas through available options.

(c) Turkmenistan-Afghanistan-Pakistan Gas Pipeline

Daulatabad area of Turkmenistan is reported to have abundant gas reserves. The Governments of Turkmenistan, Afghanistan and Pakistan proposed the transnational gas pipeline to exploit the available gas reserves in



Turkmenistan. They designated ADB as the lead development partner. ADB carried out the study and approached India for participating in the project. An Indian delegation led by Hon'ble Shri Dinsha Patel, Minister of State for Petroleum and Natural Gas visited Ashgabat, Turkmenistan to participate in the 9th Steering Committee Meeting of the countries participating in Turkmenistan-Afghanistan-Pakistan (TAP) Gas Pipeline Project held on February 14-15, 2006, as an 'Observer'. The Steering Committee invited India to become an official member of the project.

The Ministry of Petroleum & Natural Gas brought the matter before the Cabinet in May 2006 after inter-Ministerial discussions. The Cabinet in the meeting held on 18th May 2006, accorded 'in principle' approval to the proposal for India joining the TAP project. Decision of the Government of India to join TAP Gas Pipeline Project as an official member was conveyed to ADB in June 2006. ADB has been requested to appropriately take up India's request for joining the project with the Governments of Afghanistan, Pakistan and Turkmenistan. Suitable amendments in Inter Governmental and Framework agreements would be needed for India to join the Project. These amendments have yet to be made by the Governments of Turkmenistan, Afghanistan and Pakistan.

1.26 POLICY FOR DEVELOPMENT OF NATURAL GAS PIPELINES

The 'Policy for Development of Natural Gas Pipelines and City or Local Natural Gas Distribution Networks' was notified on 20.12.2006. The broad objectives of the policy are given below:

a) To promote investment from public as well as private sector in natural gas pipeline and city or local natural gas distribution networks;

b) To facilitate open access for all players to the pipeline network on a non-discriminatory basis;

c) To promote competition among entities, thereby avoiding any abuse of the dominant position by any entity; and

d) To secure consumer interest in terms of gas availability and reasonable tariff.

1.27 GAS PRICING

In accordance with the Cabinet decision of May 2005, the APM gas price applicable to small consumers having allocation upto 0.05 MMSCMD, and to city gas distribution networks had been increased from Rs. 2,850/ MSCM to Rs. 3,200/MSCM for general consumers and from Rs. 1,700/MSCM to Rs. 1,920/MSCM for consumers in the North-East with effect from 01.07.2005. The Cabinet decision had also envisaged that the gas price for these consumers would be progressively increased over the next 3 to 5 years to reflect the market price. In line with the decision, APM gas price for these consumers has been further increased by 20% from Rs. 3,200/ MSCM to Rs. 3,840/MSCM with effect from 06.06.2006. For consumers in these categories in the North-East, the price has been increased from Rs. 1,920/MSCM to Rs. 2,304/MSCM. It has also been decided that GAIL shall charge market price for the quantity of gas being marketed by MGL and IGL to industrial consumers at market price. It may be noted that the APM gas price for power



and fertilizer sector consumers has not been increased.

Regarding transportation tariff for natural gas, the Government decided that the combined single tariff of Rs. 831/MSCM for use of DVPL need not be paid by GSPL's customers. The connectivity charges of GSPL to DVPL was kept at Rs. 280/MSCM only; this decision was made effective from June 1, 2006.

The Government, after examining the report of the Tariff Commission, reduced, with effect from 01.11.2006, the transportation tariff for all the customers of KG Basin gas supply network as follows:

Tatipaka – Kakinada – Kovuur network Rs. 413/MSCM

Tatipaka – Kondapalli network Rs. 1,056/MSCM

1.28 RETAIL OUTLET DEALERSHIPS COMMISSIONED

The number of retail outlet (RO) dealerships (petrol pumps) set up by OMCs during the year 2006-07 (April-December, 2006) were 1,597. 873 ROs are likely to be set up during January–March, 2007.

1.29 LPG MARKETING BY PUBLIC SECTOR OIL MARKETING COMPANIES (OMCs)

Public Sector Oil Marketing Companies (OMCs), viz., Indian Oil Corporation Limited, Bharat Petroleum Corporation Limited and Hindustan Petroleum Corporation Limited are engaged in marketing of subsidized LPG in the country under Public Distribution System. With increased availability of LPG, the number of LPG customers enrolled by them has also been increasing over the years. The number of LPG customers served by OMCs as on 31.12.2006 was about 923 lakh.

OMCs had set a target for release of about 60 lakh new LPG connections during financial year 2006-07 out of which about 36 lakh connections were released during April-December, 2006. Similarly, OMCs had set a target for setting up of 217 new LPG distributorships during financial year 2006-07, out of which 102 distributorships have been commissioned during April-December, 2006. Total number of LPG distributorships of OMCs in the country as on 31.12.2006 was 9,372.

1.30 MARKETING OF 5 KG LPG CYLINDERS BY OMCs.

The basic purpose for launching of 5 kg cylinders is that the small size LPG cylinder in the domestic sector helps in fulfilling the demand of low income group in urban, semi-



Marketing of 5 Kg LPG Cylinder by BPCL



urban and rural pockets and also extends LPG reach to hilly terrain and interior areas on account of convenience in transportation. The LPG connection with 5 kg domestic cylinder in terms of deposit of Rs. 350/- per cylinder and low of refills of approximately Rs. 109/- is affordable for the low income groups. This also helps in meeting the requirement of economically weaker sections of the society for LPG refills and helps in restricting deforestation thereby ensuring a pollution free, happy and healthy environment.

During April-December, 2006, OMCs have released approximately 45,335 number of 5 kg connections in 29 States and 2 UTs. As on 31.12.2006, the total number of customers with 5 kg LPG cylinders served by OMCs was about 3.6 lakh.

1.31 LPG AS AUTO FUEL

Government has permitted use of LPG, being a clean and environmentally friendly fuel, as an auto fuel. For this purpose, Ministry of Petroleum & Natural Gas alongwith the other concerned Ministries/Departments has formulated necessary legislative and regulatory framework for safe usage of LPG as an automotive fuel.

Hon'ble Supreme Court has mandated conversion of old vehicles to LPG/CNG in cities which are equally or more polluted than Delhi and as per Hon'ble Court the critically polluted cities are Ahmedabad, Agra, Bangalore, Chennai, Hyderabad, Kanpur, Kolkata, Lucknow, Mumbai, Pune, Surat and Sholapur.

OMCs had initially identified 228 locations for setting up of Auto LPG Dispensing Stations (ALDS) in various Metros and some other major cities. However, in view of directive of the Hon'ble Supreme Court classifying the cities into three categories, OMCs are at present primarily concentrating on category-I and category-II cities and have commissioned 178 ALDS in 43 cities as on 31.12.2006.

Auto LPG pricing is market determined and there is no subsidy on Auto LPG. Vehicle Manufacturers like Maruti and Bajaj Auto have already started marketing factory fitted LPG cars/3-wheelers with factory fitted Auto LPG Kits. Also, approved testing agencies like ARAI Pune and VRDE Ahmednagar have approved more than 20 LPG conversion kit manufacturers for 3-wheelers and 4-wheelers covering the entire range of petrol-driven vehicles for conversion to LPG. At present 13 manufacturers of conversion kits for 4-wheelers and 11 manufacturers of conversion kits of 3-wheeler vehicles have been approved by various testing agencies like ARAI Pune, VRDE Ahmednagar and IIP Dehradun.

1.32 PARALLEL MARKETING OF LPG

In order to increase the availability of LPG and to foster competition, the private sector was allowed to participate in the Parallel Marketing Scheme (PMS) of LPG in April 1993 by decanalising imports of LPG. Under the scheme, a private party can undertake import of LPG after obtaining a rating certificate from one of the approved rating agencies given in the LPG (Regulation of Supply and Distribution) Order, 2000. LPG under PMS is sold at market-determined prices by the private parties. Parallel marketers have imported about 290 TMT of LPG under PMS during April-December, 2006. Cumulatively, parallel marketers have imported about 2,421 TMT of LPG upto December, 2006 since 1993.



1.33 Dr. RANGARAJAN COMMITTEE REPORT

In order to formulate a long-term pricing policy in respect of petroleum products, the Government had constituted an Inter-Ministerial Committee under the Chairmanship of Dr. C. Rangarajan, Chairman, Economic Advisory Council to the Prime Minister to examine different aspects of pricing and taxation of petroleum products with a view to stabilizing/rationalizing their prices, keeping in view the financial position of the oil companies, the investment needed in the sector, the need to conserve petroleum products, and establishing a transparent mechanism for the autonomous adjustment of prices by the oil companies on 26th October, 2005. The Committee had submitted its report on 17th February, 2006.

The Government has accepted the following recommendations of Dr. Rangarajan Committee Report:

(i) Implementation of principle of trade parity with reduction in customs duty on petrol & diesel from 10% to 7.5%.

(ii) Permitting autonomous adjustment in prices of sensitive petroleum products by Oil Marketing Companies (OMCs) without prior consultation with the Government once every month.

(iii) Restricting 'in principle' subsidy on PDS Kerosene to BPL families only.

1.34 PDS KEROSENE & DOMESTIC LPG SUBSIDY SCHEME, 2002

Ministry of Petroleum & Natural Gas is administering the Scheme through which the public sector oil marketing companies (OMCs) are being paid subsidy currently at 1/3rd level of 2002-03 at a flat rate from the Union Budget. This translates to subsidy at the rate of Rs.22.58 per 14.2 kg domestic LPG cylinder and Rs.0.82 per litre on PDS Kerosene. The subsidy from Government has been frozen at the current level.

1.35 FREIGHT SUBSIDY (FOR FAR FLUNG AREAS) SCHEME, 2002

Under the Freight Subsidy Scheme, the public sector oil marketing companies (OMCs) are being compensated on the freight being incurred to distribute the subsidized products in the far-flung remote areas.

1.36 RIGHT TO INFORMATION ACT - 2005

Right to Information (RTI) Act-2005 has been implemented in the Ministry of Petroleum & Natural Gas as per Gazette Notification of Government of India dated 15th June, 2005. RTI Act is inter-alia designed to promote transparency and accountability in the functioning of public authorities.

As per provisions of Section 5 (1) of the RTI Act, Shri Prabh Das, Joint Secretary and Shri V.K. Dewangan, Deputy Secretary have been nominated as Central Public Information Officer (PIO) and Assistant Public Information Officer (APIO) respectively in respect of the Ministry. Additional Secretary has been designated as the Appellate Authority in the Ministry under the provision of Section 19 (1) of the RTI Act. All the PSUs under the administrative control of the Ministry of Petroleum & Natural Gas have also implemented RTI Act, 2005 and PIOs/APIOs and Appellate Authorities have been designated



by them. Basic information in respect of the Ministry of Petroleum & Natural Gas and its all PSUs along with details of Appellate Authorities, PIOs & APIOs have been hosted on the websites of the Ministry and all oil PSUs.

From 1st January, 2006 to 31st December, 2006, a total of 412 applications including 34 appeals have been received under RTI Act, 2005 in the Ministry. Out of 412 applications, 394 applications including 33 appeals have been disposed of. The remaining applications and appeals would be disposed of within the time limit prescribed in the RTI Act.

1.37 STEPS TAKEN TO CHECK ADULTERATION OF PETROL/DIESEL AND STREAMLINING PDS KEROSENE DISTRIBUTION

The Government/Public Sector Oil Marketing Companies (OMCs) have taken the following steps to contain the menace of adulteration:-

(i) Under the Control Orders issued by the Government to prevent fuel adulteration, under the Essential Commodities Act, 1955, State Governments are empowered to take action against those indulging in adulteration. Government has requested the State Governments/Union Territory Administrations to take steps to control adulteration.

(ii) OMCs undertake regular and surprise inspections of Retail Outlets and also take action under Marketing Discipline Guidelines (MDG) and Dealership Agreements against those indulging in adulteration and malpractices, MDG provide for termination of dealership in cases of adulteration being established.

(iii) Government has taken the initiative to expedite the installation of Global Positioning System (GPS) to monitor the movement of tank trucks.

(iv) OMCs have introduced new tamper proof tank-truck locking systems to prevent en-route adulteration by transporters.

(v) Keeping in view the misuse/diversion of SKO for adulteration, the import of SKO by private parties has been canalized through OMCs.

(vi) As advised by the Government, Oil Marketing Companies (OMCs) have created a separate wing to report to a Director other than Director (Marketing), which will oversee and monitor all activities and operations to curb adulteration and specify norms and guidelines in this regard.

Checking adulteration is a continuous process and the Ministry of Petroleum & Natural Gas has been reviewing steps taken to curb adulteration from time to time. In the process, several technological and institutional measures have been taken to contain adulteration. The recent steps taken by the Ministry are summarized below:

1. **Automation of Retail Outlets**: In order to monitor the activities at retail outlets by adopting the latest technological improvements, automation of retail outlets is being implemented. MOP&NG has directed the oil



marketing companies to complete automation of retail outlets selling more than 200 KL per month by March 2007.

2. **Third Party Certification of Retail Outlets**: OMCs have been directed to complete third party certification of all the retail outlets selling more than 100 KL per month by March 2007.

3. **Monitoring of movement of Tank Trucks through Global Positioning System (GPS):** In order to prevent adulteration during transportation, OMCs have been directed to install GPS for complete monitoring of the movement of all the company owned/ dealer owned/contractor owned tank trucks by March 2007.

4. **Marker in Kerosene**: To check adulteration in auto fuels, and also to check diversion of subsidized kerosene, Government have also advised OMCs to introduce marker in kerosene. Public sector OMCs have commenced introduction of marker in kerosene on all India basis with effect from 01.10.2006. Under the new system, Marker is being put in kerosene in all depots. This system heralds the introduction of world-class technology to curb and eventually eliminate the menace of adulteration of transportation fuels along the supply chain. With the marker's presence, adulteration even with very low levels of kerosene can be detected. MS/HSD Control Order, SKO Control Order and MDG 2005 have been amended for making provision regarding introduction of marker system in Kerosene to check adulteration. A committee has been set up in the Ministry to monitor the progress of the marker system.

5. **Revising the Marketing Discipline Guidelines**: The Marketing Discipline Guidelines(MDG) under which the oil marketing companies take penal actions against the erring dealers have been revised during August 2005 making the penal actions more stringent. As per MDG, 2005, a dealership would be terminated in the first instance of adulteration itself.

6. **Jan Kerosene Pariyojna**: To streamline the PDS Kerosene distribution system and contain diversion of kerosene for adulteration and other unauthorized usages, Jan Kerosene Pariyojna (JKP) had been launched initially for a period of 6 months on a pilot basis in 414 blocks with effect from 2.10.2005. The Pilot scheme has been further extended upto 30.6.2007.

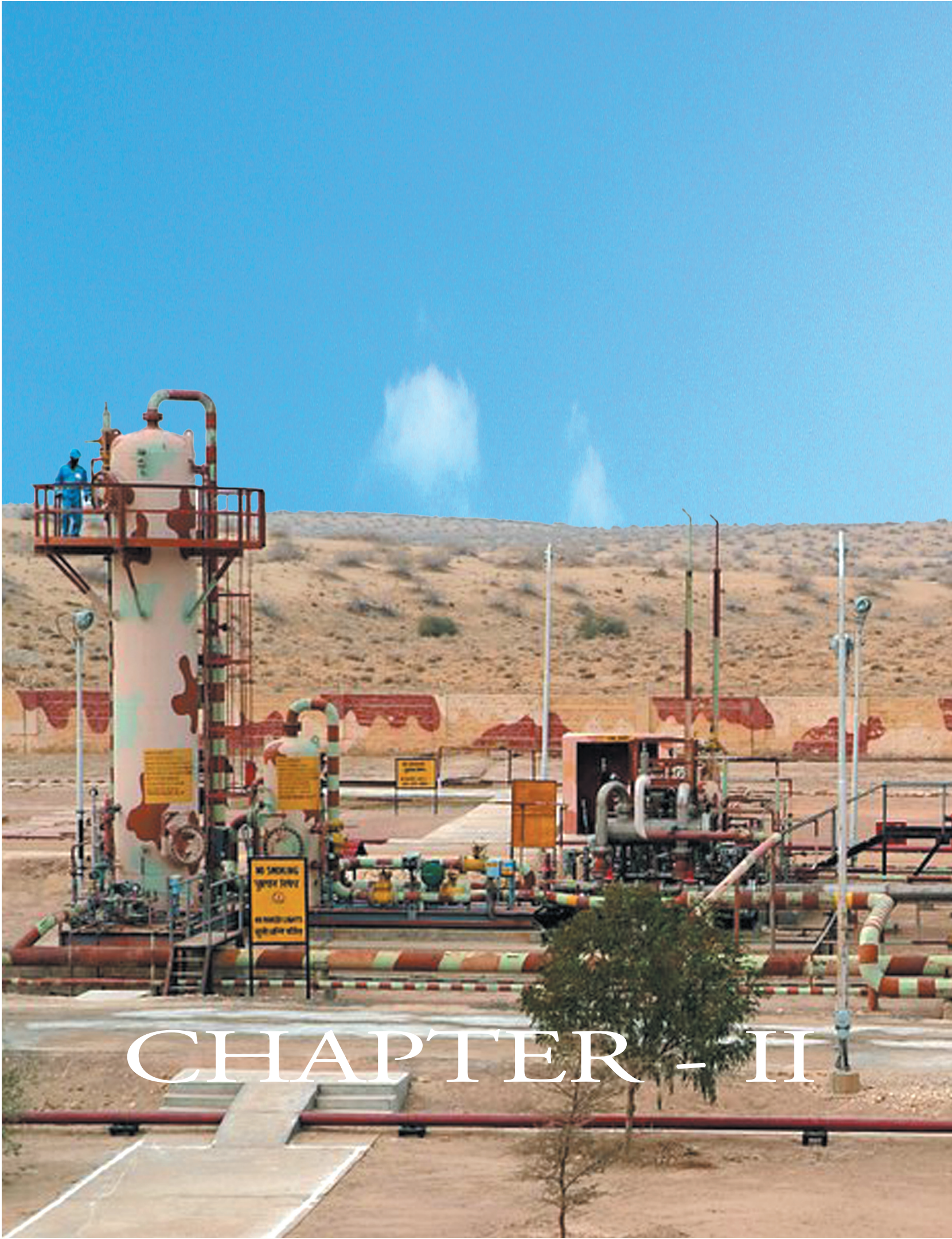
7. **Smart Card Scheme:** With the objective of ensuring that the benefit of the subsidy reaches the targeted consumers in an efficient and cost-effective manner and to prevent any leakages, this Ministry has proposed introduction of Smart Card System for distribution of PDS kerosene. The scheme is proposed to be introduced initially on an experimental basis. In the Pilot project, subsidized kerosene through Smart Card is proposed to be available to BPL families while all other ration card holders would be given non-subsidized kerosene. Oil Marketing Companies (OMCs) would ensure adequate availability of PDS as well as non-subsidized kerosene during



the entire period of implementation of the Pilot project.

1.38 AMENDMENT OF SKO CONTROL ORDER FOR PARALLEL MARKETING SYSTEM

This Ministry had introduced Parallel Marketing System (PMS) for kerosene vide Notification dated 02.09.1993 allowing the private agencies to import and market kerosene at market prices in the country. Subsequently, on the recommendation of this Ministry, Department of Commerce vide Notification dated 25.11.2003 canalized the import of kerosene through State Trading Enterprises such as Indian Oil Corporation (IOC), Hindustan Petroleum Corporation Limited (HPCL), Bharat Petroleum Corporation Limited (BPCL) and IBP Company Limited (IBP) for all purposes and also through the State Trading Corporation by Advance License Holders. Now, SKO Control Order, 1993 has been amended on 06.07.2006 allowing parallel marketers to source their requirements from indigenous sources also.



CHAPTER - II



EXPLORATION AND PRODUCTION

2.1 CRUDE OIL & GAS PRODUCTION

2.1.1 Oil and Natural Gas Corporation Limited (ONGC) and Oil India Ltd. (OIL), the two National Oil Companies (NOCs) and private and joint-venture companies are engaged in the exploration and production (E&P) of oil and natural gas in the country. Crude oil production by the NOCs during 2006-07 is expected to be about 30.23 MMT as against the production of 26.64 MMT of crude oil during 2005-06.

In addition, there will be production of 4.60 MMT from the private and JV companies during 2006-07. Thus, total crude oil production in 2006-07 is expected to be about 34.83 MMT.

Gas production during the year 2006-07 is expected to be about 33.27 BCM from ONGC, OIL and private/JV companies. The contribution of private/JV companies in gas production will be about 7.035 BCM in 2006-07.

2.1.2 Several measures taken to enhance hydrocarbon reserves and increase production are :

i) Major thrust on exploration in the new frontier areas like deep water and other geologically and logistically difficult areas while ensuring continuation of exploration in the existing and unexplored areas.

ii) Development of new fields and additional development of the existing fields through implementation of Improved Oil Recovery (IOR) and Enhanced Oil Recovery (EOR) projects in major fields and medium size fields. These projects are being implemented by ONGC & OIL.

iii) Implementation of specialized technologies like extended reach drilling, horizontal drilling and drain hole drilling.

iv) Obtaining the services of international experts whenever considered necessary.

v) Maintenance of reservoir health through work-over operations and pressure maintenance methods.

vi) Better reservoir delineation through three dimensional (3D) seismic survey of old fields.

vii) Optimization and redistribution of water injection.

viii) Infill drilling in the unswept areas of the reservoirs.

2.1.3 Consequent upon liberalization in petroleum sector, Govt. of India is encouraging participation of foreign and Indian companies in the exploration and development activities



to supplement the efforts of national oil companies to narrow the gap between supply and demand. A number of contracts have been awarded to both foreign and Indian companies for exploration and development of fields on production sharing basis.

2.2. IMPLEMENTATION OF X PLAN (2002-2007)

During the X Plan, various E&P activities were implemented, which are:

i) Optimisation of production of crude oil and natural gas from domestic basins and existing fields especially the Mumbai High field by ONGC.

ii) An optimal mix of intensive exploration with main thrust in producing areas and extensive exploration in other areas including frontier areas and deep waters for increasing the reserve base.

iii) Improvement of recovery factor by 3-4% in major fields.

iv) Emphasis on quality of exploration for enhanced success.

v) Laboratory studies and undertaking of EOR pilots in producing fields for further augmentation of recovery.

vi) Acquisition of equity oil abroad.

vii) Exploration of Coal Bed Methane (CBM).

viii) Efforts to exploit the potential of Gas Hydrates and Underground Coal Gasification (UCG).

2.3 ACQUISITION OF EQUITY OIL ABROAD

Acquiring equity oil and gas assets overseas is one of the important components of enhancing energy security. The Government is encouraging Oil PSUs to aggressively pursue equity oil and gas opportunities overseas. OVL has made an investment commitment of over US$ 5 Billion and has an oil and gas production of 6.6 MMT (oil and oil equivalent gas) in the year 2005-06.



Drilling operation at HEGLIG Sudan



In 2006, ONGC Videsh Ltd (OVL) acquired blocks/participating interest in Vietnam, Cuba, Nigeria, Brazil and Libya. Besides, ONGC - Mittal joint venture acquired interest in a block in Syria. Oil India Ltd. - Indian Oil Corporation consortium obtained interests in blocks in Libya, Gabon, Yemen and Nigeria. GAIL consortium including BPCL, HPCL and Videocon acquired an exploration block in Oman. Other PSUs, namely, HPCL, BPCL and GSPC consortium acquired participating interest in an exploration block in Australia and the consortium of BPCL, Videocon and GSPC have acquired participating interest in an exploration block jointly awarded by Timor and Australia. In addition, private Indian companies like RIL and Essar are also pursuing E&P opportunities abroad.

2.4 NEW EXPLORATION LICENSING POLICY

Government has formulated the New Exploration Licensing Policy (NELP) to accelerate and expand exploration of oil and gas in the country. So far, Government has invited six rounds of bidding under NELP. A total of 162 blocks have been awarded in these rounds. Till December 2006, a total investment of about Rs. 11,700 crore has been made by private/joint venture companies/ NOCs under NELP. NELP has been able to achieve its objective of expanding and accelerating exploration, especially in deepwater areas. Exploration under NELP has also started showing positive results with discoveries made in the Krishna-Godavari deepwater and in Cambay onland.

2.5 COAL BED METHANE (CBM) POLICY

In order to explore and produce new sources of natural gas from coal bearing areas, Government had formulated a CBM Policy providing attractive fiscal and contractual framework for exploration and production of CBM in the country. Government has awarded 26 blocks in the States of Jharkhand, Madhya Pradesh, Chhattisgarh, Maharashtra, Andhra Pradesh, Rajasthan, Gujarat and West Bengal for exploration and production of Coal Bed Methane (CBM).

2.6 OIL AND NATURAL GAS CORPORATION LIMITED (ONGC)

Oil & Natural Gas Commission was established on 14th August, 1956 as a statutory body under Oil & Natural Gas Commission Act, for the development of petroleum resources and sale of petroleum products. As per the decision of the Government, ONGC was converted into a Public Limited Company under the Companies Act, 1956 and named as "Oil and Natural Gas Corporation Limited" with effect from February 1, 1994. The Government disinvested around 10% of the equity shares of ONGC in March 2004 through a public offer in the domestic capital market at Rs. 750 per share. After the above disinvestment, the shareholding of the Government in ONGC came down to 74.14%. With the allotment of bonus shares in the ratio of 1:2 in October 2006, the paid up capital of ONGC has increased to about Rs. 2139 crore from Rs.1426 crore.

2.6.1 Highlights for the Year 2006-07 (upto January, 2007)

- During the year 2006-07, as on 01.02.2007, ONGC has made eight new discoveries which includes three new discoveries in western onland (Deloli, Mehlaj & Wadsar), two in KG



deepwater (KG-DW-S1 & KG-DWN-98.2-UD-1), one in Cauvery on land (Adichapuram), one in A&AA (Kalyanpur) and one in Mahanadi deepwater offshore (MDW-2).

- The success in UD-1 is the first breakthrough in the ultra-deepwater in Indian deepwater sector. Besides this, the discovery of commercial gas in well MDW-2A has established hydrocarbon occurrence for the first time in Mahanadi deep water area and opened up a new basin. With this, ONGC has established commercial hydrocarbons in seven basins.

- Q Marine – Proprietory technology of M/s Western Geco International for high resolution and improved reservoir characterization and monitoring has been deployed through two vessels, one each in eastern and western offshore. ONGC officers are being trained for acquisition and processing. It was started in 2005-06 and is continuing in the current year.

- M/s GX Technology is carrying out a regional study in India. ONGC is participating with a commitment for 10500 km. of data in east and west coast. The technology, focused towards deeper imaging, is very useful for improved understanding of petroleum systems.

- New Seismic Vessel "MV Sagar Samiksha" - with 6 streamers and 2 sources is under construction at Amur Ship Building Plant (ASP) Russia and is expected to be delivered by November 2007.

- 4C-4D project - First repeat survey data of Balol field handed over to National Geophysical Research Institute (NGRI), under MOU and the project is being monitored on weekly basis.

- In the sixth round of NELP, ONGC has been awarded 25 blocks on stand alone basis or in partnership with other companies, which is the highest number of blocks awarded to any company.



2.6.2 Physical performance during 2005-06 & 2006-07

		2005-06 Actual	2006-07 BE/MOU	2006-07 Actual up to Dec'06*	2006-07 Anticipated Achieve-ment
Seismic Survey					
On-land	2D (GLK/LK)	1,847.1	480	970	2,005
	3D (Sq. Kms.)	2,358.8	2,142	2,291	6,620
Offshore	2D (GLK/LK)	4,349.5	4,900	8,172	8,922
	3D (Sq. Kms.)	17,506.8	23,653	9,008	26,724
Drilling					
Exploratory	Meterage ('000m)	294.070	387.606	159.388	394.89
	Wells (Nos.)	106	138	69	138
Development	Meterage ('000m)	381.187	456.585	311.979	429.787
	Wells (Nos.)	164	214	133	201
Total (Expl.+Dev)	Meterage ('000m)	675.257	853.191	471.367	824.679
	Wells (Nos.)	270	352	202	339
Production					
Crude Oil	MMT	24.404	27.35	19.744	27.031
Natural Gas	MMSCM	22,574.4	21,966.16	16,466.058	21,503.52
Value added Products	000'T	3,425	2,903	2,367.75	3,135

* Provisional Data



2.6.3 Financial Performance during 2006-07

(Rs. Crore)

Parameters	2005-06 (Actual)	2006-07 (BE)/MOU	2006-07 (Actual) up to Sept' 2006*	Projections Oct '06- Mar '07 (Estimates)
Plan Outlay	11,421.03	14,354.28	5,323.41	11,198.42
Total Income (Incl. Interest Income)	48,011.21	46,859.61	30,189.93	23,004.02
Net Profit	14,430.77	12,946.54	8,292.97	6,181.32

* Provisional Data

2.6.4 Achievements

- ONGC posted a profit of Rs. 8,293 Crore during first six months of 2006-07 as compared to Rs. 7,457 Crore for the corresponding period of 2005-06. The profit is after sharing the subsidy/ under-recoveries of Rs. 10,152 Crore during 2006-07 (up to September 2006).
- State-of-the-art technologies inducted in hardware & software for seismic data acquisition, processing & interpretation, and in well logging.
- Advanced drilling techniques for sidetracks, multilateral and extended reach wells absorbed and implemented on fast track. Engineering design audit introduced with significant cost savings.



ONGC nurtures the largest reservoir of Technical Manpower-18,000 scientists & engineers



2.6.5 Progress of Projects

The following major projects of ONGC are under various stages of implementation.

Sl. No.	Name	Approved Cost (Rs. in Crore)	Total Expenditure incurred (Rs. in Crore)	Status/ Anticipated Completion
1.	Mumbai High North Development	3,239.43	3,204.06	Completed in Dec. 2006
2.	Mumbai High South Redevelopment	6,579.25	5,832.62	Dec. 2008
3.	Improved Oil Recovery-Rudrasagar	219.22	117.17	March 2009
4.	Improved Oil Recovery-Geleki	834.9	308.59	March 2011
5.	Improved Oil Recovery – Lakwa-Lakhmani	429.38	226.11	March 2010
6.	D-1 Development	506.52	384.55	Completed (Ph - I) March 2009 (PH-II)
7.	Vasai East Development	1,688.38	211.5	March 2008
8.	G-1 & GS-15 Development	1,262.93	814.87	March 2007
9.	C2-C3 & LPG Plant, Dahej	1,493.49	51.59	June 2008
10.	Addl development of Bassein & installation of second stage Booster compressors	2,937.01 (Revised)	486.1	March 2008
11.	Addl. Dev. Heera Pt-II	569.07	124.56	April 2007
12.	Dev. of SB-11 Bassein field	219.77	53.99	May 2007
13.	Addl. Dev. A1 Layer & L-III Res. MHN	910.53	171.03	April 2007
14.	Development of C-series Fields	3,195.16	–	Dec. 2008 Ph-I
15.	Heera and South Heera Re-development project	2,305.30	–	June 2010
16.	Barge Bumper, Boat landing and Riser protector Project.	148.84	–	Feb. 2008



2.6.6 Policy initiatives undertaken by ONGC

i. Strategic goals set for two decades 2001-2020

- Doubling Reserve Accretion to 12 Billion Metric Tonnes O+OEG
- Improving Recovery Factor to 40%
- Production of 20 MMTPA O+OEG equity oil and gas from acquisitions abroad.

ii. Short-term Strategy

- Time scheduled exploration activities for prospect recognition and drilling.
- Prioritisation of exploration activities on fast track basis for enhancing reserve accretion.
- Pre-drill 3D seismic in deepwater and blanket 3D in key growth areas.
- Knowledge building in new sectors of producing as well as frontier basins.

iii. Medium-long term Strategy

- Further intensification of exploration in the producing basins to realise the hydrocarbon resources to in-place volume conversion.
- Exploration spread in non-producing basins and yet to be explored basins to establish their potential and knowledge building.
- Major shift to deep offshore as the major thrust and contributing sector.

iv. Strategic Initiatives

- Comprehensive organizational restructuring – "Corporate Rejuvenation Campaign" (CRC) – conceptualised and launched across the entire organization changing from Business Group concepts to Asset/Basin Management with focus on results rather than activities.
- Substantive decentralization of administrative authorities together with delegation of financial authorities carried out to empower the field executives.

v) Infocom Projects

Comprehensive review of Information Technology and Communication and Control Networks was carried out. Plans were finalized for modernization, expansion and integration of all Infocom systems.

2.6.7 CBM projects of ONGC

ONGC is carrying out CBM operations in West Bengal and Jharkhand. ONGC signed an MOU with Coal India Ltd. (CIL) to undertake joint exploration in North Raniganj as well as Jharia coal fields for the CBM blocks awarded by Government of India on nomination basis jointly to ONGC and CIL. ONGC envisages producing about 1240 MMSCM of coal bed methane gas during XI Five Year Plan.

2.6.8 Health, Safety and Environment (HSE)

Environmental initiatives pertaining to metamorphosis of existing environment management system to conform to international benchmark, to minimize and to



add value to the waste through reduction at source as well as recycling options and thus, turning environmental liabilities into opportunities

Environmental initiatives encompassed solid waste, liquid effluent, air emission monitoring mechanism for proactive planning to manage waste through environment friendly technologies like bioremediation, reduction and recycling options and environmental reporting based on global reporting initiative principles.

2.6.9 Conservation of Energy and Petroleum Products

ONGC is actively pursuing energy conservation measures. The conservation of petroleum products namely HSD, Lube oil and natural gas are important activities. These measures include:-

- A comprehensive Energy Audit of 269 units was carried out including Audit of 62 units by Petroleum Conservation Research Association to determine efficient usage of energy.
- Two wind farms of 50 MW capacity each have been planned in Gujarat and Karnataka.
- Energy audit and Technical audit group conferred with ISO-9001-2000 accreditation.
- At various locations, initiatives have been taken to upgrade energy distribution system, like Automatic Power Factor correction, static cables, timers etc. thus reducing the energy consumption substantially.
- Using Gas engines and turbines for power generation.
- Inter fuel substitution for proper capacity utilisation of equipments
- Reduction of contract demand & improvement of processing facilities.
- Increase in lube oil change period resulted in substantial saving.
- Harnessing solar energy by using solar water heaters/ photo-voltaic panels at various locations.
- The measures have resulted in reduction of significant quantity of fuel consumption (HSD, natural gas & electricity) valuing Rs. 146 crore.

2.7 ONGC VIDESH LIMITED (OVL)

ONGC Videsh Limited (OVL), a wholly owned subsidiary of ONGC, was incorporated as Hydrocarbons India Private Limited on March 5, 1965 with an initial authorized capital of Rs. 5 Lakh, for the business of international exploration and production. Its name was changed to ONGC Videsh Limited on June 15, 1989. The authorized and paid-up capital of OVL as on 31.03.2006 was Rs.500 crore and Rs.300 crore respectively. Subsequently, the authorized and paid-up capital of OVL has been raised to Rs. 1,000 Crore in 2006-07. The primary business of the company is to prospect for oil and gas acreages abroad. These include acquisition of oil and gas fields in foreign countries as well as exploration, production, transportation and sale of oil and gas.



Currently, OVL has participation in 25 oil and gas projects in 15 countries namely, Vietnam, Sudan, Russia, Iraq, Iran, Myanmar, Libya, Syria, Cuba, Nigeria, Qatar, Egypt, Nigeria-Sao-Tome- Principe, Brazil and Columbia. Out of these, 6 are oil and gas producing projects, 5 have potential discoveries and the remaining is in various stages of exploration. The Vietnam project is producing natural gas and the Greater Nile Oil Project, Sudan, Sakhalin-1, Russia, Block 5A, Sudan, Al Furat Project, Syria and Omimax in Colombia are producing oil. Block BC-10 in Brazil is currently under development stage and for Block A-I in Myanmar, appraisal work is being carried out after which the fields shall be put on development.

OVL is pursuing acquisition of various oil and gas exploration and production opportunities in Africa, Middle East, Central Asia, Latin America and South East Asia, which are at different stages. OVL started production of oil and gas in year 2003 and achieved production of oil and oil equivalent gas (O+OEG) of 6.6 MMT in 2005-06 as compared to 5.063 MMT in 2004-05. The gross revenue increased from Rs. 6,025.84 crore in 2004-05 to Rs. 8,170.73 crore in 2005-06. The company earned a profit of Rs. 901.20 crore during 2005-06 as compared to Rs. 761.38 crore in 2004-05.

2.8 OIL INDIA LIMITED (OIL)

Oil India Limited (OIL), a Government of India Enterprise, under the administrative set-up of Ministry of Petroleum and Natural Gas, is engaged in the business of exploration, production and transportation of crude oil and natural gas. OIL was incorporated in 1959 as a company with two-third's share of Burmah Oil Company/Assam Oil Company and one-third share of Government of India. In 1961, OIL became a joint venture company with equal share of Government of India and Burmah Oil Company. On 14th October, 1981, OIL became a Government of India Enterprise, a wholly owned Public Sector Undertaking. The authorized and paid up capital of the company is Rs.250 crore and Rs 214 crore respectively.

The Company produces crude oil and natural gas from its oil fields in Assam and Arunachal Pradesh and natural gas from its fields in Western Rajasthan. OIL also extracts LPG from natural gas in Assam.

The Company has operational areas in the states of Assam, Arunachal Pradesh, Rajasthan and Ganga Valley of Uttar Pradesh and Uttaranchal.

Under NELP regimes, OIL has taken participating interest in 14 NELP Blocks either as operator or along with other consortium partners. Out of these 14 blocks, 8 blocks are in onland, one block in shallow water offshore and 5 blocks in deepwater offshore. OIL is the operator in 6 onland blocks, out of which 3 blocks are in Rajasthan, 2 blocks in Assam and 1 block in Orissa.

OIL is also pursuing exploratory activities outside the country in partnership with Indian as well as overseas companies like Indian Oil Corporation Limited (IOCL), ONGC Videsh Limited (OVL), M/s. Marvis Petroleum, Singapore, M/s Suntera Resources Limited, Cyprus etc. Out of these ongoing ventures in 5 different countries, 2 Blocks are in Libya and 1 Block each in Iran, Gabon, Nigeria and Yemen. Different stages of exploratory works are in progress in these blocks. In addition, the company is continuously scouting for suitable



E&P opportunities in countries like Syria, Sudan, Bangladesh, Indonesia, Oman, Kazakhstan, Russia etc. either alone or with suitable partners.

OIL operates a crude oil trunk pipeline in the North East for transportation of crude produced by both OIL and ONGC in the region to feed Numaligarh, Guwahati and Bongaigaon refineries and a branch line to feed Digboi Refinery. OIL is also continuing reverse pumping of RAVVA crude to BRPL Refinery from Barauni since April, 2003 through its existing Barauni - Bongaigaon sector of the trunk pipeline.

The natural gas produced in Assam is sold to Assam State Electricity Board (ASEB), BVFCL, APL, IOC (AOD), AGCL, NEEPCO and nearby Tea Gardens. In addition, natural gas produced in Rajasthan is supplied to Rajasthan Rajya Vidyut Utapadan Nigam Ltd. (RRVUNL). OIL is also engaged in production of LPG at its plant located at Duliajan, Assam.

In view of the changed business scenario in the hydrocarbon sector and to meet with the future challenges, OIL has already formulated its Strategic and Corporate Plan and started implementation of different priority modules.

2.8.1 New Hydrocarbon finds

In 2006-07, the four new oil & gas discoveries made in Tinsukia and Dibrugarh districts of Assam are as under:

- Well NHK – 556 in Santi Area in Dibrugarh District
- Well Baghjan – 3 in Baghjan area in Tinsukia District
- Well Baghjan - 4, east of Well Baghjan-2 in Tinsukia District
- Well Barekuri – 6 located towards N – NE of Well Barekuri – 4 in Tinsukia district



2.8.2 Physical Performance

Parameter	Unit	2005-06 (Actual)	2006-07		
			Target	Actual upto (2006-07)	Anticipated 31.12.2006
Seismic Survey					
Onshore 2D	GLKM	1,143.75	3,050	223.06	2,240
3D	SQKM	889.90	720	289.28	1,010
Drilling					
Exploratory	'000 Mtr.	47.787	93.403	31.364	67.648
Well	No.	12	24	6	18
Development	'000 Mtr.	77.514	85.497	53.601	70.293
Well	No.	23	39	17	18
Crude Oil Production.	MMT	3.233	3.50	2.352	3. 20
Natural Gas Production	MMSCM	2,269.54	2,365	1,696.77	2,365
Natural Gas Sale	MMSCM	1,742.59	1,840	1,330.05	1,840
LPG Production	'000Tonnes	48.32	50	32.245	44

2.8.3 Financial Performance

(Rs. in Crore)

Parameter	2005-06 (Actual)	2006-07		
		Target	Actual upto 31.12.2006	Anticipated (2006-07)
Plan Outlay	993.97	1,788.95	927.84	2,166.55
Total Income	6,036.56	4,915.33	4,487.94	5,834.01
Net Profit	1,689.93	1,079.12	1,250.33	1,478.77
Internal Resource	2,097.33	1,548.78	1,167.39	2,089.69



2.8.4 Other Achievements:

- Drilling of horizontal wells with the help of internationally reputed companies commenced during 2005-06 and so far drilling of 4 wells has been completed. The results are very encouraging.

- In order to convert the relatively abundant resource of coal in North-East to liquid fuels, a pilot plant for coal liquefaction has been set up in Duliajan and studies are underway in collaboration with M/s Hydrocarbon Technology Inc. (HTI), New Jersey, USA, a part of M/s Headwaters Technology Innovations Group.

- In order to enter into the business of providing pipeline transportation services, OIL is laying a product pipeline from Numaligarh in Assam to Siliguri in West Bengal for product evacuation from Numaligarh refinery.

2.8.5 Progress of Projects

The following projects related to regular E&P activities are at various stages of implementation:

Sl. No.	Name of the Project/Location	Approved Cost (Rs./Crore)	Status
1.	Exploitation of heavy oil in Rajasthan	45	1. Agreement with PDVSA signed on 29th November, 2002. 2. Phase-I of the Pilot study by PDVSA, Intevep, Venezuela completed in July, 2004. 3. Drilling of one shallow well of depth of 856 mtr. completed. Installation of boiler and other surface set up facilities is in progress so that steam injection followed by production testing can commence.
2.	Gas Turbine generating sets at Duliajan Power Stations: 2 nos.	98.66	1. Contract issued to M/s. Development Consultant Pvt. Ltd., Kolkata for consultancy services for basic engineering, preparation of specifications and tender documents, award of contract, supervision etc. 2. Works are in progress. 3. Expected date of completion: 31.10.2008.
3.	Product pipeline from Numaligarh to Siliguri	468.92	1. Laying of 75 km pipeline in the Nulamigarh – Guwahati sector completed. 2. Pipelaying works in 321 km long sector in progress. 3. Progress as on 15.01.2007: 69.9%. 4. Completion Date: 30.09.2007.



2.8.6 Initiatives Taken by OIL

The plan aims at enhancement of crude oil production in the immediate future and bringing about a multifold increase over a longer time horizon, through two distinct sets of initiatives. The first relates to physical activities in the following three major focus areas:

- Maintaining and improving production from the existing acreages in the North East through intensive exploration and development initiatives.
- Enlarging the Company's production base in the rest of the country through aggressive activities in the NELP blocks available with the company, acquisition of new blocks under future NELP rounds and acquisition of producing properties available in the market.
- Acquiring prospective exploration and producing acreages abroad.

The second set of initiatives relates to transformation of OIL to a learning organization with inherent flexibility to adapt to changes. This is being achieved by focusing on enhancing employees' capabilities and competencies to realize a shared vision through the process of continuous learning in teams. The philosophy of mutually accountable team activities aims at quantum improvement in performance and achievements.

The plan also calls for a diversified business portfolio for the company through selective presence in the oil and gas value chain covering amongst others refining, marketing/retailing, gas monetization through cracker/power generation and extension of existing business of pipeline services and E&P services.

The plan is being implemented through six distinct modules:

i. Business and Organization Restructuring and Creation of a New Performance Management System.

ii. Change Management and Creation of a new HR Policy to meet the requirements of the new and emerging competitive business environment.

iii. Implementation of Enterprise Resource Planning (ERP)

iv. Performance Improvement and Cost Reduction

v. Manpower Redeployment

vi. Corporate Governance Framework

The plan is in an advanced stage of implementation.

2.9 GAIL (INDIA) LIMITED

2.9.1 GAIL (India) Ltd is India's principal natural gas transmission and marketing company. The company has extended its presence to gas processing, transmission of Liquefied Petroleum Gas (LPG), Liquefied Natural Gas (LNG) re-gasification, City Gas Distribution, Exploration & Production and telecommunications. The Company has a paid-up Capital of Rs. 845.65 crore. The Government of India holds 57.35% of its equity, and the remaining is held by GDR holders (6.01%), ONGC and IOC (4.83% each) and other Institutional & individual holders (26.98%).



2.9.2 Gas Transmission

GAIL is operating more than 5,800 km of pipelines with a capacity of around 130 MMSCMD for transportation of natural gas to various customers in the country. GAIL is the market leader in field transmission & distribution, carrying 80% of the entire gas available in the country.

In order to transport and market more gas, GAIL has planned to lay different pipelines linking different parts of the country from gas available from various sources, like indigenous gas fields and imported RLNG. GAIL has already completed the Dahej – Vijaipur pipeline in 2004 for evacuation of RLNG from PLL Dahej LNG re-gasification terminal. GAIL has also commissioned Kalaras – Malanpur pipeline in July 2006 to supply gas near Gwalior in Madhya Pradesh. GAIL is going ahead with the implementation of Dahej-Uran Pipeline (DUPL) and Dhabol – Panvel Pipeline (DPPL).



GAIL's Petrochemical Complex at Pata, Auraiya



2.9.3 Performance at a glance for the years 2005-06 & 2006-07 (projected) are given below:

A) Physical

Parameters	Units	Actual Performance in 2005-06	Performance in 2006-07 upto Dec.'06 (provisional)	Projected Performance in 2006-07
Gas Transportation	MMSCMD	78.87	75.96	76.34
Liquid Hydrocarbon Production	'000 MT	1,325	887	1,191
Petrochemical Production	'000 MT	311	227	282
LPG Transportation	'000 MT	2,228	1,824	2,435

B) Financial

Description	Units	Actual Performance in 2005-06	Performance in 2006-07 (Upto Sep 06)	Projected Performance in 2006-07
Profit after Tax	Rs. in Crore	2,310	1,040	1,983
Gross Internal Generation (PAT+ Depreciation)	Rs. in Crore	2,871	1,324	2,704

GAIL (India) Limited has paid a dividend of Rs. 964.25 crore (including Corporate Dividend tax) for the year 2005-2006.

2.9.4 Projects

2.9.4.1 (a) Major projects completed during the year 2005–06

Narimanam – Kuthalam Pipeline.

(b) Major projects completed during the period April–Dec 2006

Kelaras – Malanpur Pipeline.

2.9.4.2 (a) Major projects approved during the year 2005-06

The Dabhol Panvel Pipeline was originally approved in January 2006. A revised approval for the same was obtained in June 2006 with extended scope.

(b) Major projects approved during the period April–Dec 2006

Nil.



2.9.4.3 Ongoing Projects

Projects	Sanctioned Cost (Rs Crore)	Schedule of Completion	Physical Progressas on 30.11.2006 (%)	Financial Progress (Rs Crore)
Dahej – Uran Pipeline	1830.77	March 2007	66.50	231.82
Dhabol – Panval Pipeline	1326.52	Phase I : Mar'07 Phase II: Nov'07	Phase I: 46.3 Phase II: 7.2	15.60
Vijaypur – Kota Pipeline	299.84	Dec 2006	95.65	66.88
Jagoti – Pithampur Pipeline	194.82	Dec 2006	79.38	65.00
Pata Expansion Project –HDPE Plant	530.00	March 2007	90.40	261.00

(Status as on 30.11.2006)

2.9.5 Joint Ventures projects of GAIL

GAIL has also formed a number of joint venture companies for city gas distribution as also in other sectors. GAIL has plans of developing CNG infrastructure across the country as well as abroad. The domestic joint venture companies are as under:

(i) MAHANAGAR GAS LIMITED (MGL)

MGL, a Joint Venture with British Gas (BG) and Government of Maharashtra, was incorporated in May 1995 and has its operations in Mumbai. GAIL holds 49.75% stake in the Company, with an investment of Rs.44.45 crore.

(ii) INDRAPRASTHA GAS LIMITED (IGL)

IGL, a Joint Venture with Bharat Petroleum Corporation Limited (BPCL) and Government of National Capital Territory (NCT) of Delhi, was formed in December 1998. GAIL holds 22.5% stake in the Company, with an investment of Rs.31.50 crore. IGL has its operators in Delhi. It is catering to the world's largest CNG bus fleet.

(iii) BHAGYANAGAR GAS LIMITED (BGL)

BGL is a Joint Venture with Hindustan Petroleum Corporation Limited (HPCL),



incorporated in August 2003. GAIL holds 22.5% stake in the Company. At present, an investment of Rs.9.99 crore has been made in the Company.

(iv) TRIPURA NATURAL GAS COMPANY LIMITED (TNGCL)

TNGCL is a Joint Venture of Tripura Industrial Development Corporation and Assam Gas Limited. It was acquired by GAIL by taking 29% equity stake in August 2005.

(v) CENTRAL U.P. GAS LIMITED (CUGL)

CUGL is a Joint Venture of GAIL and Bharat Petroleum Corporation Limited (BPCL). It was incorporated in February 2005 for implementation of City Gas Projects in Kanpur city. It is currently under the process of development of infrastructure. GAIL has 22.5% stake in the Company.

(vi) GREEN GAS LIMITED (GGL)

GGL is a Joint Venture Company of GAIL and Indian Oil Corporation Limited (lOCL). It was incorporated in October 2005 for implementation of City Gas Projects in Agra & Lucknow cities. It is currently under the process of development of infrastructure. GAIL has 22.5% stake in the Company.

(vii) MAHARASHTRA NATURAL GAS LIMITED (MNGL)

MNGL is a Joint Venture of GAIL and Bharat Petroleum Corporation Limited (BPCL). It was incorporated in January 2006 for implementation of City Gas Projects in Pune city. It is currently under the process of development of infrastructure. GAIL has 22.5% stake in the Company.

(viii) AVANTIKA GAS LIMITED (AGL):

AGL, a Joint Venture with Hindustan Petroleum Corporation Limited, has been incorporated on 7th June, 2006 for City Gas Distribution projects in the state of Madhya Pradesh.

(ix) BRAHMAPUTRA CRACKER & POLYMER LIMITED:

This Joint Venture Company, with GAIL as the main promoter with equity participation of 70% and OIL, NRL and Assam Industrial Development Corporation (Government of Assam) holding 10% equity each, has been incorporated on 8.01.2007. The company has been named as 'Brahmaputra Cracker and Polymer Limited' (BCPL). Project Office has been opened in Guwahati on 16.6.2006. Land acquisition process has been started by the Government of Assam, which is likely to be completed by March 2007. OIDB has granted in-principle approval for a term loan of Rs.327 crore. Discussions are on with the financial institutions/banks for raising debt.

(x) RATNAGIRI GAS AND POWER PRIVATE LIMITED (RGPPL)

GAIL has been pursuing opportunities of Mergers and Acquisitions (M&A) in various sectors. A noteworthy outcome in this direction has been the acquisition of assets of the Dabhol Power project by a new Joint Venture Company, namely, Ratnagiri Gas and Power Private Limited (RGPPL), where GAIL has 28.5% participating interest. The company has paid Rs.500 crore as advance pending allotment of equity shares. It is an integrated



project, i.e., gas based power plant of 2,184 MW and a LNG import and re-gasification facility with a capacity of 5 MMTPA. Commissioning of this project will offer an opportunity to the company to import 2.9 MMTPA of LNG for merchant sales. The project provides a unique growth prospect for the company to enable it to expand its gas pipeline infrastructure and to deliver the growing demand of gas in the Indian market.

(xi) PETRONET LNG LIMITED (PLL)

PLL is a joint venture company between GAIL, BPCL, IOCL, ONGCL, Gaz De France and ADB. GAIL holds 12.5% equity at an investment of Rs.98.75 crore. PLL was formed for importing LNG and setting up of LNG import and regasification facilities. PLL has already finalized a long term LNG supply contract with Ras Gas, Qatar for import of 7.5 MMTPA for its Dahej and Kochi LNG terminal. PLL has recently signed shipping contracts for adding 3rd LNG tanker for Dahej terminal, which is being expanded to 10 MMTPA. Presently the terminal is under operation to its full capacity of 5 MMTPA.

2.9.6 Telecommunication-GAILTEL

GAIL has utilized its telecommunication network, which is for its captive use for pipeline network, to connect various cities. Presently it owns 13,000 km of optical fibre cable and offers its bandwidth to telecom operators. GAIL has also joined hands and signed an MOU with Power Grid Corporation and Rail Tel for cooperation in telecom sector. GAIL is also in the process of acquiring National Long Distance (NLD) license, which would throw open the lucrative corporate and Government segment. This shall mean a significant increase in the size of the addressable market.

GAIL has installed a countrywide GAILTEL Network Management Center (NMC), which is a state-of-the-art telecom network management facility, enabling centralized monitoring and control of the entire GAILTEL network. This network management centre is designed for 24 X 7 operations with world class facilities to ensure reliability, safety and security of the operational systems. The NMC houses high-end NMS servers, which allow centralized control over the entire telecom assets in the areas of real time fault management, remote configuration management, network performance management and asset security management.

2.9.7 Exploration and Production

E&P activities continued to remain focus area of activity during the year. The production of crude oil in the Cambay Block in Gujarat has started; the company holds 50% participating interest. GAIL, along with other consortium partners, was awarded Block 56 in Oman through bidding. GAIL has two blocks in Myanmar which have gas finding. In the Coal Bed Methane third bidding round, the consortium led by GAIL was awarded three CBM blocks. GAIL has also been awarded 15 exploration blocks in the NELP-VI bidding round.



CHAPTER - III



REFINING

3.1 REFINING CAPACITY

The domestic refining capacity as on 01.04.2006 was 132.47 Million Metric Tonnes Per Annum (MMTPA). The present refining capacity is 148.97 MMTPA comprising 105.47 MMTPA by PSUs and 43.50 MMTPA by private sector. At present, there are 19 refineries operating in the country, 17 in public sector and two in private sector. Out of the 17 Public Sector refineries 7 are owned by Indian Oil Corporation Limited (IOCL), 2 each by Chennai Petroleum Corporation Limited (a subsidiary of IOCL), Hindustan Petroleum Corporation Limited (HPCL), Bharat Petroleum Corporation Limited (BPCL) and Oil and Natural Gas Corporation Limited, 1 each by Numaligarh Refinery Limited (a subsidiary of BPCL) and Bangaigaon Refinery and Petrochemicals Limited (a subsidiary of IOCL). The private sector refineries belong to Reliance Industries Limited and Essar Oil Limited.

3.2 CHENNAI PETROLEUM CORPORATION LIMITED (CPCL)

Chennai Petroleum Corporation Limited (CPCL) (formerly known as Madras Refineries Limited) was formed as a joint venture in 1965 between the Government of India (GOI), AMOCO India Inc., U.S.A. and National Iranian Oil Company (NIOC) having a share holding in the ratio 74%: 13%: 13%. In 1985, AMOCO disinvested in favour of GOI and the shareholding percentage of GOI and NIOC stood revised at 84.62 and 15.38 respectively. As a part of restructuring, M/s Indian Oil Corporation Limited (IOCL)



CPCL-2.5 MGD Sewage Reclamation Plant



acquired equity from GOI in 2000-01. Currently, IOCL holds 51.88% while Naftiran Inter-trade Company Limited (an affiliate of NIOC) continues its holding at 15.40%.

CPCL has two refineries, with a combined refining capacity of 10.5 million metric tonnes per annum (MMTPA). The Manali Refinery in Chennai has a capacity of 9.5 MMTPA and is one of the most complex refineries in India with Fuel, Lube, Wax and Petrochemical feedstocks production facilities. The second refinery at Cauvery Basin, Nagapattinam was set up initially with a capacity of 0.5 MMTPA in 1993 and later its capacity was enhanced to 1.0 MMTPA in 2002.

3.2.1 Physical Performance

During the year 2005-06, the company processed 10.36 Million Metric Tonnes (MMT) of crude oil, which was 16% higher than the previous year. The company achieved MoU Excellent rating for its overall performance during the year 2005-06.

3.2.2 Financial Performance

During the year 2005-06, the company achieved a turnover of Rs. 25,408 crore as against Rs. 16,271 crore in the previous year. The profit before tax was lower at Rs. 723.37 crore as against Rs. 933.63 crore mainly on account of sharing of under recovery of oil marketing companies, in respect of Liquefied Petroleum Gas/Superior Kerosene Oil/Motor Sprit/High Speed Diesel amounting to Rs. 439 crore. The profit after tax was Rs. 480.96 crore as compared to Rs. 596.97 crore in the previous year. The company maintained the dividend rate of 120% for the year 2005-06.

3.2.3 Projects completed

3.2.3.1 New Zero Discharge Plant

A new Zero Discharge Plant of 200 KL/Hr. for treating effluents from Refinery III and reusing treated water in the Refinery was completed at a cost of Rs. 11.00 crore in September 2005. This Project, apart from significantly contributing to the protection of



CPCL's Zero Discharge Plant



environment by treating the effluents, helps in enhanced water availability position for Manali refinery operations. The commissioning of this unit is yet another milestone in implementing environmental friendly infrastructure projects by the company.

3.2.3.2 New Boiler for Operational reliability

In order to enhance the reliability of steam and power availability for the uninterrupted operation of Manali Refinery, the two old boilers have been replaced during the year with a new 100 TPH boilers at a cost of Rs. 24.81 crore.

3.2.4 New Project initiatives

3.2.4.1 Auto Fuel Quality Projects to meet Euro-IV

CPCL has taken up the following initiatives in order to supply Euro-IV MS and HSD to the market well before the scheduled date of 1st April 2010:-

- Setting up a new diesel hydrotreating unit by December 2009 to enable the Refinery to upgrade diesel quality to Euro-IV standard.

- Capacity augmentation of the existing Catalytic Reformer Unit and setting up of a new isomerisation unit by the year 2009 for upgradation of MS quality to Euro-IV standard.

3.2.4.2 Refinery capacity augmentation at Manali

CPCL has undertaken capacity augmentation of its Crude Distillation Unit (CDU)-III from 3.0 to 4.0 MMTPA of crude processing. The capacity of CDU-I will also be revamped by additional 0.7 MMTPA. These projects are expected to be completed by early 2009 with an estimated cost of Rs. 314 crore. With the implementation of these projects, the capacity of Manali Refinery will increase from 9.5 to 11.2 MMTPA.

3.3 BONGAIGAON REFINERY & PETROCHEMICALS LIMITED (BRPL)

BRPL was incorporated on February 20, 1974 with the objective of installation of a refinery having crude processing capacity of 1 MMTPA and a Petrochemical Complex consisting of Xylene, Dimethyl Terephthalate (DMT) and Polyester Staple Fibre (PSF) units. The crude processing capacity of the refinery was enhanced to 2.35 MMTPA in 1995-96 by commissioning of its Refinery Expansion Units.

The authorized equity capital and the paid up capital of the Company is Rs. 200 crore and Rs. 199.82 crore respectively. The Government of India disinvested its equity share of 74.46% to Indian Oil Corporation Limited (IOCL) in March, 2001 and hence BRPL became the subsidiary Company of IOCL on 29th March, 2001.

3.3.1 Physical Performance

The refinery processed 2.356 million metric tonnes (MMT) of crude oil during the year 2005-06 as against 2.311 MMT in the previous year. Production of LPG in 2005-06 was 50.4 TMT as against the previous highest production of 49.1 TMT in 2004-05. The company achieved lowest ever fuel and loss of 5.42% on crude throughput during the period 2005-06.



3.3.2 Financial Performance

The Company achieved a net profit of Rs. 175 crore in 2005-06. The company expects to earn an estimated net profit of Rs. 240 crore for the year 2006-07. The company has paid a total dividend (including dividend tax) of Rs. 61.52 crore during the year 2005-06.

3.3.3 New Projects

(i) Diesel Hydrotreatment Project

The company has taken action for setting up of Diesel Hydro Treatment facilities to meet Euro-III equivalent specification of Diesel. The project is expected to be completed by September, 2009.

(ii) Motor Sprit Maximisation Project

BRPL has initiated action to implement the MS Maximisation Project with the following objectives:

(a) Improving gross refinery margin

(b) Reduce production of naphtha which is a demand limited product.

The project is expected to be completed by November, 2008.

(iii) Motor Spirit Quality Upgradation Project

The company has taken action for setting up a Motor Spirit Quality Upgradation Project by using the existing idle Xylene Isomerisation unit to meet Euro-III equivalent specification of Motor Spirit. The project is expected to be completed by September, 2009.

(iv) Indmax Project

BRPL has proposed to install Indmax Project which works at high operation severity to maximize production of LPG and Gasoline from various residual petroleum fractions using Fluidised Catalytic Cracking (FCC) reactor-regenerator configuration and proprietary catalyst formulation.



A view of Crude Distillation Unit (BRPL)



The Indmax Unit will:

a) Eliminate production of Light Diesel Oil, Low Sulphur Heavy Stock, Low Viscosity Furnace Oil and Fuel oil.

b) Improve profitability.

The project is expected to be completed by the year 2012.

3.4 NUMALIGARH REFINERY LIMITED (NRL)

Numaligarh Refinery, popularly known as "Assam Accord Refinery" had been set up as a grass-root refinery at Numaligarh in the District of Golaghat (Assam) in fulfillment of the commitment made by Government of India in the historic "Assam Accord", signed on 15th August, 1985 for providing the required thrust towards industrial and economic development of Assam. Both the Refinery and its adjacent Marketing Terminal were completed within the approved project cost of Rs. 2,724 crore. Commissioning process of Numaligarh Refinery was completed in June 2000 and commercial production commenced from 1st October, 2000.

3.4.1 Physical Performance

During the year 2005-06, the crude throughput was 2,133 TMT against MOU target 2,200 TMT. During April-September 2006, the crude throughput was 1,285 TMT against the target of 1,212 TMT. Distillate yield of 85.06 % was achieved by NRL during 2005-06.

3.4.2 Financial Performance

During the period 2005-06, the company registered a profit (After Tax) of Rs. 448.93 crore. Sales Turnover during the period 2005-06 was Rs. 5,820.37 crore. The company has paid Rs. 139.77 crore as dividend for the year 2005-06.

3.4.3 Completed Projects

Motor Spirit (MS) Project (Euro-II Specification)

- The MS Project for production of Motor Spirit confirming to Euro-III specifications, was mechanically completed on 31st May 2006.



The newly commissioned MS plant of NRL



- The Naphtha Hydrotreating Unit (NHU) and the Catalytic Reforming Unit (CRU) were commissioned in June 2006 and July 2006 respectively. With the commissioning of these units, production of MS conforming to BS-II specifications has started from 31.07.2006.

3.4.4 Ongoing Project

Receipt and Despatch Terminal at Siliguri

To receive evacuation in future, NRL has entered into an agreement with M/s Oil India Limited (OIL) for transportation of white oil products from Numaligarh to Siliguri through a product pipeline. Construction and operation of the pipeline is under OIL's scope. The dispatch facilities at Numaligarh and receiving terminal at Siliguri are being constructed by NRL.

3.5 MANGALORE REFINERY & PETROCHEMICALS LIMITED (MRPL)

Mangalore Refinery and Petrochemicals Limited (MRPL), the first joint venture company for setting up a crude petroleum refinery in India was formed in 1987 jointly by Hindustan Petroleum Corporation Limited alongwith Indian Rayon and Industries Limited and its associate companies (A.V. Birla Group). The refinery project was commissioned in March, 1996 with an actual capacity of 3.69 MMTPA. The expansion project of MRPL, having capacity of 9.69 MMTPA, was commissioned in April, 2001. The refinery is located at Mangalore on the western coast of India, primarily conceived to maximize middle distillates, such as kerosene and diesel. The refinery is designed to process light to heavy and sour to sweet crude. The



A view of MRPL



performance of MRPL started deteriorating after dismantling of APM for refineries in April, 1998 and the Company came very close to becoming a sick company by 2002-03.

With the approval of the Government, ONGC acquired the entire stake of Aditya Birla Group in MRPL for Rs. 59.43 crore and also infused additional equity capital of Rs. 600 crore in March, 2003 as part of the approved debt restructuring plan. With this, ONGC acquired 51% stake in the equity of MRPL. Thus, MRPL became a Government company within the meaning and scope of Section 617 of the Companies Act, 1956 and also a subsidiary company of ONGC. In June/July 2003, ONGC acquired Rs. 35.80 crore equity shares held by banks and financial institutions issued against part conversion of their loans in terms of debt restructuring plan, increasing its stake in MRPL to 71.62%.

MRPL is the first refinery in India to produce Euro-III high speed diesel (HSD) and Euro III motor spirit (petrol).

3.5.1 Physical Performance

During the year 2005-06, the Company processed highest ever throughput of 12.12 million metric tonnes (MMT) of crude oil achieving 125% capacity utilization, produced 11.338 MMT of finished goods and dispatched 11.50 MMT. Yield for the year was 93.56%, comprising distillates 73.927% and heavy ends 19.62%. The fuel & loss of the refinery was 6.44%. The Company's Mixed Xylene Plant to recover maximum quantity of Xylene (Ortho, Para & meta xylenes and also ethyl benzene) using distillation process was commissioned on 17.11.2006. The Company's Isomerization Unit consisting of Mixed Light Naphtha Hydrotreater (LNHT), Bensat and Penex (LNHT/DeP/Penex) process was commissioned on 30.12.2006.

3.5.2 Financial Performance

During financial year 2005-06, the Company earned a net profit of Rs. 371.61 crore. Taking an overall prudent view and the forthcoming investment in expansion programmes, the Company declared a dividend of 7%.

3.5.3 Future Plans

Capital investments are being made by the Company in their refinery upgradation-cum-expansion project and revamping of CDU/VDU, HCU and GOHDS Units which will result in product quality improvement, value addition, de-bottlenecking and energy saving.



CHAPTER - IV



MARKETING AND DISTRIBUTION

4.1 INDIAN OIL CORPORATION LIMITED (IOCL)

4.1.1 Indian Oil Corporation Limited (Indian Oil) is the country's largest commercial enterprise in terms of sales turnover. During 2005-06, the sale turnover of Rs. 1,83,204 crore (US$ 41 billion) and profit after tax of Rs. 4,915 crore (US$ 1.10 billion) for fiscal 2005. It is the 21st largest petroleum company in the world. Indian Oil is also the highest ranked Indian company in the prestigious Fortune "Global 500" listing in terms of sales turnover, having moved 17 places to the 153 rd position based on fiscal 2005 performance.

4.1.2 Network

Indian Oil and its subsidiaries account for 57% of the marketing infrastructure, 41% refining capacity and 51% petroleum product pipeline capacity in India. In the year 2005-06, Indian Oil Corporation Limited sold 49.61 million tonnes of petroleum products, including exports of 2.09 million tonnes. Indian Oil along with its domestic subsidiaries achieved a domestic market share of 47%. Indian Oil's seven refineries achieved a throughput of 38.52 million tonnes excluding those of its subsidiaries, and the pipeline network of above 9,000



IOCL's Retail Outlet



kilometres transported 45.35 million tonnes of crude oil and petroleum products.

4.1.3 Memorandum of Understanding with Government

As a National Oil Company, it has attained "Excellent" MOU rating for the 17th consecutive year in 2005-06, indicating consistent and outstanding performance as per the laid-down criteria in the Memorandum of Understanding (MoU) with the Government of India.

4.1.4 India's Flagship National Oil Company

Beginning in 1959 as Indian Oil Company Limited, Indian Oil Corporation Limited was formed in 1964 with the merger of Indian Refineries Limited (Est.1958).

4.1.5 Refining and Pipelines

The Indian Oil Group of companies owns and operates 10 out of India's 19 refineries with a combined refining capacity of 54.20 million tonnes per annum as on 01.04.2006 which has been increased to 60.2 MMTPA (1.2 million barrels per day) with the commissioning of Panipat Refinery expansion project. These include two refineries of its subsidiary Chennai Petroleum Corporation Limited (CPCL) and one of Bongaigaon Refinery and Petrochemicals Limited (BRPL). Indian Oil owns and operates the country's largest network of cross-country crude oil and product pipeline spanning over 9,000 kilometers, meeting the vital energy needs of the country.

4.1.6 Marketing

As the flag-ship national oil company in the down stream sector, Indian Oil together with its marketing subsidiary, IBP Co Limited reaches precious petroleum products to millions of people everyday through a countrywide network of over 30,000 sales points. They are backed for supplies by 167 bulk storage depots and terminals, 97 aviation



IOC exports Lube Oil to Pakistan



fuel stations and 88 Indane LPG bottling plants as on 01.04.06.

Indian Oil together with IBP operates the largest and the widest network of petrol and diesel stations in the country, numbering over 15,000. Indian Oil reaches Indane cooking gas to the doorsteps of 43.4 million customers in 2,546 markets through a network of nearly 4,856 Indane distributors.

Indian Oil's ISO-9002 certified Aviation Service commands a market share of 64% in aviation fuel business, meeting the fuel needs of domestic and international flag carriers, private airlines and Indian Defense Service. Indian Oil also enjoys a dominant share of the bulk consumer business, including that of Railways, state transport undertakings, defense establishments industrial, agricultural and marine sectors.

To maintain its competitive edge and leadership status, Indian Oil was investing Rs.18,000 crore during the X Plan Period (2002-07) and has proposed a plan investment of Rs. 45,215 crore (US $ 10.4 billion) during XI plan period (2007-12) in integration and diversification projects, besides refining and pipeline capacity augmentation, product quality upgradation, Research and Development and expansion of marketing infrastructure.

4.1.7 Customer Service

At Indian Oil, customers always get first priority. New initiatives are launched from time to time for the convenience and improved services to various customer segments.

Exclusive XtraCare petrol & diesel stations unveiled in select urban and semi-urban markets offer a range of value-added services to enhance customer delight and loyalty. Similarly, large format Swagat brand outlets cater to highway motorists, with multiple facilities such as food courts, first aid, rest rooms and dormitories, spare parts shops, etc. Specially formatted Kisan Seva Kendra outlets meet the diverse needs of the rural populace, offering a variety of product and services such as seeds, fertilizers, pesticides, farm equipments, medicines, spare parts for trucks and tractor engine oils and pump set oils, besides auto fuels and kerosene.

4.1.8 Learning Organization

Indian Oil is a "Learning Centre" with a score of full-fledged training activities across the country building skills and competencies among Indian Oil people to face the challenges of the market place, evolving economy of the country and becoming an international player. Among these, the Indian Oil Institute of Petroleum Management (IIPM) at Gurgaon, the Indian Oil Management Centre for Learning in Mumbai and the Indian Oil Management Academy at Haldia has emerged as world-class training and management academies.

4.1.9 R&D for Growth

Indian Oil's world class R&D Centre is one of the best in Asia. Besides pioneering work in lubricants formulation, refinery processes, pipelines transportation and alternative fuels such as bio-diesel, the Centre is also the nodal agency of the Indian Hydrocarbon sector for ushering in Hydrogen fuel into the country.





A view of IOC L Data Centre

4.1.10 Expanding Horizons

Indian Oil has set its sight to reach US$ 60 billion revenues by the year 2011-12 from current earnings of US$ 41 billion. The road map to attain this milestone has been laid through vertical integration – forward into petrochemicals and backwards into exploration & production of oil – and diversification into natural gas business, besides globalization of its marketing operations.

In petrochemicals, Indian Oil is currently implementing a master plan envisaging Rs. 30,000 crore (US$ 6.8 billion) investment by the year 2011-12. As part of this, a world-scale Linear Alkyl Benzene plant at Koyali Refinery and an integrated Paraxylene/Purified Terephthalic Acid plant at Panipat are already in operation, while a Naphtha Cracker with downstream polymer units is coming up at Panipat. IndianOil also proposes to develop another Refinery-cum-Petrochemicals complex at Paradip on the east coast to increase its presence in the sector besides having already infused equity participation in Haldia Petrochemicals Limited.

In exploration & production (E&P), IndianOil has bagged eleven blocks in the first three rounds of bids under NELP (New Exploration Licensing Policy) in India, in consortium with other Oil PSU companies. It has also farmed-in two on-shore blocks in Assam and Arunachal Pradesh region besides acquiring participating interests in two CBM bocks within the country.

Overseas E&P ventures include participation in onland exploration blocks in the countries, viz., **Libya, Nigeria, Gabon and Yemen** along with consortium partners through Farm-in/ Service Contracts. In **Iran**, Indian Oil has signed Exploration Service Contract (ESC) along with consortium partners for the off shore Farsi Exploration Block. The Company



is also exploring opportunities to acquire a suitable medium-sized E&P company to consolidate its upstream portfolio.

In natural gas business, Indian Oil is already marketing 1.50 million tonnes of regassified liquefied natural gas per annum. To augment its business in the sector, it has signed an MOU for import of 1.75 million tonnes of LNG per annum with Iran from the year 2009 onwards. The Company has also proposed partnering Petropars, a subsidiary of National Iranian Oil Company, in jointly developing gas blocks in the North Pars fields of Iran.

IOC also has made successful forays in export of services by way of conducting training programmes, manpower secondment, technical services agreement related to project engineering, purchasing, construction/ commissioning and operational activities etc. with their overseas clients in the countries like Oman, Iraq, Dubai, and Sudan.

To emerge as a transnational energy major, IndianOil has set up subsidiaries in Sri Lanka, Mauritius and the United Arab Emirates (UAE) and is simultaneously scouting new opportunities in the energy markets of Asia and Africa.

Indian Oil subsidiary, Lanka IOC Ltd., operates 160 petrol & diesel stations in Sri Lanka, commanding a 22% market share. Its oil terminal at Trincomalee is also Sri Lanka's largest petroleum storage facility.

Indian Oil (Mauritius) Ltd. has also garnered a 14% market share, which include aviation fuelling and bunkering business. It operates a modern petroleum bulk storage terminal at Mer Rouge port, besides seven petrol and diesel stations. Expansion of retail network, a modern product-testing laboratory is also being set up in Mauritius.



Indian Oil Retail Outlet in Mauritius



The Corporation's UAE subsidiary, Indian Oil Middle East FZE, oversees business expansion in the Middle East. The Company is expected to be developed as a Nodal Agency for export of Lubricants to Middle East and African countries through several strategic initiatives.

4.1.11 Performance

4.1.11.1 Physical Performance

In the current year, for the period till December 2006, performance has been as under:

Parameter	Unit	Performance			
		2006-07 Apr-Dec (P)	2005-06	2004-05	2003-04
Refinery Crude Throughput	MMT	32.19	38.52	36.63	37.66
Pipeline Throughput	MMT	37.85	45.35	43.03	45.17
Product Sales (domestic)	MMT	37.08	47.52	48.86	46.81
Product Sales (Exports)	MMT	2.45	2.09	1.96	1.81

4.1.11.2 Financial Performance

The Corporation achieved a turnover of Rs. 183,204 crore in 2005-06 as against Rs. 150,729 crore in 2004-05. The profit before tax was Rs. 6,706 crore and the profit after tax was Rs. 4,915 crore for the year 2005-06 against the corresponding figures in 2004-05 of Rs. 5,955 crore and Rs. 4,891 crore respectively.

Indian Oil Corporation (IOC) has paid out a total dividend of 125% amounting to Rs. 1,460 crore for the financial year 2005-06, on the total share capital of Rs. 1,168.01 crore. With a record of 40 consecutive years of dividend declaration, Indian Oil has so far paid a cumulative dividend of Rs. 11,602 crore to its shareholders. The Company has declared an interim dividend of 60% during the fiscal 2006-07.

For the first six months of the current fiscal, ended September 2006, the Corporation's Gross Turnover moved up by around 26%, to Rs. 1,08,297.45 crore from Rs. 85,998.62 crore for the corresponding period of the previous year. Net profit for the first six months ended September 2006, was Rs. 4,830.79 crore as against Rs. 891.03 crore for the same period of the previous year. An amount of Rs 7,168 crore has been accounted for in the current period (April-September'06) as per approval received from Government of India for issuance of Special Oil Bonds in lieu



of under realization suffered by the Company. Consequent to non- revision of retail selling prices in line with the International prices, the Company has suffered net under realization of Rs 2,462 crore during April- Septemebr'06 on the sale of MS, HSD, SKO(PDS) and LPG(Domestic).

4.1.12 New Initiatives

SAP (Enterprise Resource Planning)

During the year, SAP was extended to 125 more locations, including those in the Kashmir Valley, bringing the total number to 650 as at Dec'06. As part of the largest SAP implementation project in the Asia-Pacific, about 5,000 end-users are now connected to the central Production Server at IIPM, Gurgaon, with a response time of less than two seconds. SAP consultancy assignment was successfully completed at IBP locations all over India in a time span of three months. Based on the experience gained from SAP implementation in the organization, consultancy services were provided for implementation of the same in the subsidiary companies IBP Co. Ltd and Bongaigaon Refinery and Petrochemicals Ltd.

Optimization

For the first time, the Integrated Planning model has been used to draw up the annual plans for Refineries and Pipelines divisions, as well as for negotiation and finalisation of product exchange with other marketing companies. Optimisation models have been also deployed to evaluate investments in various projects, including resid upgradation project at Gujarat Refinery, expansion of Panipat Refinery to 15 million tonnes per annum, Hydrocracker at Haldia Refinery, and Paradip Refinery & associated product pipelines.

Crude Oil Basket

Identification of new grades, which suit IOC's refinery system technically and commercially, is an ongoing process and IOC has been proactive in diversifying sources of crude oil imports. After assessing their suitability based on technical and commercial considerations, IOC has imported 4 trial grades of crude oil during 2006-07 and 4 trial grades of crude oil during 2005-06.It has increased its share of processing of High Sulphur/Heavy Crude oil in its refineries from 38.7% to 41.2% during the current year.

Biofuels

To bring about greater focus on bio-fuels, IOC has formed a Biofuel group at its corporate office and has definite plans to have its presence across the entire value chain of Bio-diesel. IOC has already commenced discussions with several state governments to work out the modalities for plantation, refining etc. through joint cooperation.

Meanwhile, Jatropha plantation has been done on 70 hectares of Railway land at Surendra Nagar, Gujarat. More than one lakh saplings planted. Jatropha oil extracted out of Jatropha seeds will be used in BioDiesel production.

Hydrogen/CNG

In line with the International trend for entering into Hydrogen economy, Oil companies in India have taken initiatives for assessing the feasibility of using hydrogen as a transport fuel.



IOC R&D is acting as nodal agency on behalf of oil & gas sectors for undertaking research activities for using hydrogen as a transport fuel.

IOC R&D has undertaken demonstration project using Hydrogen CNG blend in automotive Vehicles. IOC has set up a Hydrogen-CNG dispensing station at R&D Centre for dispensing H-CNG blends for test vehicles. Trials at present are being conducted on a passenger car and 3-Wheeler using up to 10% H2 in CNG, without doing any engine modification.

IOC, R&D has tied up with vehicle manufacturers to take up the necessary modifications in the engines for using higher percentage of H2 with ultimate aim of reducing NO2 emission and improving energy efficiency. A demo project on a larger scale has also been planned in Delhi.

"In-House" chartering of Ocean Vessels

For the first time, Cabinet approval was received in April' 2005 for in-house chartering of ocean vessels instead of through Trans chart. This initiative along with chartering of Very Large and Ultra Large crude oil carriers has resulted in substantial savings and better management of supply chain.

4.1.13 Subsidiaries

(a) Indian Oil Mauritius Limited (IOML)

IOML has been set up as a Wholly Owned Subsidiary of IOC in Mauritius with equity of MUR 488 Million (INR 78 crore approx.) which has been fully subscribed by IOC.

The subsidiary owns and operates storage facilities, Retail Outlets and Aviation facilities. With the commissioning of the terminal at Mer Rouge in December 2003, the first Retail Outlet in November 2004, and also a State-of-the-Art laboratory besides Aviation refueling services, IOML's operations have begun in right earnest to play a major role in the country's downstream oil business. In the year 2005-06, gross turnover was Rs 302.23 crore vs Rs 127.62 crore in the previous year. Profit after Tax rose to Rs 6.07 crore in 2005-06 from Rs 0.92 crore during 2004-05.

For the first six months of the current fiscal, ended September 2006, the Corporation's Gross Turnover moved up by around 83 %, to Rs.194.32 crore from Rs.105.87 crore for the corresponding period of the previous year. Profit after Tax for the first six months ended September 2006, was Rs.5.18 crore as against Rs.2.33 crore for the same period of the previous year.

(b) Lanka IOC Limited (LIOC)

LIOC was incorporated as a wholly owned subsidiary of Indian Oil on 29th August 2002. Commercial operations commenced on 14th February 2003. To support the downstream marketing activities in the country through its retail network, LIOC is already engaged in operations of the port terminal at Trincomalee besides having acquired 33% share in the Ceylon Petroleum Storage Terminal Ltd (CPSTL) which controls the Terminal



at Colombo as well as smaller depots around the country. In the year 2005-06, gross turnover was Rs 1,639.40 crore vs Rs 1,217.55 crore in 2004-05. The Company during the year 2005-06 however, made a net loss of Rs 309.11 crore arising due to non payment of subsidy claims receivable from Govt. of Sri Lanka (GOSL) as compensation for the loss arising from price differential suffered by the Company due to price revisions not being carried out by GOSL as per pricing formula agreement entered into by the company, Ceylon Petroleum Corporation and Secretary to the Treasury, GOSL.

For the first six months of the current fiscal, ended September 2006, the Corporation's Gross Turnover moved up by around 93%, to Rs.704.72 crore from Rs.364.95 crore for the corresponding period of the previous year. Profit after Tax for the first six months ended September 2006, was Rs.29.67 crore as against Rs.9.36 crore for the same period of the previous year.

Of late, in a much-awaited breakthrough, LIOC has since signed a Settlement Agreement on 05.01.07 with the Government of Sri Lanka (GoSL) for compensation of its under-realisation in sale of petroleum products.

On signing of the agreement, the outstanding amount of SLR 5.16 billion (INR 215 crore) has been settled in full, with Lanka IOC receiving a cheque for SLR 700 million (INR 29.17 crore) and the balance SLR 4.46 billion (INR 185.83 crore) in the form of Government Bonds. These Bonds are non-tradable in nature, bearing an interest rate of 11% and a maturity period of two years.

(c) Indian Oil Technologies Limited (ITL)

ITL a wholly owned subsidiary of IOC, under the aegis of the R&D Centre has been formed with an aim to commercialize the intellectual property rights of the Corporation through consultancy and licensing of in-house developed Hydrocarbon Technologies both within the country and overseas. The subsidiary posted a profit after tax of Rs.0.20 crore as against Rs.0.42 crore in 2004-05.

For the first six months of the current fiscal, ended September 2006, the Corporation's Gross Turnover was Rs.0.37 crore as against Rs.0.44 crore for the corresponding period of the previous year. Profit after Tax for the first six months ended September 2006, was Rs.0.01 crore as against Rs.0.12 crore for the same period of the previous year.

(d) Chennai Petroleum Corporation Limited (CPCL)

Indian Oil has an equity share of 51.8% in CPCL, which owns and operates two Refineries at Manali and Narimanam in Tamil Nadu. The subsidiary recorded a Gross Turnover of Rs. 25,464.35 crore in 2005-06 vs Rs. 16,279.89 crore in 2004-05.



Profit after tax was Rs. 480.96 crore in 2005-06 vs Rs. 596.97 crore in 2004-05.

For the first six months of the current fiscal, ended September 2006, the Corporation's Gross Turnover moved up by around 26%, to Rs. 15,432.31 crore from Rs. 12,289.96 crore for the corresponding period of the previous year. Net profit for the first six months ended September 2006, was Rs.351.83 crore as against Rs.430.42 crore for the same period of the previous year.

(e) Bongaigaon Refinery and Petrochemicals Limited (BRPL)

Consequent to the transfer of 74.46% equity share of BRPL to Indian Oil in 2001, BRPL has become a subsidiary of the Corporation. The performance of the subsidiary has been greatly enhanced with the allocation of 1.52 MMT Ravva crude ex K-G basin. The subsidiary recorded a profit after tax of Rs. 174.76 crore in 2005-06 Vs Rs. 478.30 crore in 2004-05. Turnover in 2005-06 was Rs. 6,290.35 crore Vs. Rs. 4,996.63 crore in 2004-05.

For the first six months of the current fiscal, ended September 2006, the Corporation's Gross Turnover moved up by around 23.6%, to Rs. 3,553.83 crore from Rs. 2,875.75 crore for the corresponding period of the previous year. Net profit for the first six months ended September 2006, was Rs. 132.02 crore as against Rs. 117.96 crore for the same period of the previous year.

(f) IBP Co. Limited (IBP)

IBP became a subsidiary of Indian Oil following the transfer of 53.58% equity held by the Government of India. The disinvestments of the balance 26% held by GOI was carried out through book building process as per SEBI guidelines in March 2004.

During 2005-06, the company recorded a turnover of Rs. 15,196.58 crore and registered an increase of 21% over Rs. 13,478.96 crore in 2004-05. The company posted Rs. 12.44 crore as Profit after Tax during 2005-06.

For the first six months of the current fiscal, ended September 2006, the Corporation's Gross Turnover moved up by around 23.3%, to Rs. 8,965.43 crore from Rs. 7,268.46 crore for the corresponding period of the previous year. The company posted a net loss of Rs 625.38 crore. As a result of non– revision of retail selling price matching with the movement of Refinery Transfer Price (RTP) linked with the international price, the Company has suffered under-realization of Rs 866.68 crore for the six months ending September, 2006 based on industry expected margin on account of products (MS, HSD and SKO-PDS) net off discount receivable from upstream oil companies under loss sharing scheme and Oil Bonds as approved by the Ministry.

The similarities in the business and the possible synergies of operations to result in higher efficiency, economy of scale have led to the Holding Company



initiating steps for merger of IBP with Indian Oil. The Government of India has approved the merger proposal in principle. The merger of IBP Co. Limited with Indian Oil Corporation Limited is at an advanced stage.

(g) IOC Middle East FZE, Dubai

The wholly owned subsidiary was established in April'06 with equity of Rs 1.26 crore for marketing of lubricants in the middle- east and other African countries. During the first six months of its operations in the fiscal 2006-07, the Company has recorded a turnover of Rs. 0.31 crore.

The Company is expected to play a lead role in promoting export of lubricants in the gulf and African countries through several strategic initiatives in near future.

4.1.14 Projects

4.1.14.1 (a) Major Projects completed during 2005-06

1. Diesel Hydrotreatment Facilitites at Mathura
2. MS Quality upgradation facilitates at Mathura
3. MS Quality upgradation facilities at Haldia
4. Chennai – Trichy – Madurai Product pipeline
5. Sidhpur – Sanganer product pipeline



Modern Terminal of IOCL in Mauritius



(b) Major Projects completed during the period April- Dec'06

1. Integrated PX/PTA project at Panipat Refinery
2. Panipat Refinery expansion project from 6 MMTPA to 12 MMTPA
3. Mundra – Panipat Crude oil Pipeline and conversion of Kandla– Panipat section of KBPL to crude oil service (Panipat refinery expansion linked pipeline projects)
4. MS quality upgradation facilities at Gujarat Refinery.
5. Koyali - Dahej Product Pipeline
6. TOP at Trichi

4.1.14.2 Major Projects approved during the year 2006-07

1. Naphtha Cracker Project at Panipat Project Cost - Rs. 12,138 crore.
2. Panipat – Jalandhar LPG Pipeline. Project cost - Rs. 186.72 crore.

Major Ongoing Projects as of December 2006.

Sl. No.	Name of Project	Sanction cost (Rs.Crore)	Expected Commissioning
1.	Panipat Refinery Expansion project from 12 to 15 MMTPA	806.00	March,2008
2.	Installation of facilities for improvement in Diesel Quality and Distillate Yield (Hydrocracker) project at Haldia Refinery	2,869.00	December,2009
3.	Koyali-Ratlam Product PL	224.69	June,2007
4.	Paradip-Haldia Crude PL	1,178.00	February,2007
5.	Dadri-Panipat R-LNG line	250.66	January,2009 *
6.	Augmentation of Mundra-Panipat crude oil pipeline	204.74	March,2008**
7.	Panipat – Jalandhar LPG Pipeline	186.72	May,2008
8.	TOPs at Chittogarh(Rajasthan)	56.50	Jan'07
9.	New Depot at Lalkuan(Uttarakhand)	48.00	Oct'08
10.	Bottling Plants at Mathura(UP) and Raipur (Chattisgarh)	66.40 20.50	May'07 Jan'07

* - Linked to readiness of captive power plant of Panipat Naphtha Cracker project

** - Linked to Panipat Refinery expansion project from 12 MMTPA to 15 MMTPA.



4.1.15 Health, Safety & Environment

Emphasis in Indian Oil has always been on sustainable development. The Corporation has always been committed to providing a safe work place and in the enrichment of quality of life of employees, customers and the community. Under a Corporate Safety, Health and Environment (S,H&E) policy, a comprehensive safety, health & environment management system is in place in all operating units and installations under which the facilities are periodically reviewed and upgraded from time to time for better performance. Safety systems are regularly audited for continuous improvement. Environment management systems of all refinery units and Pipelines installations and major Marketing installations are certified to ISO – 14001 standards.

All Indian Oil Refineries fully comply with the prescribed environmental standards and incorporate state-of-the-art effluent treatment technologies. Sustained efforts are being made to further improve the existing performance and facilities.

All Refineries are accredited for Occupational Health and Safety Assessment Series (OHSAS-18001). All Refineries are also rated under International Safety Rating System.

4.1.16 Control of Pollution and Environmental & Safety Initiatives

Indian Oil while achieving excellence in business activities is consciously committed to achieve environmentally sustainable growth and has continued with this endeavour during the year 2006-07 also.

4.1.17 Achievements in 2005-06 and for the period April-December 2006

Environment Protection

- Full compliance of effluent and emission norms at all refinery units, pipelines and marketing installations.
- Treated effluent has been reused to the extent of 80 % at the refineries. Panipat Refinery continues to maintain zero discharge.
- State of the art Effluent Treatment Plants commissioned in Panipat Refinery for the Panipat Refinery Expansion Units and PX-PTA Plants.
- The under noted Process Unit was installed and commissioned during the period Apr-Dec'06 for improving fuel quality & environment emissions:
  - Motor Spirit Quality (MSQ) Up gradation Unit commissioned at Gujarat Refinery to comply with EURO-III standards on auto emissions.
- One project has been taken up as CDM project in each refinery.
- Use of 'Oilivorous-S' & 'Oilivorous-A' technologies continued for the treatment of Oily Sludge and Acid Tar respectively.
- In-situ mechanical desludging of heavy product tanks.



- A 2-year project has been awarded by Gujarat Refinery to Anand Agricultural University to study the impact of bio sludge on soil as well as vegetable plants. Based on favorable results, bio-sludge can be disposed off as manure to farmers.

- IOC R&D has signed MoU with New Energy & Industrial Technology Development Organisation (NEDO), Japan in December 2006 for exchange of information in the area of Hydrogen production, storage, transportation, safety codes and standards and fuel cell development.

- 15 Auto LPG Dispensing Stations (ALDS) commissioned during the period. The number total ALDS commissioned so far is 86.

Safety

- To improve the safety implementation measures in Marketing Division Safety Councils have been formed at State, Region & Head Office level.

- Quarterly on-site and annual offsite emergency drills were carried out at Refinery Units.

- Off site disaster drill conducted by all Pipeline Installations.

- Emergency response drill conducted by all Marketing Installations.

- Corporate level meet conducted on Occupational Health & Occupational Environment monitoring.

- Revisit of HAZOP study of identified process units in refineries was done.

- Quantitative Risk Analysis (QRA) study of Digboi Refinery carried out.

- M/s Dupont has been lined up for Safety Culture Foundation building at Gujarat, Mathura and Haldia Refineries.

- Advanced training programmes on Safety conducted.

4.1.18 Safety & Environment Protection Awards during 2005-06

Environment

- Barauni Refinery won the TERI Corporate Environmental Award for 2002-03 (Category 3) for a case study on 'Installation and commissioning of flue gas scrubbing in RFCCU' to remove particulate matter and SO_2

Safety

- Barauni Refinery bagged the Oil Industry Safety Directorate (OISD) Award for the years 2003-04 and 2004-05 and Salaya-Mathura Pipeline won the OISD award for 2003-04

- Gujarat Refinery and Kandla-Bhatinda Pipeline (KBPL) bagged the British Safety Council Award-2004.

- Haldia-Mourigram-Rajbandh-Barauni Pipeline (HMRBPL) and Haldia-Barauni Crude Oil Pipeline (HBCPL) won the Commendation Certificate from the National Safety Council of India for the years 2004 and 2005 respectively.



- Six units of Indian Oil's Marketing Division won the National Safety Awards instituted by the Ministry of Labour, Government of India.

- Indian Oil won the Safety Innovation Award for the year 2005 in the category 'Oil Sector', instituted by the Safety and Quality Forum, Institution of Engineers (India).

Quality

- Panipat Refinery and R&D Centre won the Rajiv Gandhi National Quality Award.

During the period April-December 2006

❖ IOCL was awarded "Safety Innovation Award 2006" for the second consecutive year in the Safety Convention 2006 organized by Safety & Quality Forum, Institution of Engineers.

Refineries Division

❖ Mathura, Guwahati and Digboi Refineries achieved level 8 rating in International Safety Rating System (ISRS) in March 2006.

❖ Panipat Refinery was the winner of National Safety Award (Scheme –II) for the year 2005.

❖ Oil Industry Safety Directorate (OISD) Safety Award – 1st Position was received by Guwahati Refinery for the year 2005-06 in November 2006.

❖ Guwahati Refinery received Shri A V Ogale Shield for safety in operations for the year 2005-06.

Pipelines Division

❖ Mathura Jalandhar Pipeline (MJPL), Bijwasan – International Safety Award for year'2005- British Safety Council, UK

Marketing Division

National Safety Awards – 2005 instituted by Ministry of Labour, Government of India.

Sl. No.	Scheme	Installation	Award
1	III	Panipat Terminal	Runner Up
2	IV	Panipat Terminal	Runner Up
3	V	Varanasi LPG Bottling Plant	Winner
4	V	Shakurbasti Teminal	Runner Up
5	VI	Shakurbasti Teminal	Runner Up
6	VI	Thimapur LPG Bottling Plant	Winner
7	VII	Mangalore Terminal	Winner
8	VIII	Dhanaj LPG Bottling Plant	Winner



R & D Centre

- ❖ R&D Centre Received the Golden Peacock Eco-Innovation Award 2006.

4.1.19 Conservation of Petroleum Products

The energy index in terms of MBTU/BBL/NRGF (MBN) is being reduced continuously as a result of various energy conservation measures undertaken as given below:

Year	MBN
2004-05	77
2005-06	73
2006-07(Apr-Dec'06)	73

Some of the measures implemented in the refineries for minimizing the energy consumption through optimization of the operations resulted in savings of around 54960 MT of refinery fuel during the year. Adoption of operational changes and best practices as well as increased awareness among the employees has brought about continuous improvements. The major schemes implemented during the year includes the following –

- ❖ Installation of new boilers of 2X50 T/Hr at Guwahati Refinery
- ❖ Installation of efficient air compressor in TPS at Haldia Refinery
- ❖ Heli Tower in CCRU for improved heat recovery at Mathrua Refinery
- ❖ Pre-Heat improvement by routing vac slop thro RCO exchangers at Mathura Refinery
- ❖ Use of MDEA in place of DEA at Mathura Refinery
- ❖ H2 recovery from CLPS gas in PREP HCU at Panipat Refinery



4.1.20 Energy Conservation Awards

During 2005-06

1.	**Jawaharlal Nehru Centenary Awards for Energy**			
		Award Winning Refineries	**Award Instituted by**	**Awarded for**
	2002-03	First: Gujarat Second: Panipat	Ministry of Petroleum & Natural Gas, GOI	Lowest Specific Energy Consumption among PSU refineries having complexity factor more than 4.
	2003-04	Second: Panipat		
	2004-05	Second: Panipat		
2.	**OGCF Award for the lowest steam leaks among Indian Refineries**			
		Award Winning Refinery	**Award Instituted by**	**Awarded for**
	2005	Haldia – 2nd best	CHT, MoP&NG	Lowest steam leaks during survey conducted by CHT in Jan'05.
3.	**National Energy Conservation Award 2005**			
		Award Winning Refinery	**Award Instituted by**	**Awarded for**
	2004-05	Commendation Awards to Mathura and Haldia (No 1st / 2nd prizes this year)	Ministry of Power,Govt. of India	Excellence in Energy Conservation & Management in Refineries Sector 2005
4.	**Award for Excellence in Oil Conservation 2006**			
		Award Winning Refinery	**Award Instituted by**	**Awarded for**
	2005-06	Large Projects Category: Panipat (H_2 recovery from CLPS off gas in OHCU)	PCRA	Excellence for exemplary work in Energy Conservation, 2nd Prize.



2006-07

1.	**Best performance in Furnace & Boiler efficiency award among Indian Refineries**			
		Award Winning Refineries	**Award Instituted by**	**Awarded for**
	Heater Efficiency	3rd : Barauni	CHT, MoP&NG	Survey by CHT teams in Jan'06.
	Insulation Effectiveness	1st : Barauni 3rd : Mathura		
2.	**National Energy Conservation Award 2006**			
		Award Winning Refinery	**Award Instituted by**	**Awarded for**
		Mathura – Second (No First Prize this year)	Ministry of Power	Excellence in Energy Conservation & Management in Refineries Sector

4.2 HINDUSTAN PETROLEUM CORPORATION LIMITED (HPCL)

4.2.1.1 Hindustan Petroleum Corporation Limited (HPCL) is an integrated oil company in India. It has two refineries producing a wide variety of petroleum products - one in Mumbai (West Coast) having a capacity of 5.5 MMTPA and the other in Visakhapatnam (East Coast) with capacity of 7.5 MMTPA. The Corporation holds 16.95% equity in Mangalore Refinery and Petrochemicals Limited having a capacity of 9 MMTPA, and is progressing to set up a refinery in the State of Punjab. The Corporation owns and operates the largest Lube Refinery of 3, 35,000 Tonnes capacity for Lube Base Oils.

4.2.1.2 During 2005-06, the two refineries of the Corporation achieved a combined crude throughput of 13.82 MMT. The throughput expected to be achieved during 2006-07 is 14.93 MMT. The total sales of petroleum products during the period 2005-06 was 18.40 MMT. The total sales of petroleum products expected to be achieved during 2006-07 is 19.25 MMT. During the year 2005-06, the sales turnover was Rs. 77,249 crore and profit after tax was Rs.406 crore. The sales turnover expected to be achieved during 2006-07 is Rs.82, 906 crore and profit after tax expected to be achieved during 2006-07 is Rs.1,139 crore. The Board of Directors had recommended a dividend of Rs. 116 crore for the year 2005-06.



4.2.1.3 During the period 2005-06, the Corporation commissioned 647 Retail Outlets and 50 LPG distributorships and released 10.61 lacs new LPG connections. During the period 2006-07, new Retail Outlets and LPG distributorships expected to be commissioned is 800 and 100 respectively. The new LPG connections expected to be released during 2006-07 is 15.00 lacs.



Club HP Retail Outlet

4.2.2 Major Projects Completed

- A new depot at Ramagundam (in Andhra Pradesh) with total tankage of 7974 KL was commissioned in September, 2005 at the cost of Rs.11.47 Crore.

- DHDS II Reactor at Visakh Refinery: Visakh Refinery commissioned the DHDS second reactor during the year.

4.2.3 Major Projects Approved

- Wind Power Project 100 MW: 100 MW Wind power project based on DFR was approved by Board of Directors on 30.7.2005 with the capital cost of Rs.475 crore and for implementation of the project in 2 phases.

4.2.4 On- Going Projects

- Mundra Delhi Pipeline Project:- The pipeline project having a capacity of 5 MMTPA approved in July 2004 at a cost of Rs.1623.84 crore is under execution with an objective to commission the new infrastucture by May, 2007. The pipeline originating from West Coast location at Mundra (Gujarat) and terminating at Bahadurgarh will cater to market in North India.

- Pune Solapur Pipeline Project: - The project approved in January, 2004 at a cost of Rs. 335.17 crore was mechanically completed by September, 2006. On completion of the project, industry requirements in the districts of Kolhapur, Solapur, Sangali and Gulbarga will be catered.



- Mumbai Refinery Green Fuels and Emission Control Project (MR-GFECP): Refinery has undertaken mega project at an approved cost of Rs. 1,850 crore to meet the HSD/MS of EURO III grade. The project also envisages to enhance refining capacity from 5.5 MMTPA to 7.9 MMTPA. The project is expected to be completed mechanically by January, 2007.

- Visakh Refinery Clean Fuels Project: Visakh Refinery has undertaken clean fuels project at an approved cost of Rs. 2147.8 crore to meet the MS/HSD of EURO III. The project also envisages to increase the refining capacity to 8.30 MMTPA from 7.5 MMTPA. The project is expected to be completed mechanically by December, 2006.

4.2.5 Policy Initiatives Undertaken

HPCL has undertaken a path of high growth in keeping with the national priorities. Its ambitious plans include furthering the synergies and participating in the oil industry's growth by vertically integrating in both the upstream and downstream sectors. The policy initiatives undertaken also include growth and diversification ventures in the following areas:

4.2.6 Joint Ventures

The status of the joint ventures companies (JVCs) promoted by HPCL is as follows:-

- Mangalore Refinery & Petrochemicals Ltd.:- MRPL with a capacity of 3 MMTPA was commissioned in March, 1996. The capacity of the refinery was enhanced to 9 MMTPA during 1999 - 2000. In March, 2003 ONGC acquired the entire equity stake of Indian Rayon Industries Limited in MRPL and also infused Rs. 600 crore into MRPL as additional equity on 30.03.2003. Consequent to the restructuring, HPCL's equity at present stands at 16.95%. A fresh Shareholder Agreement dated 03.03.2003 has been signed by HPCL with ONGC to take care of the interests of HPCL.

- Hindustan Colas Ltd. (HINCOL): The performance of HINCOL, a JVC formed with Colas SA of France for producing and marketing Bitumen Emulsions continues to be encouraging. In addition to Bitumen Emulsions, HINCOL has been successfully marketing a wide range of value added bitumen products like Modified Bitumen, Cut Back Bitumen etc. HINCOL presently operates manufacturing plants at Mumbai, Bahadurgarh, Chennai, Vadodara, Visakhapatnam and Mangalore.

- South Asia LPG Co. Pvt. Ltd. (SALPG): This JVC with Total Fina Elf of France envisages the construction of LPG Underground Cavern storage of 60,000 MT capacity and associated receiving and dispatch facilities at Visakhapatnam. This project is the first of its kind in South Asia and would facilitate import of LPG in large vessels resulting in savings in freight costs. The project will meet the requirement of a large storage for imported LPG in order to meet the burgeoning demand in Andhra Pradesh and neighboring states.



The cost of the project is estimated to be Rs. 333 crore and it is being financed through debt-equity of 2.33:1. The debt has been fully tied up with a consortium of banks led by State Bank of India. The financial closure of the project has already been achieved.

- Petronet India Ltd. (PIL) :- PIL was formed in May, 1997 as a joint venture company with 50% equity by oil PSUs and balance 50% being taken by private companies/financial institutions. Special Purpose Vehicles (SPVs) were floated by PIL with oil companies for implementing individual pipeline projects, viz., Petronet MHB, Petronet CCK and Petronet VK which are the operating companies.

  Since oil companies are now having pipelines independently, PIL has initiated action to disinvest its equity holding in individual JVCs.

- Petronet MHB Ltd. (PMHBL) : HPCL, along with Petronet India Ltd. (PIL) had promoted Petronet MHB Ltd., for the construction and operation of Mangalore-Hassan-Bangalore pipeline. ONGC has joined as a strategic partner in the company by taking 23% equity. The product pipeline from Mangalore to Bangalore, with a tap off point at Hassan, has been executed at a cost of Rs. 639 crore. The pipeline is meeting the transportation needs between Mangalore, Hassan and Bangalore. Due to lower throughput and pipeline tariff, the operational and financials of PMHBL are affected. The financial restructuring of PMHBL is under progress.

- Prize Petroleum Co. Ltd.:- HPCL, in partnership with ICICI and HDFC, has formed a Joint Venture E & P Company viz., Prize Petroleum Co. Ltd. for participating in exploration and production of hydrocarbons. Prize Petroleum in consortium with M/s GSPC, Jubilant Empro and Geoglobal Resources has been awarded the Block CB-ONN-2002/3 in the Cambay Area under NELP-IV.

  Prize Petroleum has been successful in getting award of an offshore field cluster consisting of three fields (Cluster 7) from ONGC under service contract. The Company has started a drilling programme for onshore fields of Hirapur and Khambel as well as Sanganpur fields.

- Bhagyanagar Gas Ltd. :- Bhagyanagar Gas Limited (BGL) has been formed as a JVC by GAIL and HPCL – for distribution and marketing of environmental friendly fuels (green fuels) viz., CNG and Auto LPG for use in the transportation, domestic, commercial and industrial sectors, in the State of Andhra Pradesh. BGL was incorporated on 22nd August, 2003. HPCL and GAIL shall hold 22.5 % each of the equity while 5% would be held by Govt. of Andhra Pradesh and 50% by Strategic / Financial Investors.

  BGL has set up one Auto LPG outlet at Tirupati and three Auto LPG outlets at Hyderabad which are operational. Commercial sales operations of CNG have commenced in Vijaywada during the current year.



- Avantika Gas Limited:- Avantika Gas Limited has been incorporated on 7.6.2006 following a Joint Venture agreement signed by HPCL with GAIL for the distribution and marketing of CNG and Auto LPG in the state of Madhya Pradesh.

- **Guru Gobind Singh Refineries Limited (Punjab Refineries Project)**

  - Approved Cost: Rs.9806 Crore

  - Actual Expenditure upto October, 2006: Rs.330.71 Crore

  - Cumulative Commitments: Rs. 405.40 Crore

Capacity: Considering the supply demand scenario, economics of scale and financial viability the capacity of the project is recommended as 9 MMTPA.

Deed of Assurance: Deed of Assurance has been signed with Government of Punjab on August 12, 2005. The highlight of the DOA is the interest free loan of Rs.250 crore per year for a period of five years in lieu of the sales tax deferment.

4.2.7 Control of pollution and other environmental initiatives

A separate department exists in both the refineries at Mumbai and Visakhapatnam to monitor and control pollution and effluent levels. Both the refineries have been meeting the statutory regulations and standards set by State Pollution Board and Ministry of Environment and Forests, Government of India.

4.2.7.1 Initiatives at Mumbai Refinery

1. **Green Fuels & Emission Control Project :-** In order to produce eco-friendly automobile fuels and to upgrade their quality, thereby improving the quality of ambient air nationwide, the Mumbai Refinery has undertaken this modernization project at the cost of Rs.1,850 crore.

2. **Replacement of Old Ambient Air Monitoring Analyzers with new analyzers:** Old and Obsolete analyzers were replaced with new analyzers at a cost of Rs.1.2 crore.

3. **Rain Water Harvesting:** The project was undertaken at a cost of 2.5 crore. This project activity has been initiated since 2005 onwards.

Other projects initiated by the Corporation at the refinery include Integrated ETP, sludge management, solid waste management and green belt development.

4.2.7.2 Initiatives at Visakh Refinery

1. **Clean fields project**: Visakh Refinery has undertaken the project at an approved cost of Rs.2147.8 crore to meet the MS/HSD of EURO-III grade.

2. **ETP Modification:** ETP-I and ETP-II are being augmented with additional surge capacity. This project has been completed 50% and expected to be completed by April 2007.

Other projects initiated by the Corporation include fuels-gas de-sulpharization project,



VOC emission monitoring, solid waste management, stack monitoring facilities projects.

4.3 BHARAT PETROLEUM CORPORATION LIMITED (BPCL)

4.3.1.1 BPCL is an integrated Oil Company in the downstream sector engaged in refining of crude oil and marketing of petroleum products. It has also diversified into the manufacture and marketing of petrochemical feedstock. The Corporation has an all India presence through its extensive marketing network.

4.3.1.2 Till 1992, the Government of India held the entire paid up capital of BPCL which was Rs.50 crore. During 1992 and 1993, the Government disinvested a total of 30% of the Company's paid up capital in favour of the Indian Financial Institutions, Banks and Mutual Funds. In 1994, the Government further disinvested 3.8% of the paid up capital in favour of the employees of the Company. Consequently, the Government's holding stood reduced to 66.20%.

4.3.1.3 The Ministry of Company Affairs vide their Order dated 18.8.2006 approved the amalgamation of Kochi Refineries Limited with BPCL in the swap ratio of 4 fully paid up equity shares of BPCL for every 9 fully paid up equity shares of KRL as provided in the scheme of amalgamation. Accordingly, the authorised share capital was increased from Rs. 300 crore to Rs.450 crore. The paid up capital of the Company was increased to Rs.361.54 crore and the holding of the Government of India has reduced from 66.20% to 54.93%.

4.3.1.4 During the year 2005-2006, BPCL's Mumbai Refinery & Kochi Refinery achieved a throughput of 10.30 MMT and 6.94 MMT respectively. The throughput expected to be achieved during 2006-07 is 11.80 and 7.70 MMT respectively. The profit after tax during 2005-2006 was Rs.291.65 crore. The expected profit after tax to be achieved during 2006-2007 is Rs.1021.70 crore.

4.3.1.5 During the year 2005-06, the Corporation sold 21.63 MMT of petroleum product. The total sale of petroleum products expected to be achieved during 2006-2007 is 21.80 MMT. During the period 2005-06, the Corporation commissioned 906 new retail outlets, 8 SKO-LDO dealerships and 79 new LPG distributorships. During the period 2006-07, new retail outlets and LPG distributorships expected to be commissioned is 639 and 50 respectively. The Corporation released 12.09 lacs new LPG connections during the year 2005-06. The new LPG connections expected to be released during 2006-07 is 10.00 lacs.

4.3.2 Policy initiatives undertaken by BPCL

4.3.2.1 Strategic Initiatives

i) Internal Restructuring: To meet the emerging environment, during the year 1996, BPCL initiated a major organizational restructuring exercise. A new organizational structure was introduced in May 1998 to enable the Company to become more customer focussed in the changing business environment.

ii) BPCL has embarked on a journey called 'Project Destiny' charting out the



Corporation future plans and strategies to attain lofty but achievable goals. The focus of the project was:

- Develop tools/techniques and process.
- Demonstrate value through look back analysis and create conviction behind the new approach.
- Institute organization forums and processes for discussion and implementing new ways of doing things.

4.3.2.2 Product security

BPCL has acquired the Government of India's shareholding in Kochi Refineries Ltd. (KRL) and IBP's stake in Numaligarh Refinery Ltd. (NRL). With these acquisitions, the two companies KRL & NRL have become subsidiaries of BPCL.

Consequent to the above acquisition, BPCL's product availability from its own sources has gone up from 45% to 90% of its sales. In addition, BPCL has tied up with other oil companies to cover its current deficit in the short term. BPCL has also plans to set up grassroots refineries at Bina in Madhya Pradesh and at Lohagara in Uttar Pradesh for meeting its deficit in the Northern Region.

4.3.2.3 Entry in exploration and production of oil and gas

The entry into the upstream sector of Exploration and Production (E & P) business in oil and gas has become necessary for BPCL in order to have reasonable supply security with the benefits of an integrated supply chain and hedging of price risks in the volatile oil market. The Board of Directors of BPCL has given an 'in-principle' approval for venturing into this new business. In order to give a major thrust to Exploration and Production business, an allocation of Rs.1,000 to Rs.1,500 crore



A view of BPCL's Kochi Refinery



has been earmarked over the next five years, based on the opportunities available for it.

BPCL has entered into this business with successful bidding for blocks offered by the Government of India under NELP - IV. BPCL has been awarded three blocks which include two deep water blocks (in Krishna-Godavari and Mahanadi basins) in consortium with ONGC and OIL, wherein BPCL has 10% participating interest in each block and one on-land block (in Cauvery basin) along with ONGC, wherein BPCL has 40% participating interest. The exploration programme on these blocks has since commenced and the estimated expenditure for BPCL on these three blocks would be approximately Rs.158 crore during the exploration period.

BPCL has also actively pursued some 'farming-in' opportunities to acquire assets or take over participating interest of the existing E & P companies.

In July 2006, BPCL Consortium was awarded block WO5-11 in Australia. BPCL have been awarded block no. 103 in the Joint Plan Development Area.

In March 2006, the bid submitted by the consortium of Oilex, BPCL, HPCL GAIL and Videocon Industries Limited (VIL) for Block 56 was accepted by the Sultanate of Oman. The Exploration and Production Sharing Agreement (EPSA) with the Ministry of Oil, Sultanate of Oman was signed on 28.06.2006.

Recently, BPCL in consortium with M/s. Oilex of Australia (Operator), Videocon Industries Limited, GSPC and GAIL has bid for 2 blocks offered by the Egyptian Natural Gas Company in 2006 and outcome of the same is awaited.

Considering the need for a focussed approach for E&P activities and implementation of the investment plans of BPCL, it was felt that these objectives could be best achieved by formation of a separate subsidiary company. The proposal was approved by the Board on 27.04.2006. Preliminary activities related to the establishment of subsidiary are underway.

4.3.2.4 Refinery

Some of the Policy initiatives taken by the Refinery SBU are as under:-

- Constant efforts to upgrade product quality in line with the trends worldwide
- Optimizing costs in the entire value chain, from sourcing and transportation of crude, processing and optimization of products mix, and eventually realizing better margins.

4.3.3 Retail

- **Retail Business Initiatives**

BPCL has pioneered in the customer loyalty programmes in the oil industry. These initiatives are receiving good response from the customers and have created a brand differentiation for BPCL in the minds of customers.

- **Enhanced Fuel Proposition (EFP) :**

The Pure for Sure (PFS) programme is an intense effort towards ensuring delivery of pure fuel in the right quantity to the consumers, deliver courteous and professional service and increase speed and efficiency of fuelling. The programme involves delivering of products to retail outlets in modified tank lorries fitted



with tamper proof locks, comprehensive sealing of dispensing units at the retail outlets, periodic and surprise checks by the company personnel, monthly testing of product samples, periodic audits and re-certification once in six months.

The PFS programme has been well received by the consumers and most of the certified outlets have registered high growth compared to other outlets in the neighboring area.

Presently, the company has 4514 Retail outlets under PFS. Approximately 77% of MS volumes and 73% of HSD volumes were sold through these outlets. This Programme has been very successful in gaining customer confidence and enhancing sales from PFS Outlets.

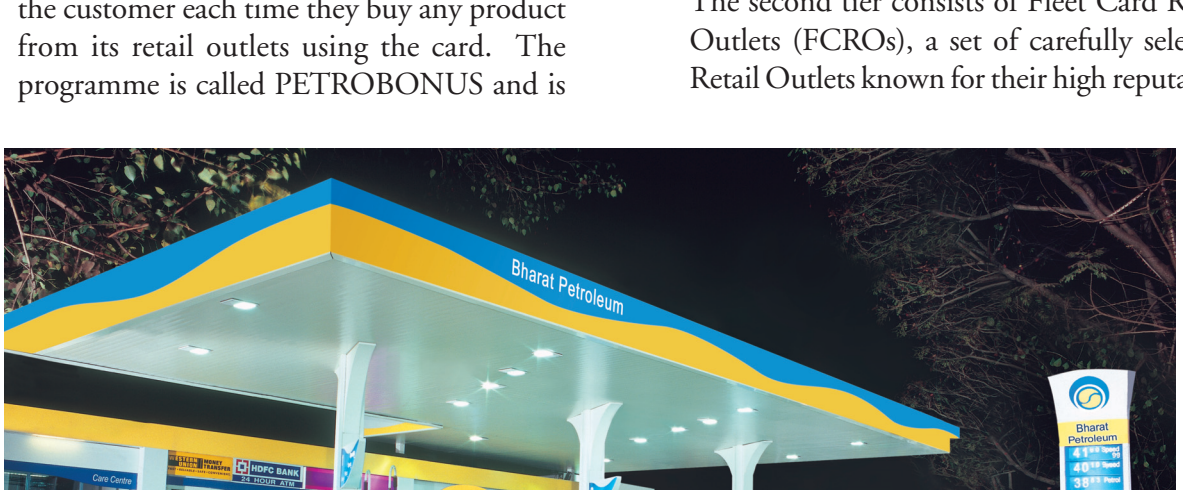
- **Petrocard**

BPCL was the first to launch a comprehensive Customer Loyalty Programme which rewards the customer each time they buy any product from its retail outlets using the card. The programme is called PETROBONUS and is administered through a Petrocard which uses the state-of-art Smart Card Technology. The technology, in addition to facilitating easy operations for the customers helps in understanding customers fuelling behavior comprehensively. Petrocard was also voted as the 'Product of the Year' by the Smart Card Forum of India. Currently over 16.45 lakh customers have been enrolled, thus making the Petro Bonus programme as the largest customer loyalty programme in India.

- **Smart Fleet Card**

BPCL's Retail Highway Strategy has identified truck drivers as a large and valuable customer segment and to cater to their needs, two-tier Upgraded Highway Network has been developed. The first tier consists of One Stop Truckers Shops (which have been branded as Ghars), which are a network of strategically located sites, which are Company Owned and Company Operated (COCO).

The second tier consists of Fleet Card Retail Outlets (FCROs), a set of carefully selected Retail Outlets known for their high reputation



A view of BPCL Retail Outlet



in the market and having been certified as PFS. Smart Fleet Card, a unique programme for Fleet Owners and Corporates, has evoked enthusiastic response from Truck Fleet owners. More than 5.58 lakhs vehicles have been enrolled under this scheme.

- **In & Out Stores**

The 'In & Out', a Convenience Retailing proposition, has been extended to more than 383 stores, providing convenience to the urban customer through a well-stacked format of a departmental store, has also gained wide popularity.

- **New Generation Petrol Fuel : SPEED**

Deregulation has opened avenues for marketing improved branded products. BPCL realised the opportunity by launching New Generation Petrol - SPEED.

SPEED has been produced with world class additives sourced from M/s Chevron Oronite Company, LLC, USA and offers advantages of maximum power, lower vehicle maintenance, increased mileage and reduced emission by effectively removing harmful carbon deposits.



Inside view of an IN & OUT store of BPCL RO at Delhi



Outside view of an IN & OUT store



After introducing SPEED in Mumbai in July 2002, SPEED has been successfully launched in 60 territories across the country and is strategically marketed from 2,148 'Pure for Sure' certified retail outlets. It is proposed to launch SPEED in more cities in a phased manner, thus providing value added branded fuel to the customers.

- **Speed 97**

Speed 97, a powerful and a High Octane (97) petrol to clean car engine, maximize power output and minimize polluting emissions was launched in Mumbai in January 2005. It is the highest Octane petrol in India. This fuel has been launched to meet the demand of the most modern cars.

- **Hi-Speed Diesel launched**

BPCL launched yet another branded product "Hi-Speed Diesel" at a Retail Outlet in Mumbai. Hi- Speed Diesel is a blend of Diesel and world-class multi-functional additive sourced from Afton Chemicals (formerly M/s. Ethyl Asia Pacific Company). Presently, more than 1697 Retail Outlets are having High Speed Diesel.

4.3.4 LPG

With a view to achieving excellence in customer service, high standards of safety and operating practices, the following initiatives which have been taken are ensuring comfort, convenience and reliable service to the Bharatgas customers:

i) Improved customer services at Territory offices and LPG distributorships for effective redressal of customer complaints and improved response at distributor's end.

ii) BPCL has launched a 24-hour service through a unique telephone no. 1712 where the customer can order for Bharat Gas Cylinder or log a leakage call.

iii) Improved inventory management at LPG distributorships.

iv) Ensure customer safety and enhanced customer awareness.

v) Training of LPG sales staff, distributors and their staff to improve their technical/ behavioral skills.

vi) Computerization of the LPG distributorship network for on-line accounting

vii) Pioneered 24-Hour Bharat Gas Helpline which has been implemented in all major markets.

- **Reticulated System**

BPCL has a proposal to develop reticulated LPG system in housing colonies in urban areas where LPG will be supplied to the kitchens by means of pipelines from centralised storage at low pressure. BPCL has taken initiative to introduce this concept in 30 cities.

- **Introduction of 5 kg. cylinder in rural markets**

Keeping in mind the lower income customers in rural, and hilly areas, and the need to penetrate extensively in rural markets, it was felt that there was a need to introduce a smaller size cylinder so as to reduce both initial deposit cost as well as the recurring refill cost.



- **Rural Mobile Vehicle**

In order to reach the far - flung rural customers, BPCL has introduced the Rural Mobile Vehicle (RMV) way back in 1999 in the State of Punjab. Encouraged by this novel method of reaching rural customers, BPCL has introduced 24 RMVs during the year. RMV customer population has crossed 1 lakh during November, 2004.

- **LPG as auto fuel**

LPG being a clean and an environmentally friendly fuel, BPCL was the first Oil Company to take up the initiative to set up an Auto LPG dispensing station to run vehicles on LPG as a pilot project in Delhi in October, 1999. BPCL has commissioned 32 Auto LPG dispensing stations.

4.3.5 Lubricants

A number of initiatives were taken up to retain and increase the market share. The sales network was expanded during the year by appointing additional Primary Lube Distributors and by adding a large number of multi-product counters to the existing network. Channel finance for retail outlet dealers was strengthened by implementing Co-Branded Cards with ICICI leading to online validity of creditworthiness and credit availability of the customers as well as faster flow of funds.

In an endeavour to expand export operations during the year, entry was made in U.A.E. in addition to Bangladesh and Nepal. An MOU has been signed with a major petroleum retailing company in Africa for entering into African countries.

A major thrust has been given to Research and Development to support the Lubricant business initiatives.

Following new products were developed :-

i) Performance Diesel Engine Oil



Inauguration of BPCL's LOBS Project



ii) New grades of rust preventive oil

iii) High performance greases

iv) Exclusive grades for Defence sector

v) Exclusive bearing oils for steel plants

vi) Alternate formulations for existing lubricants grades

4.3.6 Investment in Joint Venture Projects:

- **Bharat Oman Refineries Limited**

A 6 MMTPA grassroots refinery at Bina, in Madhya Pradesh is being set up by Bharat Oman Refineries Limited promoted by BPCL and Oman Oil Company Limited. The estimated cost of the project is Rs.10,378 crore on as built basis.

- **Indraprastha Gas Co. Limited**

Indraprastha Gas Co. Limited, a joint venture between Gas Authority of India (GAIL), BPCL and the Government of National Capital Region of Delhi was incorporated on 23.12.1998 for implementing the Delhi City Gas Project with an authorised capital of Rs. 220 crore.

The equity of the company is Rs. 140 crore and BPCL's contribution towards equity works out to Rs. 31.50 crore @ 22.5% which has already been invested.

The JV has been formed for distribution of Natural Gas to the domestic consumers as well as commercial establishments through pipeline in the National Capital Region of Delhi and installation of CNG outlets to feed the automobile sector. The company is vigorously pursuing the gas distribution project in Delhi. As of September, 2006, IGL has commissioned over 146 CNG stations in Delhi. Number of CNG vehicles has crossed 1,23,500. IGL have given connections (PNG) to 56,438 customers as on 30.9.2006.

- **Petronet LNG Limited**

Petronet LNG Limited (PLL), a Joint Venture Company of GAIL, ONGC, IOC and BPCL has been incorporated with an authorised capital of Rs.1200 crore with the main objective to import Liquefied Natural Gas and development of necessary infrastructure for its utilisation in India.

Petronet LNG Ltd. has set up LNG receipt and re-gasification terminal facilities of 5.0 MMTPA capacity at Dahej in Gujarat which would be extended to 10 MMTPA. The setting up of LNG terminal at Kochi has been taken up. LNG Terminal at Kochi is expected to be completed within 36 months from the date of EPC award.

- **Central U.P. Gas Ltd. (CUGL)**

Central U.P. Gas Ltd. (CUGL) a Joint Venture Company (JVC) between BPCL and GAIL has been incorporated in March 2005, with an authorized capital of Rs. 50 crore, for implementing the City Gas Distribution Project for supply of CNG to the household and automobile sector in the city of Kanpur and then proposes to cover Allahabad, Baraelli and Jhansi. The first CNG station was commissioned at Fazalganj on 7.4.2006 and second at Makharikera, Vikasnagar on 4.10.2006.

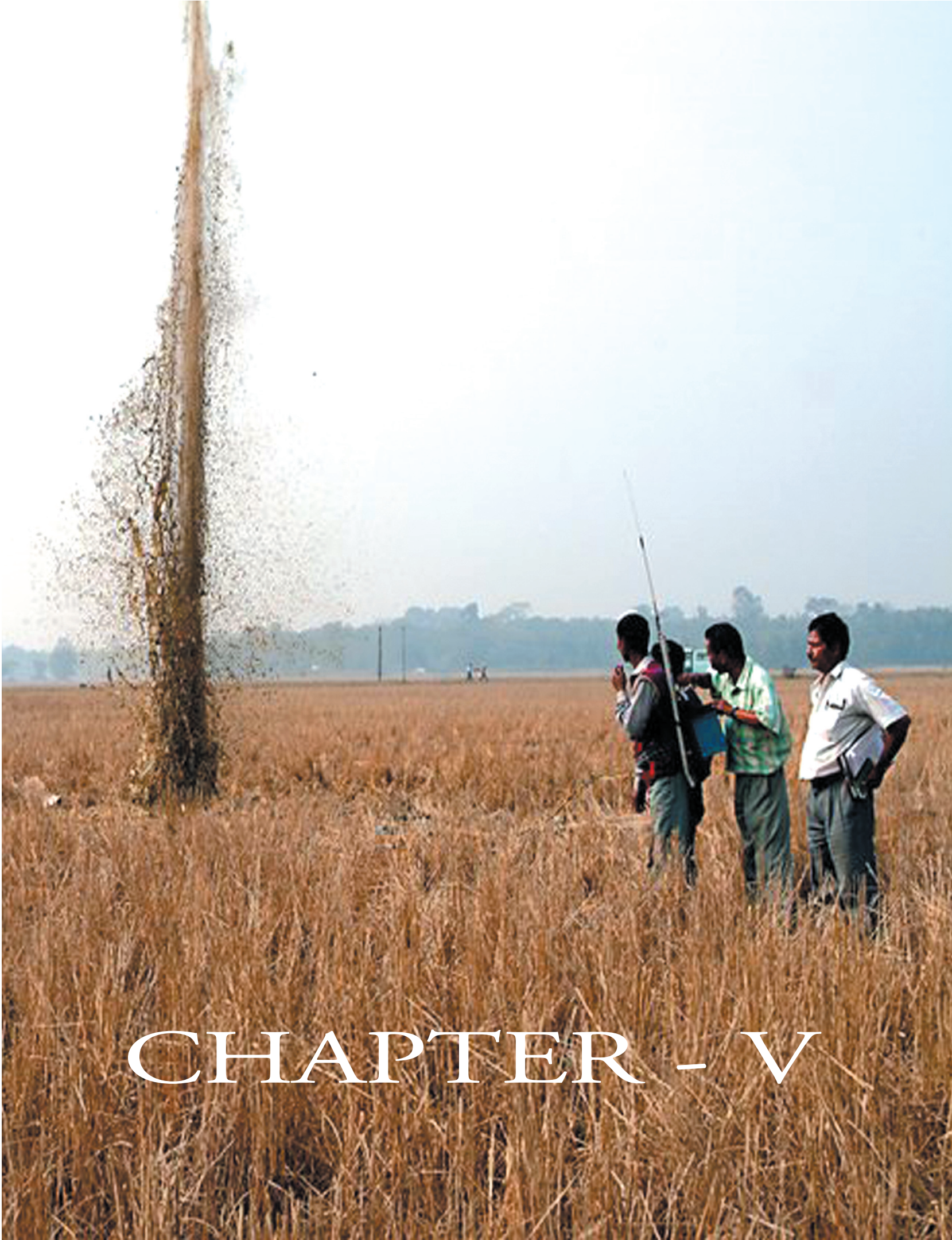


- **Maharashtra Natural Gas Limited (MNGL)**

Maharashtra Natural Gas Limited has been incorporated on 13.1.2006 between BPCL and GAIL with an authorised capital of Rs.100 crore, for setting up facilities for distribution of CNG to the household and automobile sector in the city of Pune and adjacent areas in Maharashtra except Mumbai, New Mumbai and Thane.

- **Sabarmati Gas Limited**

Sabarmati Gas Limited a Joint Venture Company between BPCL and Gujarat State Petroleum Corporation Limited has been incorporated on 6.6.2006, with an authorised capital of Rs.100 crore, for implementing the city gas distribution project for supply of CNG to the household and authomobile sector in the city of Gandhinagar, Mehsana and Sabarkantha districts.



CHAPTER - V



OTHER UNDERTAKINGS/ORGANISATIONS

5.1 DIRECTORATE GENERAL OF HYDROCARBONS (DGH)

5.1.1 The Directorate General of Hydrocarbons (DGH) was established under the administrative control of Ministry of Petroleum & Natural Gas by a Government of India Resolution in 1993. Objectives of DGH are to promote sound management of the Indian oil and natural gas resources having a balanced regard for environment, safety, technological and economic aspects of petroleum activity. DGH has been entrusted with certain responsibilities concerning Production Sharing Contracts for discovered fields and exploration blocks, promotion of investment and monitoring of E&P activities including review of reservoir performance of major fields. In addition, DGH is also engaged in opening up of new /unexplored areas for future exploration and development of non-conventional hydrocarbon energy sources such as Coal Bed Methane & Gas Hydrates. Details of the main activities undertaken by DGH during 2006-07 are as under:

5.1.2 Opening up of New Areas for Future Exploration

To open up new areas for exploration, DGH has carried out reconnoitory surveys in poorly explored / unexplored basins with the aim to upgrade geological information of the areas and carve-out new blocks for offer under future rounds of New Exploration Licensing Policy (NELP).

5.1.3 Speculative 2D Seismic Survey in East and West coast of India

DGH has carried out speculative 2D seismic survey through GX Technology and acquired 16964 LKM seismic data.

5.1.4 Seismic Survey in Kutch Basin

DGH has initiated 2D seismic survey in Kutch basin. Approx 200 LKM of 2D seismic data will be acquired in 2006-07.

5.1.5 Marine Magnetic Telluric (MT) and Seismic Survey

In Kutch offshore area, DGH will be acquiring 235 LKM of Q-marine seismic data in 2006-07 to explore sub trappean sediments.

5.1.6 Analysis of Aerial Images/Remote Sensing Data over Narmada Cambay/Deccan Syneclise region in Central India

The study is progress. This study will help to know the geology of sub-trappean sediments for hydrocarbons.

5.1.7 MT Survey in Central India

DGH is carrying out MT survey in Central



India to obtain information about basement configuration, tectonics and nature of sediments.

5.1.8 Implementation of NELP

Government of India approved the NELP in 1997 and it became effective in February, 1999. Since then licenses for exploration are being awarded only through a competitive bidding system and National Oil Companies (NOCs) are required to compete on an equal footing with Indian and foreign companies to secure Petroleum Exploration Licences (PELs). Six rounds of bids have so far been invited under NELP, in which, Production Sharing Contracts (PSCs) for 162 exploration blocks have been awarded. In addition, 28 exploration blocks were signed prior to NELP. Under NELP, 37 discoveries have already been made in Cambay onland, North East Coast and Krishna-Godaveri deepwater areas, for which, development plans by the operators, viz., Cairn, RIL and Niko are in progress.

NELP-VI

Sixth round of New Exploration Licensing Policy (NELP-VI) was launched on 23rd February, 2006. In NELP-VI, 55 exploration Blocks (24 deepwater, 6 shallow water and 25 onland) were on offer, covering an area of 3,52,191 Sq. kms. The bid closing date for NELP-VI was 15th September, 2006.

The Government received 165 bids for 52 blocks. A total of 68 companies including 36 foreign companies and 32 Indian companies bid either on their own or as consortia. 39 blocks attracted multiple bids. 13 blocks received a single bid. Evaluation of the bids was made by DGH. 52 exploration Blocks have been awarded after approval of the Cabinet in February, 2007.

5.1.9 Monitoring of Production Sharing Contracts

Government of India has signed contracts for 28 discovered fields, 26 CBM blocks and 138 blocks for exploration and development to Private/JV and NOCs. Out of this, contracts for 112 exploration blocks, 26 CBM block and 28 discovered fields are under operation. In NELP-VI, 52 exploration blocks have been awarded and signing of Production Sharing Contracts was completed by March, 2007. DGH monitors the execution of management of these Production Sharing Contracts on behalf of GOI through Management Committees set up for each block/field. This involves in depth review of annual work programme, project monitoring (especially with regard to time & cost over run), calculation of reserves and production profile, making simulation model of the field, review and approval of development plan, budget and safety management system.

About US $5.8 billion (Rs. 26,431 crore) investment has already been made by companies on Exploration and Production till December, 2007. During 2006-07, Private/JV sector is expected to produce 4.60 MMT of oil and 7.03 BCM of natural gas, which is about 14% and 23% of country's oil and gas production respectively.

5.1.10 Monitoring of the Petroleum Exploration Licenses held by NOCs – on nomination basis

DGH reviewed the progress of exploration



activities in respect of 133 Petroleum Exploration Licenses held by NOCs (115 ONGC and 18 OIL) on nomination basis on a half-yearly basis vis-à-vis minimum committed work programme.

5.1.11 Field Development, Reservoir and Production Monitoring

DGH is monitoring the development activities of various fields under the Production Sharing Contracts such as Panna-Mukta, Ravva, Tapti, Laksmi, Gauri, Kharsang, PY-3, Asjol, Bakrol, Indrora, Lohar, Baola, Dholka, NS-A, N.Balol, Mangala, Aishwariya, Rageshwari and Saraswati.

5.1.12 The Redevelopment plans of Mumbai High North and South and monitoring of IOR/EOR projects of ONGC

The Redevelopment Plans for Mumbai High North and South are under implementation by ONGC. DGH is continuously monitoring the field performance based on Redevelopment Plans, Progress of EOR pilots. G&G and other studies on regular basis. To analyze the field performance voluminous data of more than 700 wells of Mumbai High field is being updated on a regular basis in DGH.

Monitoring the performance of IOR/EOR schemes under implementation in major fields of ONGC is now being carried out on regular basis.

5.1.13 National Knowledge Hub (NKH)

DGH has embarked upon the project of setting up of National Knowledge Hub (NKH) of Geoscience data for E&P industry in India. The NKH will:

- Enable evaluation of the total hydrocarbon potential of the country by integrating geo-scientific data
- Protect past investment, attract new investments and thus promote desired growth in future by leveraging on modern technology
- Improve the efficiency of hydrocarbon prospecting in the country by providing integrated and synergetic environment
- Provide level playing field to small players to take part in E&P activities by providing NKH facilities at nominal cost.
- Create geo-scientific ambience and establish a link among the Geo-scientists, petroleum engineers both from industry and academia to strengthen over-all geo-scientific activities in India.

The National Knowledge Hub (NKH) will comprise the following for use by the industry:

- The National Data Repository (NDR)
- The National G&G Processing Center (NGPC)
- The National Visualization and Application Center (NVAC)
- The National Training Center (NTC)



- The National E&P Knowledge Portal (NKP)

Two meetings on NDR, which is the heart of the National Knowledge Hub, so far have been held. The meetings have been attended by Directors and nominated coordinators from the participating organizations. Nine organizations engaged in acquisition and interpretation of geoscience data have become members of NDR in India till date.

The project of setting up of NDR was appreciated by all participating organizations and as a first step towards implementation of the project it was unanimously decided to prepare the metadata dictionary of the geoscience data. Members of the NDR core team from DGH visited NRSA, NGRI, OIL where-in meetings with all the heads of all disciplines were held and meta data attributes were identified for relevant data for preparation of metadata.

The proposal for setting up of NKH has been approved by the advisory council and the detailed proposal has been put up before the Ministry. The process of including private oil companies in the NKH will be initiated whereby the private oil companies also will be made members of NKH. The draft guidelines and modalities of membership for NKH are also under preparation.

5.1.14 Coal Bed Methane (CBM)

Government of India has awarded 26 CBM blocks for exploration and production of Coalbed Methane in different coalfields of India. These blocks are located in the states of West Bengal (4), Jharkhand (6), Chattisgarh (3), Madhya Pradesh (5), Andhra Pradesh (2), Rajasthan (4), Gujarat (1) and Maharashtra (1).

The CBM resources in the awarded blocks are about 1400 billion cubic metres, with production potential of around 38 MMSCMD during peak production period.

The exploration activities have already established encouraging CBM resources in some of these blocks. There have been significant finds in eastern and central part of India.

The commercial production of CBM from few of these awarded blocks is likely to start by 2007-08.

5.1.15 Gas Hydrates

Exploration of Gas Hydrates is at R&D stage world over. India is participating in the Gas Hydrates Programmes carried out by other countries. A road map was prepared for National Gas Hydrates Programme (NGHP). As per the road map, detailed geoscientific investigations were carried out in the KG Basin and Kerala-Konkan basin by NGHP through National Institute of Oceanography (NIO). Based on the results of seismic data studies and geoscientific investigations, ten sites in Mahanadi, KG & Kerala-Konkan basins and Andaman Sea have been short listed for drilling/coring of gas hydrates in the deepwaters. The drilling/coring for gas hydrates is a very specialized activity and India is only the third country in the world to do so, after USA and Japan. The services for such specialized activity are not available commercially in the world. With sustained efforts by DGH with IODP & USA, the drillship JOIDES Resolution along with all the scientific equipment and scientists onboard collected samples in Indian offshore from April, 2006 to August, 2006, under an agreement between DGH and a US Consortium of companies.



After obtaining the gas hydrates cores, several scientific studies are being carried out onboard the ship and will also be carried out in several laboratories in India, USA and Canada, for which separate agreements have been signed by DGH and corresponding agencies.

The studies will lead to understand gas hydrates characterization in Indian offshore areas and also in carrying out resource estimates, as well as R&D in this field. During drilling/coring by the drillship, presence of huge quantities of Gas Hydrates has been detected in one of the wells in KG Basin. A specialized core repository is also being constructed in Panvel, Mumbai for storing all the valuable gas hydrates cores for future studies. Overall, good progress has been made in exploration for gas hydrates in the country under NGHP.

The production of gas from gas hydrates itself is the biggest challenge faced by the world scientific community. The basic challenge is to find out a suitable technology to first dissociate the gas hydrates present in the solid form below the seabed in deep-sea conditions, as well as the permafrost regions of the world. Another challenge is to produce the dissociated gas from gas hydrates at commercial viable costs.

5.1.16 Essentiality Certificates

During the period (April-November, 2006), 6894 Essentiality Certificates have been issued for the goods used for petroleum operations for various blocks/fields under PSC regime as well as for areas under PEL/ML.

5.1.17 Status of International Cooperation

Various R&D projects, which ought to be taken up on priority, were identified. During this exercise, Alberta Research Council (ARC) in Canada, Norwegian Petroleum Directorate (NPD) in Norway and Energy Resources and Development Unit (ERDU) of Department of Trade & Industries in UK were identified as the agencies with which cooperation could be sought.

5.1.18 Work by Advisory Council

The Advisory Council of DGH advises on the technical matters/scientific projects to be implemented by DGH. Council also examines major technical studies and progress of work carried out by DGH.

5.2 ENGINEERS INDIA LIMITED (EIL)

5.2.1 Engineers India Limited (EIL) is a design engineering and consultancy organisation with its head office in New Delhi. Since its inception in the mid sixties, it has been serving the petroleum, petrochemicals and other process industries including the metallurgical industry. In the year 2000-01, it entered the infrastructure sector and since then has secured several assignments related to intelligent buildings, express highways, river/canal projects and modernisation/development of international airports.

EIL provides a comprehensive range of project engineering services spanning project feasibility, process design, detailed engineering, procurement, construction and project management to supervisory assistance for



commissioning and plant start-up. EIL also undertakes projects on LSTK basis. It continues to play a significant role in the hydrocarbon and process industries, both in India and abroad. EIL's management system conforms to ISO quality standards (version ISO - 9001: 2000).

To enhance reach and proximity to clients, EIL has a network of regional offices in Chennai, Vadodara and Kolkata; branch office in Mumbai, overseas engineering/market offices in Abu Dhabi, Kuwait, Libya, Saudi Arabia and Qatar; Inspection/Procurement offices at various locations all over India and also in London and Milan and construction offices at different project sites in India and abroad. Besides, EIL has a wholly owned subsidiary in Malaysia (EIL Asia Pacific Sdn Bhd) for executing projects and one subsidiary in India (Certification Engineers International Ltd.) for providing certification and inspection services.

The total manpower strength of the Company as on 31.12.2006 was 2576.

5.2.2 Performance

(a) **Physical performance – important assignments secured during 2006 - 2007** (upto December 2006)

During the year (till December 2006), EIL secured new business worth Rs. 1,848 crore comprising consultancy business of Rs. 930 crore (including overseas business of Rs. 63 crore) and LSTK business of Rs. 918 crore. Details of major jobs secured are given below:

Domestic

- PMC services for Phase II of capacity expansion-cum-modernization Project of BPCL's Kochi Refinery.
- PMC services for Phase II of Naphtha Cracker Project at Panipat Refinery of IOCL



Visit of MoPNG delegation to underground storage of Crude Oil under construction at S. Korea



EIL signs Contract with Sonatrach Algeria

- Pre-project services, EPCM, FEED and PMC services for refinery expansion and refinery upgradation Project of MRPL.
- Consultancy services for HPCL's new refinery project at Visakh.
- Consultancy services for Punjab Refinery Project of GGSRL at Bhatinda.
- Engineering services for modification of WIN/NC Platform of ONGC, Mumbai.
- PMC services for Dhabol-Panval Pipeline Project of GAIL.
- PMC services for strategic crude oil storage facilities of ISPRL at Visakh.
- EPCM services for DHDT Project of BRPL.
- Independent Engineers Services for Delhi and Mumbai Airport projects for IAAI.
- TPI services for fencing and roads for the Indo-Bangladesh and Indo-Pak Border Project of Ministry of Home Affairs.
- Deposit Works for renovation of Ayakar Bhawan at Vaishali, Ghaziabad for Directorate of Income Tax, Ghaziabad

Overseas

- MC Services for Ph-III Project of Abadan Refinery, Iran
- Engineering Consultancy Services for preparation of Front End Loading Document of Ammonia Urea Complex for Crest Strategies Ltd. British Virgin Islands.



– Energy Conservation Opportunity Assessment at Saudi Aramco Gas Plants for National Energy Efficiency Programme, Saudi Arabia

– QRA and HSEIA Verification Studies for GASCO Revamp Project, GASCO, Abu Dhabi.

– PMC Services for 9th Olefins Complex for PIDM Company, Iran.

LSTK

– 350,000 TPA LLDPE/HDPE (SWING) Plant (EPCC-III) of Naphtha Cracker Complex at IOCL Panipat

Business Forecast (January –March, 2007)

Following is the list of major expected jobs during the period January to March 2007:

– EPCM services for New Vizag Refinery Project [Expansion + Bottom upgradation] of HPCL.

– Consultancy Services for construction of external campus at Greater Noida for IIT, Roorkee.

– Consultancy Services for infrastructure projects in Uttranchal for Uttranchal Government.

Business Secured during 2005-2006

During 2005-2006, EIL secured business worth Rs. 801 crore, of which Rs. 333 crore worth of business was from overseas markets and the remaining Rs. 468 crore was from the domestic market. The list of major jobs secured during 2005-06 is given below:



EIL signs MoU with Technimont Italy



Domestic

- Consultancy services for expansion of Panipat Refinery, IOCL
- Balance activities on restart of ESSAR Refinery Project, Essar Oil Limited, Jamnagar.
- PMC services for completion of balance works of LNG Terminal of Ratnagiri Power Project Limited, Dhabol for GAIL.
- LSTK Services for revival of MNW Platform, ONGC, Mumbai.
- PMC services for Central India Refinery at Bina of BORL, Mumbai.
- PMC works for Dahej Expansion Project of Petronet LNG Ltd.
- EPCM services for tankages of HPCL, Mumbai.
- Consultancy Services for 26 Well Platform Revamp Project, ONGC, Mumbai.
- Feasibility study & BDEP for CDU/ VDU Revamp Refinery-III and Revamp of NHDT/CRG/ARGU/SWS & New crude tanks of CPCL.
- Feasibility study for setting up a Grassroots Refinery in Rajasthan, IOCL, New Delhi.
- DFR for Grassroots Refinery in Rajasthan, MRPL.
- Feasibility Report for Expansion Project of Numaligarh Refinery.
- DHDT Project services - Route Survey, DFR, BDEP and Licensor selection of HGU, Detail Engineering, and Procurement Services for long lead items for BRPL.
- Feasibility Report and Pre-project activities for strategic storage of crude oil and gas for OIDB, New Delhi.
- Internet Protocol – Virtual Private Network Project Implementation for Department of Income Tax
- Due-Diligence of Turkish Petroleum Refineries proposals for bid preparation to IOCL.

Overseas

- BDEP for Bandar Abbas Condensate Refinery, ODCC, Iran.
- PMC services for rehabilitation of ALGER Refinery, NAFTEC, Algeria
- PMC services for additional tanks and tank farm facilities upgrade project at Jabel Dhanna for ADCO, Abu Dhabi.
- Engineering Consultancy Services for Aromatic Complex Project of Kuwait Aromatics Company for Tecnimont, Italy.
- PMC Services for Condensate Topping Project and LNG Project at Skikda for SONATRACH, Algeria.
- Development of engineering capabilities for SONATRACH, Algeria.



- Engineering Supervision Services for Petroleum Tanks at Buipe and Bulgatanga for BOST, Ghana.

(b) Financial Performance

Turnover of EIL was Rs. 790.48 crore during the year 2005-06 as against Rs. 913.06 crore during the year 2004-05. Its profit before tax and profit after tax were Rs. 199.78 crore and Rs. 138.64 crore respectively in 2005-06 as compared to Rs. 166.66 crore and Rs. 112.64 crore respectively during 2004-05. EIL has declared dividend of Rs. 51.23 crore for the year 2005-06, which is 80% of its paid-up capital.

5.2.3 Projects

As a design engineering consultancy organization executing projects on behalf of clients in the hydrocarbon sector and process industry, EIL does not have projects of its own.

5.2.4 Policy Initiatives Undertaken

Salient policy initiatives taken during 2006-07 includes the following:

Marketing

– Marketing offices were opened in Libya and Saudi Arabia to sustain close contact with potential clients, assist in business development, enhance market presence and provide mileage to "Brand EIL" in the region.

– Plans are under preparation for exploring business in CIS countries. Some contact meetings have already been made with potential clients in Kazakhstan, Azerbaijan and Uzbekistan.

– Exploring possibility of forming a Joint Venture with a multinational engineering company to target EPC Projects in the Middle East Region.

– Exploring possibility of forming a Joint Venture in Saudi Arabia in order to target LSTK Projects in Saudi Oil & Gas sector. The structure of entity, day-to-day operations, tax liabilities, etc., is being evaluated before formal registration of JV.

To give impetus to EIL's standing in technology development, following initiatives were taken:

– A specialized technology group has been setup to explore opportunities in the power sector, coal gasification and coal-bed methane projects.

– Successful marketing of Diesel/ Hydrotreating technology developed in cooperation with IOCL-R&D for which the first contract for a DHDT Plant was bagged from BRPL for diesel quality upgradtion.

– Similarly, the technology for LPG Treating Unit developed jointly by EIL and IOCL-R&D was successfully marketed resulting in job awards from IOC, Barauni and Paradeep Refineries.

– Efforts on similar lines for development of Delayed Coker Unit technology for its successful field application are already under way.



– MOU was signed with Siirtec Nigi (SINI), Italy for marketing their technologies based upon SINI know-how on Oxygen Enriched Claus, TGTU-HCR (High Claus Ratio), Liquid Sulphur degassing, Sulphur forming and Liquid/Solid handling.

Human Resources Development

Training & Development: Training programmes including those for multi-skill development and skill enhancement continued. Two persons were sponsored to diploma course in industrial safety. As part of the follow up action plans of Employee Engagement Study and with the objective of strengthening soft skills, team building and leadership capabilities of managers, Management Development Programmes were conducted for middle and senior management levels in association with a business school. Since, the Company has recruited large number of Management Trainees this year, training programmes focused on their orientation, on the job training and site training are being regularly conducted. Mentor scheme has also been revised to help the new entrants in assimilating company's culture and core values.

Review of Performance Management System (PMS) and Performance Linked Rewards (PLR): A study has been taken up to review the PMS and PLR in order to make these more effective by linking individual performance with Key Result Areas.

5.2.5 Enterprise Resource Planning (ERP) System

To enable real time information access for efficient functioning and augmented control, activities have been initiated for designing and installing an ERP Package in the company.

5.2.6 Memorandum of Understanding (MOU)

EIL signed a MOU on corporate performance with Ministry of Petroleum & Natural Gas for 2006-2007 with challenging targets for turnover of Rs. 1,049 crore, gross margin of Rs. 196 crore and business secured for Rs. 1,575 crore.

5.2.7 Corporate Risk Management

A Corporate Risk Management system addressing assessment, minimisation and mitigation of risk was evolved. The Corporate Risk Policy has been formulated and the organization structure for the Enterprise Risk Management System is under implementation in the company.

5.3 BALMER LAWRIE & COMPANY LIMITED (BL)

Balmer Lawrie & Company Limited (BL) was established in 1867 as a Partnership Firm and was incorporated as Private Limited Company in 1924. It was subsequently converted into a Public Limited Company in the year 1936 with its Registered Office at Kolkata. The authorized capital, paid-up capital and reserves and surplus of the Company as on 31.03.2006 was Rs. 30 crore, Rs. 16.29 crore and Rs. 209.52 crore respectively.

The Company is a diversified, medium sized Company with operations spread throughout India and overseas. The main activities of the



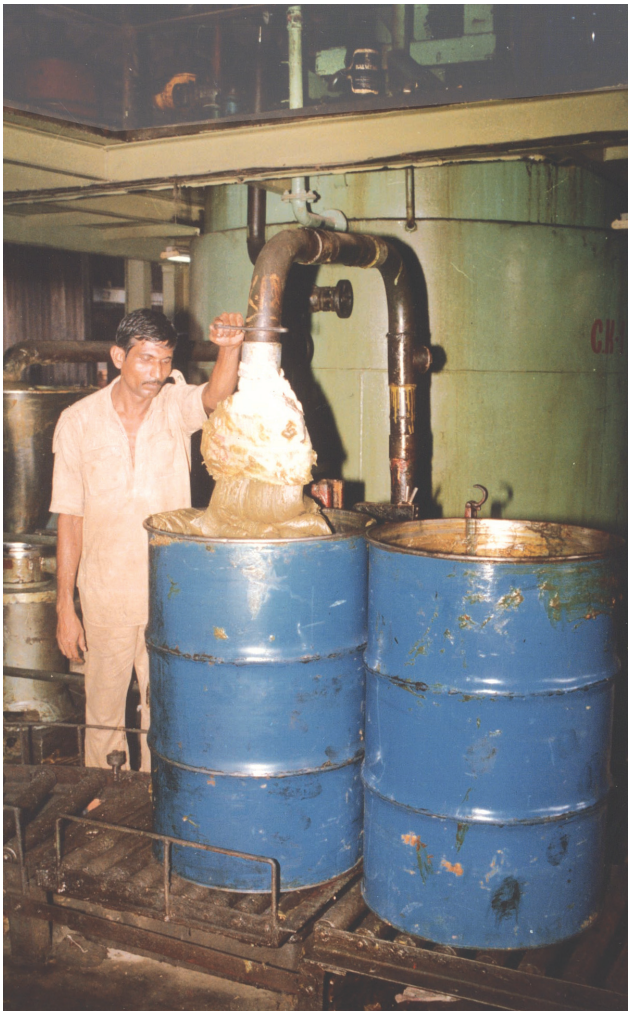
Company are classified into a number of Strategic Business Units (SBU) viz., (i) Oil & Natural Gas Related (Industrial Packaging, Greases & Lubes and Performance Chemicals) (ii) Export Related including Infrastructure for Exports (Speciality Containers, Container Freight Station and Tea Blending & Packaging) (iii) Infrastructure and Services Related (Travel & Tours, Logistics Services and Engineering Technology & Services (iv) Research & Development Related (Engineering, Design & Development Center, Applications Research Laboratory and Product Development Centre).

During the year 2006-07, the Company is expected to manufacture 37 lakh barrels/drums. The Company is expected to produce 34,000 MT of Greases/Lubricants during 2006-07, which is the same as achieved during the period 2005-06. Similarly, the production of leather chemicals is estimated to be 4,400 MT during the year 2006-07.

The total turnover of the Company is estimated at Rs. 1,200 crore in the year 2006-07. The profit after tax of Company was Rs. 46.80 crore during the year 2005-06, whereas the estimated profit after tax during the year 2006-07 is Rs. 67.50 crore.

Company is following the Official Language Act strictly. All the documents, which come under Section 3(3) of the Official Language Act, are being issued bilingually in all the locations of the Company.

During the financial year 2006-07, the Company has utilized about Rs. 7.8 lakh (approximately) for Special Component Plan (SCP) and Tribal Sub Plan (TSP) including Rs. 4 lakh utilized under Gender Budget.



A view of BL's Grease Plant

5.4 BIECCO LAWRIE LIMITED (BLL)

Biecco Lawrie Limited (BLL), a Government of India Enterprise, under the administrative control of the Ministry of Petroleum & Natural Gas, was incorporated on 23rd December, 1919. This is a medium sized Engineering Unit with diversified activities having two factories located at Kolkata. The Company has an Authorized Capital of Rs. 50



crore while the issued, subscribed and paid-up capital is Rs. 42 crore. The President of India and the Oil Industry Development Board (OIDB) hold 57.37% and 41.85% respectively, of the Equity Share Capital.

During the financial year under review, the Company is expected to register total turnover of Rs. 53.80 crore and attain net profit (provisional) of Rs. 0.95 crore upto the period 31.12.2006. Net Worth of the Company as on 31.03.2006 was negative and stands at Rs. 19.59 crore.

The physical performance of the Company for 2006-07 with regard to turnover of electrical operations inclusive of switchgears, electric repair jobs and electrical projects is estimated to be Rs. 48.12 crore as against Rs. 37.57 crore achieved in the corresponding period of the preceding financial year, showing a positive trend in 2006-07.

The Company has drawn up its Restructuring Plan to ensure sustainable performance and growth of the Company and has submitted the same to the Government for consideration of the Board for Restructuring of Public Sector Enterprises (BRPSE).

5.5 OIL INDUSTRY DEVELOPMENT BOARD (OIDB)

5.5.1 Objectives of the Oil Industry Development Board (OIDB)

The Oil Industry (Development) Act, 1974 was enacted following successive and steep increases in the international prices of crude oil and petroleum products since early 1973, when the need of progressive self-reliance in petroleum and petroleum based industrial raw materials assumed great importance.

5.5.2 Functions of the Board

The Oil Industry Development Board was set up in January 1975 under the Oil Industry (Development) Act 1974 to provide financial assistance for development of Oil Industry. Its organizational set up consists of:

a) Chairman b) Members and c) Secretariat

The functions of the Board, as defined in section 6 of the Act, involve rendering financial assistance for the promotion of all such activities as are, in its opinion, conducive to the development of the Oil Industry. The financial assistance is extended by way of loans and grants for activities such as prospecting, refining, processing, transportation, storage, handing and marketing of mineral oil, production and marketing of oil products and production of fertilizers and chemicals.

5.5.3 Resources of the Board

The Oil Industry (Development) Act, 1974 provides for collection of cess as a duty of excise on indigenous crude oil and natural gas. The cess has been levied on crude oil, from time to time. The current rate of cess on crude oil produced in the country is Rs. 2,500 per tonne with effect from 1st March, 2006.

The Central Government has, in the public interest, restricted the duty of excise on crude oil production from the fields under the Production Sharing Contracts to Rs. 900 per tonne.

Out of such proceeds, the funds, as Central Government thinks fit, are made available to the Board after due appropriation by the Parliament for utilization towards various activities envisaged under the Act. Since



inception and up to 30th September 2006, the Central Government has collected more than Rs. 64,000 crore approximately as cess. Out of this, OIDB has received an amount of Rs. 902 crore till date, which constitute 1.41% approximately of total cess collection. The OIDB also generates its internal resources by way of interest income on loans given to various oil sector companies and short-term investment of surplus funds in Fixed Deposit Receipts. The cess receipts along with internal receipts has contributed to Oil Industry (Development) Fund to accumulate to Rs. 8,269 crore approximately as on 31st March, 2006.

5.5.4 Assistance to Oil Industry

The OIDB has been entrusted with the responsibility to render, in such manner, to such an extent and on such terms and conditions financial and other assistance, as it may deem fit, for the promotion of all such measures as are, in its opinion, conducive to the development of Oil Industry. The Board renders assistance by way of grant of loans for projects, disbursements of grants for Research & Development programmes, refinancing of loans and funding expenditure of scientific advisory committees, study groups, task forces, etc. The OID Board determines the terms and conditions including interest rates for project loan from time to time and these are subject to review periodically and, at least, every three months, depending on the interest rates prevailing in the market. According to the formulation as recommended by the Standing Committee on Review of Interest Rates and approved by the OID Board, the month-end interest rates for Government Securities having different residual maturities as latest available in RBI's monthly bulletin may be the benchmark rates for computing interest rates on OIDB loans for different tenures on monthly basis. On the basis of the above formulation, OIDB term loans carried the following interest rates for the month from April 2006 to December 2006:-



(%) per annum

Month	Period of loan			
	1 year	3 years	5 years	10 years
April 2006	7.34	7.52	7.53	7.70
May 2006	8.05	7.96	8.08	8.07
June 2006	8.21	8.04	8.18	8.24
July 2006	7.29	7.82	8.02	8.15
August 2006	7.67	8.06	8.17	8.37
September 2006	7.93	8.41	8.41	8.57
October 2006	7.78	8.58	8.55	8.76
November 2006	7.86	8.30	8.56	8.78
December 2006	7.68	7.97	8.38	8.59

As per the recommendations of the Committee, further discount on interest rates on OIDB loans are also given to certain type of projects such as:-

- Projects of Strategic National Importance that have a direct bearing on the energy security of the country are eligible for a discount of 100 basis points on the effective interest rates.
- Environmental Improvement Projects and Projects for special areas, such as, North-East region, J&K state etc. are eligible for a discount of 50 basis points on the effective interest rates.

Prepayment Fee

The OID Board in September 2004 decided to soften the terms of prepayment to enable the oil companies to retire their costlier loans. The Board decided that the companies might be given an option of prepayment of their existing loans after paying a lump sum prepayment fee of 0.5% of the loan proposed to be prepaid. The companies were also given "Interest Reset" option if they wished to continue with the existing loan after paying the lump sum resetting charges on the same rates as applicable for prepayment of loan.

5.5.5. Deployment of funds

The OIDB has accorded highest priority to programmes connected with exploration, production, refining and storage of crude oil/natural gas. So far OIDB has up to 15th December 2006 extended following financial assistance to the Oil industry:



Financial assistance since 1975

(Rs. in crore approx.)

	Cumulative up to 15.12.2006
Loans	20,000
Grants	1,077
Total	21,077

The loan outstanding from oil companies to OIDB, as on 15th December 2006 is Rs. 6,050 crore (approx.). In addition, the Board has invested its funds in the equity share of M/s. Biecco Lawrie Limited amounting to Rs. 17.58 crore and Numaligarh Refinery Limited amounting to Rs. 90.80 crore. A major portion of the loan assistance has been utilized for meeting capital outlay on Plan Projects of the Oil Companies.

Details of financial assistance given during last five years

Year	Loans	Grants	Rs. in crore
2002-03	1,790.50	123.07	1,913.57
2003-04	520.00	77.21	597.21
2004-05	2,211.83	75.21	2,287.04
2005-06	760.00	89.51	849.51
2006-07 (upto 15.12.2006)	846.00	234.00	1,080.00

Disbursement of Loans during the year 2006-07(Up to 15.12.2006)

(Rs. in crore)

Sl. No	Name of the Organization Plan Projects Loans	Allocation of Funds (2006-07) BE	Funds disbursed Up to 15.12.2006
1	BPCL	80.00	80.00
2	HPCL	600.00	244.00
3	IOCL	1,000.00	372.00
4.	CPCL	55.00	0.00
5.	KRL	150.00	150.00
	Total	1,885.00	846.00



5.5.6 Abstract of the projects funded by OIDB during 2006-07 (upto 15th December 2006)

5.5.6.1 Hindustan Petroleum Corporation Limited : - Rs.244 crore

(i) Mumbai Refinery Green Fuels and Emission Control Project –Rs. 100 crore

HPCL has undertaken the above mega project to meet the MS /HSD of Euro-III grade in Metro/Mega cities and Bharat stage-II grade in the rest of the country. The project also envisages enhancing refining capacity from current level of 5.5 MMTPA to 7.9 MMTPA. Refinery has already installed and commissioned DHDs 2nd reactor in May, 2005 which facilitated to upgrade their HSD production to EURO-III grade. The major facilities proposed under this project to upgrade the MS to EURO-III grade and enhance crude refining capacity are NHT/CCR, Isomerization unit, FCC Gasoline Hydrotreater unit with associated auxiliaries and revamp of existing CDU-1/VDUs and FCC Units. The project is expected to be completed mechanically by December 2006.

(ii) Visakh Refinery Clean Fuels Project – Rs. 100 crore

Similarly Visakh Refinery of HPCL has undertaken Clean Fuels Project to meet the MS/HSD of Euro-III grade in Metro/Mega cities and Bharat Stage-II grade in rest of the country. Under this project, it is also envisaged to increase the refining capacity to 8.33 MMTPA from current level of 7.5 MMTPA. The major facilities proposed under this project are NHT/CCR/NIU/FCC NHT in MS block, Fuel Gas De-sulphurization Project and revamp of existing FCCU-II & DHDS units. The project is expected to be completed mechanically by December 2006.

(iii) Mundra Delhi Pipeline Project: - Rs. 44 crore

Out of sanctioned loan of Rs.400 crore, OIDB disbursed an amount of Rs. 44 crore to the company during the year 2006-07 (upto 15.12.2006) for the said project. HPCL has proposed to lay 1,036 km. (approx.) long multi-product petroleum pipeline starting from its proposed terminal and main pumping station at Mundra and terminating at Bahadurgarh (Haryana) near Delhi. The tap-off points for marketing installation are proposed at Palanpur, Ajmer-Jaipur, Rewari and Bahadurgarh.

5.5.6.2 Bharat Petroleum Corporation Limited: Loan of Rs.80 crore

Bharat Petroleum Corporation Limited is an integrated Oil Company engaged in refining of crude oil and marketing of petroleum products and petrochemical feed stocks. It has also diversified into the upstream sector for exploration of oil and gas in India and abroad. An amount of Rs.80 crore was made available to the company as loan for the following projects:

(i) Extension of Mumbai Manglia Pipeline to Brijwasan - Rs. 50 crore

The Proposed project consists of a 16 inch diameter 686 KM long pipeline from Manglia to Piyala Installation with a tap off at Mathura



Installation and 8 feeder pipeline of 54 KM length from Piyala to Brijwasan to carry MS, SKO and HSD. The pipeline has been optimized for a throughput of 3.5 MMTPA from Manglia to Piyala and 1 MMTPA from Piyala to Brijwasan. The project will also improve BPCL's competitiveness in positioning products in the northern region. An amount of Rs. 50 crore was made available by OIDB to BPCL during the current financial year for the said project.

(ii) Lube Oil Base Stock (LOBS) facilities at Mumbai Refinery –Rs. 30 crore

The project envisaged setting up of facilities to produce 180 TMT/PA of high performance Lube Oil Base Stocks (LOBS) at Mumbai Refinery. The plant will have capability to produce three different grades of LOBS to meet the captive and domestic market demands. OIDB disbursed an amount of Rs. 30 crore to the company during the year 2006-07 (upto 15.12.2006) for the said project.

5.5.6.3 Indian Oil Corporation Limited – Rs. 500 crore

Out of sanctioned loan of Rs. 500 crore for Naphtha Cracker Project at Panipat, OIDB disbursed an amount of Rs. 372 crore to the company during the year 2006-07 (upto 15.12.2006) for the said project. The Project is mainly for production of full range of high value petrochemical products like Polypropylene, LLDPE/ HDPE and MEG etc. by gainfully using Naphtha from Panipat, Mathura and Gujarat Refineries besides having an export potential.

5.5.6.4 Kochi Refinery of BPCL – Rs. 150 crore

OIDB disbursed an amount of Rs. 150 crore to the company during the year 2006-07 for Single Point Mooring Project. The project is being set up to reduce the transportation cost of crude oil.

Details of Grant-in- aid (Regular Grantee Institutions) during 2006-07 (Up to 15.12.2006) are as under:-

(Rs. in crore)

S.No.	Name of the Organisation	Allocation BE	Disbursement (upto 15.12.2006)
1	CHT	9.07	2.45
2	PCRA	21.42	7.40
3	DGH	70.00	15.30
4	OISD	7.44	2.35
5	PPAC	8.00	2.54
	Total	115.93	30.04



Financial assistance disbursed for other R&D projects during 2006-07 BE (Up to 15.12.2006) are as under:-

(Rs. in crore approx.)

S.No.	R&D Project/Agencies	Approved Grant (2006-07) BE	Disbursed
1	NGHP	75.00	184.03*
2	ONGC	9.48	3.80
3	Govt. of Rajasthan, Deptt. of Petroleum	-	0.67
4	IIT Delhi	0.57	0.25
5	NGRI	1.45	0.10
6	IIP Dehra Dun	7.85	0.16
7	Hydrogen Corpus Fund	30.00	-
8	Jan Kerosene Pariyojana	-	15.32
9	Grant for cost of DFR for construction of Rajiv Gandhi Institute of Petroleum Technology	20.00	-
	Total	144.35	204.33

* This amount includes last year expenditure carried out for funding during the financial year 2006-07. Necessary allocation of funds will be made at RE 2006-07 stage. However, OIDB will bear only 70% of the total expenditure whereas remaining 30% of expenditure will be borne by Oil companies.

5.5.7 Major Projects being funded/proposed to be funded by OIDB during 2006-07.

5.5.7.1 Strategic Crude Oil Storages Project

The Central Government has approved building of a Strategic Crude Oil Reserve of 5 Million Metric Tone (MMT) at three locations through a Special Purpose Vehicle (SPV). Three sites namely Vizag (1.0 MMT), Mangalore (1.5 MMT) and Padur (2.5 MMT) have been finalized for constructing the Strategic Storage Facilities at a capital cost of Rs. 2,397 crore and a Crude Oil Cost of about Rs. 8,870 crore with an estimated operational and maintenance cost of about Rs.90 crore per annum. The facilities will take about 54 months for construction and the cost of crude will be incurred from 6th to 8th year. The capital cost of the construction will be met from the existing funds available with OIDB. M/s Engineers India Limited (EIL) has been appointed as Project Management Consultant. While the DFR for Crude Oil Storages at Vishakhapatam and Mangalore have been finalized, it is under preparation for crude oil storage at Padur.



The Indian Strategic Petroleum Reserves Limited (ISPRL) which was earlier a subsidiary of Indian Oil Corporation Limited has become a wholly owned subsidiary of Oil Industry Development Board w.e.f. 09.05.2006. The authorized and paid up capital of ISPRL have been enhanced from the present Rs.1 crore to Rs. 1,000 crore and Rs. 100 crore respectively.

5.5.7.2 Setting up of Rajiv Gandhi Institute of Petroleum Technology

Considering the demand and growth in the petroleum sector, the Government felt the need to set-up a state-of-the-art educational institute to spawn high level manpower to cater to the educational and training requirements of both the upstream and downstream sectors of the oil and gas industry. It is also envisaged that the Institute shall closely interact with industry through undertaking of sponsored R&D and consultancy projects and the offering of customized continuing education programs for working professionals in the cutting-edge areas of oil, gas and petrochemical technology.

The proposed institute to be known as the Rajiv Gandhi Institute of Petroleum Technology will be promoted and financed by Oil Industry Development Board and the public sector oil companies ONGC, GAIL, IOCL, BPCL and HPCL under patronage of Ministry of Petroleum & Natural Gas.

5.5.7.3 Jan Kerosene Pariyojana

Objective is to make available kerosene in the required quantities to the intended beneficiaries i.e. families below poverty line and secondly, to eliminate diversion of PDS SKO for adulteration. Pilot project is being implemented in 10% of the blocks of the country. After review and based on the experience, Government will consider scaling up the scheme to cover the entire country. Capital expenditure anticipated for the scheme is Rs.696 crore. Expenditure will be met out of OID Funds. Oil Marketing Companies (OMCs) will claim the reimbursement from OIDB.

5.5.7.4 Hydrogen Corpus fund

In the wake of interest across the world on the use of hydrogen as an auto fuel, the Government of India decided that the Indian Oil Industry should also work synergistically to make headway in this frontier area.

With the above objective, a Hydrogen Corpus Fund of Rs.100 crore has been set up with individual shares as under:-

IOC, ONGC, GAIL (Rs.16 crore each)	Rs. 48 crore
BPCL, HPCL (Rs.6 crore each)	Rs.12 crore
OIDB	Rs.40 crore

In accordance with the directives of the Ministry, OIDB has already contributed Rs. 10 crore to the corpus.

5.5.8 Grant in aid for R&D Activities

Keeping in view the paramount need for attaining self-sufficiency in the production of crude oil, the OIDB has been according highest priority to the programmes connected with exploration & production of crude oil and other alternative sources of energy. The OIDB



has taken initiatives to fund various seismic surveys and R&D projects in upstream technology. The OIDB is also funding national gas hydrate programmes, exploration of coal bed methane in Rajasthan, oil & gas production technology from deepwater and development of advanced geo-chemical techniques for petroleum exploration and exploitation of alternate energy sources.

The Board has set up a Peer Group to recommend the projects of interest in upstream sector. These projects are, in the first instance, examined by the Group and if recommended, are placed before the Board for taking appropriate decision.

5.5.9 Dividend from NRL

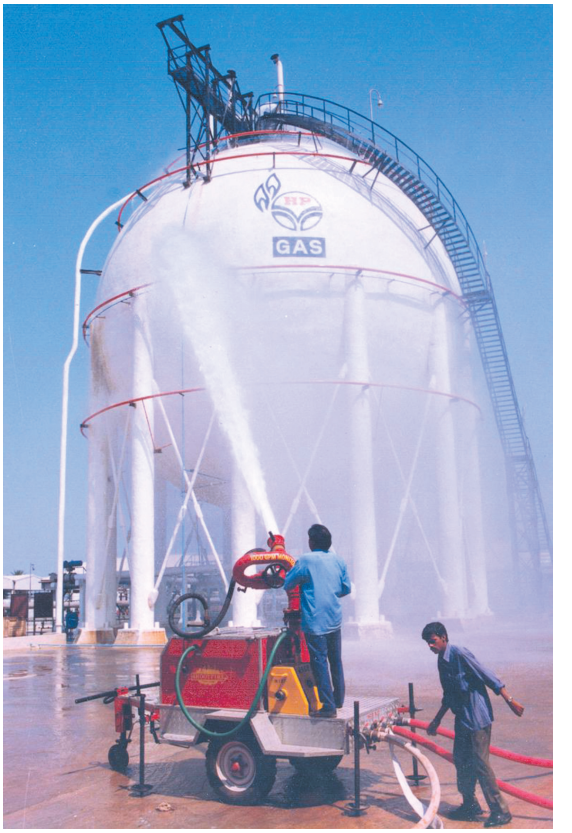
OIDB has taken a stake of Rs. 90.80 crore in NRL's equity. NRL has paid a dividend of Rs. 17.25 crore to OIDB for the year 2005-06.

5.6 OIL INDUSTRY SAFETY DIRECTORATE (OISD)

The Oil Industry Safety Directorate (OISD) assists Safety Council under Ministry of Petroleum & Natural Gas (MOP&NG). The council is headed by Secretary, P&NG as Chairman and includes Additional/Joint Secretaries, Advisors in MOP&NG, Chief Executives of all Public Sector Undertakings (PSUs) under the Ministry, Chief Controller of Explosives (CCE), Advisor (Fire) of the Government of India, DGMS and the Director General of Factory Advice Service & Labour Institute etc. as members.

5.6.1 Standardisation

OISD develops safety standards for hydrocarbon industry to keep them abreast of the latest design and operating practices in the areas of safety and fire fighting in the developed countries. OISD Standards are reviewed periodically to incorporate the latest technological developments, and experience gained in their implementation so as to update them in line with the current international practices. Four new standards and complete review of two existing standards were approved by Safety Council in 2006. As on date, OISD has issued 108 safety standards.



Safety Drill at HP Gas Bottling Plant

5.6.2 External Safety Audits (ESA)

External Safety Audits (ESAs) are carried out periodically to check compliance with respect to implementation of safety standards. ESA





BPCL LPG OISD award

of one Gas Processing and Petrochemical plant, 6 marketing locations, viz., POL terminal/Depot, LPG plants, 44 Exploration and Production (E&P) installations and 568 km of cross country pipelines in addition to one offshore pipeline have been carried out till December, 2006. Additionally, pre-commissioning inspection of 6 new projects in refineries and nine marketing locations and 1600 km of cross country pipeline has been carried out in line with approved methodology till December, 2006.

5.6.3 Safety Performance Evaluation

Safety performance evaluation is done by specially developed system based on total loss concept. The evaluation for the year 2005-06 was completed in 2006 and safety awards were distributed in November, 2006.

5.6.4 Training Programs/Workshops

Technical workshops covering entire oil industry are organized to discuss latest developments, sharing of experiences, etc. One training program with Petroleum Safety Authority of Norway and another seminar on HSE initiative in refining, Gas Processing and Petrochemical Plant was organized in 2006.

5.7 CENTRE FOR HIGH TECHNOLOGY (CHT)

Centre for High Technology (CHT) was established in 1987 as a specialized agency of the oil industry to assess future requirements, acquire, develop and adopt technologies in the field of refinery processes, petroleum products, additives, storage and handling of crude oil, products and gas.





Integrated Refinery Business Imporovement Programme

CHT acts as the technical wing of the Ministry for implementing the scientific and technological programmes. Its major functions include assessment of technology requirement as also operational performance of the refineries specifically from the point of view of energy utilization, acts as focal point of oil industry for coordinating and funding of research work in refining and marketing areas, exchange of information & experience, co-ordinate and pursue the programmes of "Scientific Advisory Committee on Hydrocarbons".

During the year 2005-06, CHT has sponsored following R&D projects:-

- Catalyst Development for Isomerisation of Light Naphtha by IIP and IOCL-R&D
- Studies on the Effect of Gasoline Composition on Exhaust Emissions from Two Wheelers
- Development of Regenerative Process for Sulphur Dioxide Removal from Lean Gas stream.

With a view to keep abreast with the latest development/trends that are taking place worldwide in the field of Petroleum Refining, CHT has organized seminars and workshops, published technical journals viz., "Technology Scan" and CHT Bulletin and held Activity Committee Meetings on various process areas.

In order to encourage energy conservation in refineries, CHT recommends awards for best performance in energy consumption and Oil





R.S. Sharma, the Chairman, ONGC and Shri R. Rajamani, MD, MRPL receiving the first prize from Hon'ble Minister of State, MOP&NG

& Gas Conservation awards in the area of Furnace/Boiler Efficiency and Insulation Effectiveness of Furnace/Boiler etc.

5.8 PETROLEUM INDIA INTERNATIONAL (PII)

5.8.1 Petroleum India International (PII) is a consortium of Public Sector Companies in the petroleum, petrochemicals and engineering sectors. PII was established in 1986 with the common objectives of mobilizing the individual capabilities of its member companies into a joint endeavour for providing technical managerial and other human resources on a global basis.

5.8.2 PII has provided technical Project Management Consultancy, HRD and Training Services, Information Technology and procurement services to the oil and gas sector in Kenya, Ghana, Bahrain, UK, USA and Saudi Arabia. The turnover of the company during 2005-06 was Rs. 3,397 lakh with a net profit of Rs. 763 lakh.

5.9 PETROLEUM PLANNING & ANALYSIS CELL (PPAC)

The Petroleum Planning & Analysis Cell (PPAC) was created w.e.f. 1st April 2002 after dismantling of the Administered Pricing Mechanism (APM) in the petroleum sector and abolition of the erstwhile OCC. It is attached to Ministry of Petroleum & Natural Gas and assist inter-alia in the discharge of following functions:

1. Administration of subsidy on PDS Kerosene and domestic LPG and freight subsidy for far-flung areas.



2. Maintenance of information data bank and communication system to deal with emergencies and unforeseen situations.

3. Analyzing the trends in the international oil market and domestic prices.

4. Forecasting and evaluation of petroleum import and export trends.

5. Operationalising the sector specific surcharge schemes, if any.

Oil Industry Development Board (OIDB) funds the expenditure for the Cell.



CHAPTER - VI



CONSERVATION OF PETROLEUM PRODUCTS

6.1 Petroleum Conservation Research Association (PCRA), on behalf of Government of India, Ministry of Petroleum & Natural Gas has been working for the development and deployment of strategies for energy conservation and environment protection in the major sectors of economy, viz., Industry, agriculture, transport, domestic and commercial.

The oil crisis of 1970s brought into sharp focus the need for conservation of petroleum products due to the enormous hike in country's import bill. The Government in response set up the Petroleum Conservation Action Group (PCAG) in 1976, which was subsequently reconstituted as PCRA in 1978. Over the years, new developments have shaped and given thrust to PCRA's programs and activities.

The demand of petroleum products in the country is growing steadily at the rate of 5-6% per annum and Government Policy as spelt out in India hydrocarbon vision 2025 considers issues such as energy security, use of alternate fuels and interchange ability of technology as vital to ensure that mix of energy sources used in economy is optimal and sustainable. The Energy Conservation Act 2001 provides the legal and institutional framework for energy conservation activities.

6.2 PCRA'S ACTIVITIES – AN OVERVIEW

Human Resources Development

PCRA meets all its manpower requirements by appointing officers and non-officers on deputation from Oil PSUs such as ONGC, IOCL, BPC, HPC, OIL, IBP, GAIL, etc. The deputation is normally for a period of 5 years after which the officers revert to their parent companies.

At present, a total of 59 technically qualified officers are posted all over India to successfully achieve its objectives by emphasizing the need of energy audit and energy efficiency. Out of these, 15 executives are certified energy auditors accredited by Bureau of Energy Efficiency.

Details of Training

In order to upgrade their skills, PCRA officers and staff are exposed to training programmes relevant to their role and function. The training includes staple programmes, skill updation programmes and developmental programmes. In addition both officers and staff members are nominated to attend seminars and conferences on energy related topics in India and abroad.

Officers are also exposed to certain specialized training programmes on energy intensive



applications like steam engineering, air-conditioning & refrigeration systems and DG set operation and maintenance wherein scope for enhancing efficiency in operations is immense. These training programmes are beneficial to PCRA officers for carrying out energy audits in different Industries.

During the year 2006-07, a total number of **30** training programmes/seminars/conferences were attended by **57** participants from PCRA, many officers figuring in more than one programme extended over **172** training mandays.

Besides these inland trainings, PCRA officers were also exposed to training programmes/ conferences/seminars abroad covering varied topics like bio fuels, biomass utilization, renewable energy, energy conservation conferences etc.

In-house technical training programme

Since its inception, PCRA has been engaged in spreading conservation tips in industrial, transport, agriculture and domestic sectors. During this year, PCRA has also ventured into the area of classroom training on "Energy Conservation and Energy Audits" for technical personnel. Training programmes are organised based on the training needs of the individual industry at their premises or PCRA conference hall. The industries covered so far are hotels, Oil and Gas, power etc. These trainings are imparted with the help of in house expertise.

6.3 Oil and Gas Conservation Fortnight 2007

Oil and Gas Conservation Fortnight (OGCF) is a significant annual event of the Ministry of Petroleum & Natural Gas, which is organized from 15th January to 31st January every year. During the period, a large number of activities like rallies, marathons, human chain, technical seminars, symposiums, quiz and painting competitions etc. are arranged for the propagation of oil and gas conservation message amongst the major consuming sectors namely, transport, industrial, agricultural, household and commercial.

OGCF-2007 took off with impressive inaugural functions at the National Capital and all the State Capitals on January 15th 2007. The theme for this year was "SAVE OIL & GAS FOR BETTER LIVING". The event at New Delhi was inaugurated by Shri Murli Deora, Hon'ble Minister for Petroleum & Natural Gas on 15th January, 2007. He addressed a large gathering of dignitaries from the Government, the oil industry, senior executives, school children and others present on the occasion and administered the OGCF Pledge. The function was also graced by Shri Dinsha Patel, Hon'ble Minister of State for Petroleum & Natural Gas, Secretary, Petroleum & Natural Gas, Additional Secretary, Petroleum & Natural Gas.

In addition to the above, all the State Level Coordinators of the Oil Industry have carried out large number of activities like technical seminars, symposiums, Save LPG/Kerosene clinics, quiz and painting competitions etc. for the propagation of oil and gas conservation message amongst the major consuming sectors namely, transport, industrial, agricultural, household and commercial. School children and college students have been specially involved in OGCF celebration by organizing debates, painting, poster, and essay competitions for them on an inter school and inter college level.





Children Participating in Inaugural Function of OGCF 07 at New Delhi

6.4 FIELD ACTIVITIES – (2006-07)

Field Activities are one of the core areas of PCRA operations. The energy conservation programs through these activities are designed to cover a large spectrum of socio-economic profile of our country in different sectors viz. industrial, transport, domestic, agriculture and commercial.

6.4.1 INDUSTRIAL SECTOR

During 2006-07(April '06 - December '06), PCRA conducted 184 energy audits in the industrial sector. The savings identified through these studies was 60590 KLOE (Rs. 115 crore) and the savings realized through follow up studies was 11600 KLOE (Rs. 22 crore).

These are aimed at identifying the possible areas of improvement in energy use efficiency and promotion of fuel-efficient practices and equipment in small, medium and large industries.

Seminars/Technical Meets

During 2006-07 PCRA organized/participated in **25** Seminars/ Technical Meets across the country. These events were very important occasion to disseminate and exchange ideas on technical aspects related to energy efficiency in industries among different stakeholders.

Exhibitions

Exhibitions are an ideal platform where PCRA creates awareness about the conservation of



petroleum products/energy among the general public all over the country. Under this activity, PCRA participate/put up stalls and exhibits the general public the methods/ways/tips for energy conservation through its personal interaction, distribution of conservation related literature/display posters/audio/video cassettes and screen conservation films etc. During 2006-07, PCRA organized/ conducted **90** exhibitions in various parts of the country.

Institutional Training Programs

PCRA's institutional training program (ITP) is an activity primarily meant to share the experience gained by PCRA during industry audits. Institutional training programs are conducted in large/medium industry for groups of 20-30 managers/supervisors/ technicians. Experience is shared through discussion on case studies of specific energy audits that have resulted in sizeable energy saving potential/realization in similar type of industries. During 2006-07 PCRA conducted 62 such industrial training programmes in various industries.

Empanelment of energy auditors

Over the years PCRA has been playing an important role of developing quality energy auditors whose services become available to industries and commercial establishments in the country. Our empanelment committee comprises members from BEE, NPC, TERI and PCRA. Today a strong force of **87** PCRA empanelled energy auditors is providing service to the Indian industry.

International/National Networking

A) International: As a part of Government of India's initiative for cooperation with Japan in the field of oil & gas, PCRA executed an MOU with "The Energy Conservation Center Japan (ECCJ)" on 28th June 2006 in New Delhi. The following actions have been initiated as part of cooperation envisaged in the MOU:

- First working group meeting was held on 26th and 27th July 2006 in Tokyo, wherein the broad areas of cooperation were agreed and finalized.

- A group of 20 engineers from the Oil and Gas Sector was provided training on energy conservation techniques implemented in Japan from 14th to 24th November 2006.

- Two technical experts from ECCJ, Japan presented technical papers during the Two-day technical meet on "Energy Conservation in Commercial Building" organized by PCRA in New Delhi on 22nd and 23rd January 2007.

B) National: During the year PCRA associated actively with the Regional/National Industry bodies such as FICCI, ASSOCHAM, Power Trading Corporation, Thane Belapur Industries Association, Federation of All India Textile Manufacturers Association etc. to carry out jointly the activities such as seminars, technical meets, training programmes and energy audits.

These joint programmes proved very useful towards addressing effectively the issue of energy efficiency to the target audience.



6.5 PCRA's Driver Training Programmes

Transport sector that accounts for around 50% of the country's consumption of petroleum products remained another major area of focus for PCRA during the year 2006.

Realizing the huge consumption of diesel in the country and the average sectoral fuel saving potential as high as 18%, PCRA reinforced it's efforts towards promotion and implementation of the efficient use of diesel, petrol, lubricants and greases through it's activities such as 3-Day Driver Training Programmes (DTPs) both in organized and unorganized sectors, Model Depot Studies and exclusive transport sector seminars, workshops etc.

During 2006, PCRA conducted over 540 DTPs training over 10,000 drivers. The average improvement in KMPL was to the tune of 10-12%.

Highlights

Training was imparted to over 2600 drivers of **RSRTC** in last two years under an agreement to train total of their 6000 drivers through 300 DTPs. RSRTC have realized saving of Rs. 6 crore per annum through increase in KMPL from 5.0 kmpl to 5.09 kmpl. Besides KMPL improvement, PCRA's Driver Training Programmes have also accrued additional benefits to RSRTC in terms of 7% reduction in maintenance cost amounting to Rs. 54 crore per annum and the reduction in accident rate from 0.13 to 0.11 per one lakh kms i.e. an improvement of 15%.

Activities for Youth and Women

Panel discussion on "Energy Policy – Challenges for India" was organized as a part of National Undergraduate Economics Students Summit "BLISS POINT-2006" at Sri Venkateswara College, New Delhi. Dr. Kirit Parikh, Member Planning Commission delivered the keynote address.

Paper presentation and the Poster making competitions were organized at Sri Venkateswara College, New Delhi on the topics of energy efficiency and energy conservation. The competition attracted participation from a large number of students of the colleges of Delhi University.

To energize and motivate women towards saving LPG, PCRA networked effectively with Oil Marketing Companies to organize a series of LPG safety and efficiency workshops in the residential colonies of major cities across the country. These workshops evoked an overwhelming response from both men and women.

Integration of PCRA programmes with SIRDs

To propagate the ways and means of achieving energy efficiency in domestic, agriculture and transport sectors through simple and cost effective tips, PCRA took a promising initiative during 2006 of reaching masses, through integration of its educational activities with the structured programmes of State Institutes of Rural Developments (SIRDs) in different states across the country.

Agriculture Sector & Demonstration Centres

Besides taking an initiative towards integrating its activities with the structured programmes of SIRDs, PCRA efforts in this sector focused



on awareness spreading through van publicity campaigns of the state field publicity departments, workshops on bio-diesel and simple tips to save diesel in different agricultural equipment, kisan melas, exhibitions etc.

To motivate farmers use energy efficient (ISI) equipment, PCRA through it's demonstration centers in rural areas demonstrated to farmers the benefits (in energy use) of using ISI pump sets, foot valves and piping etc. over the non ISI equipment.

6.6 Research & Development

PCRA continued its efforts towards new R&D projects aimed at accelerating conservation of petroleum products leading to environment protection, energy security and sustainable development. Thrust has been to look into the aspect of dissemination of project outcome at the time of sponsoring the project itself. For this purpose project proposers were requested to contact and wherever feasible associate the prospective users of technology right from the beginning. This is an effective methodology as the project results are quickly implemented.

Two of the technologies have been licensed and PCRA received 50% of licensing fee. Patents have been filed for 4 technologies.

R & D Projects

Sl. No.	Particulars	No. of projects	Value of Projects (in Lakh)
1.	New Projects awarded during 2005-06	15	129.6
2.	On-going projects	27	354.4
3.	Projects completed in 2005-06	9	143.0



Activities of PCRA for Bio Diesel

PCRA has been nominated as **nodal coordinating outfit** by the Ministry of Petroleum & Natural Gas for conducting mass awareness programs on promotion of Bio diesel.

PCRA has been making persistent efforts to promote bio fuels particularly growing Jatropha and manufacturing of Bio diesel.

Bio diesel Bank

To bring synergy and forge backward and forward linkage so as to develop sustainable supply chain.

CDM Project

CDM Project relating to Bio diesel has been submitted.

R & D Activities

a. Transesterification Plant

- On PCRA's initiative, Delhi College of Engineering has developed a simple technology and equipment for transesterification on small and medium scale.
- A 10 litre per day plant which can be efficiently used by small scale entrepreneurs is kept at our National Bio fuel Centre. This is also being used for demonstration to different groups.
- PCRA has now financed Delhi College of Engineering for developing 1000 litre/day esterification plant.

b. Other aspects

- PCRA has sponsored an R&D project on Shivsadan Renewable Energy Research Institute, Sangli for producing biogas fuel from Jatropha Curcas seeds. The project is nearing completion.
- PCRA and NEDFi (North Eastern Development Finance Corporation Limited, Guwahati) are jointly taking up a project, titled "NEDFi-PCRA Bio diesel Project" to promote and develop the use of Bio diesel in the North East.
- PCRA has sponsored a project on IIT Guwahati to develop cooking stove wherein Bio fuel can be used in place of kerosene.

6.7 Education & Mass Awareness Campaign

Print Media

Press Campaign

Print media plays a powerful role to educate the end users on importance of conservation of petroleum products in various sectors. PCRA released sector specific ads in newspaper during 2006-07 (as on 25.01.07). "Cutting Pollution with Energy Audit", the ad on dual affect of energy audit in enhancing industrial profit as well in reduction of environmental pollution was released on the occasion of World Environment Day, 2006.

PCRA's energy audit in Shastri Bhawan, North Block and South Block resulted in a



scope of huge saving potential in its energy bill by implementation of PCRA recommendation. This information was highlighted in the form of press release in newspapers order to motivate other government buildings to take up energy audit and cut down on their energy bill.

Printed Literature

Leaflets, brochures, pamphlets on various topics of oil and gas conservation developed by PCRA have been used extensively to spread the fuel saving tips to the end users in various sectors of the economy. Four numbers of new booklets/leaflets (list shown below) were compiled, designed and printed during the year 2006-07(as on 25.01.2007).

- Booklet on PCRA's Unique Driver Training Programme
- Leaflet on "Energy Efficiency in Pulp & paper Industry"
- Leaflet on "Sona ESV", energy efficient cooking equipment
- Leaflet on LPG saving

During the year 2006-07 (as on 25.01.2007), PCRA printed eleven lakh copies of free literature on oil and gas conservation in 12 languages and distributed to 158 distribution centers all over the country spread across 106 locations. This free literature is distributed throughout the year to different end users of petroleum products all over the country in order to educate them on energy efficient practices.

Active Conservation Technique (ACT), the quarterly technical bulletin of PCRA that focuses on articles pertaining to energy conservation techniques and case studies on successful energy audits, were published and distributed amongst industries.

Internet Campaign

Internet is considered to be one of the most emerging and effective medium of communication in the industry today in view of its accessibility on finger tips and its wide spread popularity amongst the masses. "indiatimes.com", the internet portal of India Today Group provides wide scope of catching attention of users and PCRA is running 5 Banner advertisements on conservation techniques on industrial and transport sector on this portal that has received very encouraging results in terms of response to the quiz on conservation.

Outdoor Publicity

Conservation Hoardings at Public Utilities

Hoardings on energy efficient practices in transport sector and energy audit in commercial buildings were displayed in public utilities in different cities.

Conservation Hoardings at Petrol Retail Outlets

Petrol Retail Outlets are the most strategic locations to disseminate message on petrol/ diesel saving tips as all vehicles on an average spends 5-7 minutes while refilling their fuel tanks. Keeping this in mind, PCRA displayed conservation hoardings at 10 numbers of petrol retail outlets of IOCL, HPCL, BPCL & IBP in the city of Delhi during 2006-07 (as on 25.01.2007).

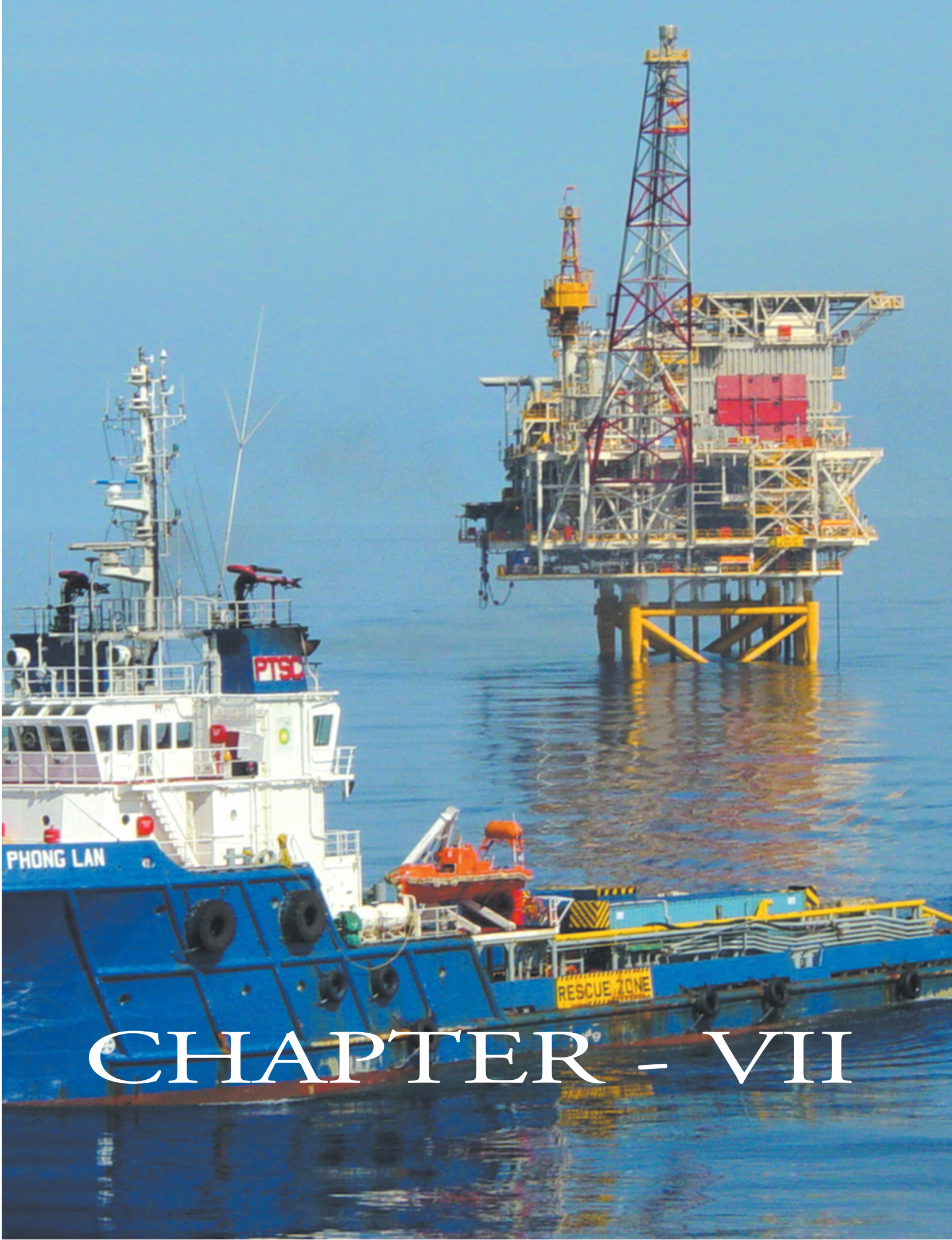


Electronic Media

a) Films, TV Spots

During the year 2006-07 (as on 25.01.2007), PCRA contemplates to multiply the effect of its research findings in the form of films and motivate similar industries to replicate various energy efficient practices. 4 numbers of technical films were produced during the year 2006-07 (as on 25.01.2007) as shown below:

- Shining Rays of Bio diesel – Film on Bio diesel, the emerging alternate source of fuel targeted at entrepreneurs.
- Ek Nai Pahal – Film on PCRA's success story on driver training program in Rajasthan State Road Transport Corporation targeted at various State Transport Corporations.
- Energy efficient Tunnel Kiln – Film on measures to increase energy efficiency in Pottery Industry targeted at Pottery Industries all over the country.
- Jatropha Agro Practices – Film on Agro practices of Jatropha targeted at village Panchayats of the country.



CHAPTER - VII



INTERNATIONAL CO-OPERATION

7.1 In the dynamic global energy scenario, India needs to explore ways and means to address its energy concerns. In order to give special attention to matters relating to international co-operation, a new Division was created in the Ministry of Petroleum and Natural Gas with effect from 01.04.2005. This division, known as the International Co-operation (IC) Division, is headed by an Additional Secretary/ Joint Secretary.

7.2 The principal role of the IC Division is to promote long term engagement of Indian companies in the hydrocarbon sector abroad. The specific areas to be pursued abroad are:-

(i) equity participation in developed oil and gas fields;

(ii) exploration and production contracts in new fields, both oil and natural gas;

(iii) participation in mid-stream and down stream projects in the oil and gas sector;

(iv) promotion of Indian participation in transnational oil and gas pipeline projects;

(v) participation in bilateral bodies such as Joint Commissions and Joint Working Groups on Hydrocarbons Cooperation to ensure that India's interests in specific countries are effectively projected and pursued;

(vi) participation at regional and global multilateral fora to pursue issues of interest to India such as organisation and functioning of oil markets; investments and joint ventures in the Hydrocarbon sector and cooperation between academic and research institutions to promote R&D, transfer of technology, training, dissemination of data on hydrocarbons, etc;

7.3 Several forays were made at the international level to explore ways and means to augment the energy security of the country. The overseas visits of the Minister/MOS during the year 2006-07 and the objectives successes achieved are as under:



ONGC Drilling rig in Jazmin Field , Colombia



OVERSEAS VISITS OF MINISTER

Sl. No.	Countries visited and period	Objectives of the visits
1.	U.K (London) USA (Houston, Washington) (March/April 2006) –	Minister visited London for promotional road-shows for New Exploration Licensing Policy (NELP-VI) and Coal Bed Methane (CBM) Policy (CBM-III). Minister visited London for finalisation/signing of MOUs between DGH and Imperial College/ University of Aberdeen in upstream technology.
2.	Qatar (Doha)(April 2006)	Minister visited Doha for participation in the 10th International Energy Forum (IEF) and 2nd International Energy Business Forum (IEBF).
3.	China (Shanghai) (June 2006) Kazakhastan (Almaty) (June 2006)	Minister visited Shanghai to represent India at the Shanghai Cooperation Organisation Summit.Minister visited Almaty to attend the 2nd Summit of the Conference on Interaction and Confidence Building Measures in Asia(CICA) .
4.	Austria (Vienna) and U.K. (London) (September 2006)	Minister visited Vienna for participation in the 3rd OPEC International Seminar and London to participate in the 5th Annual Eurasia Conference on Business Prospects and Geo-politics in Central Eurasia at the Cambridge University's Judge Business School.
5.	Russia (Moscow) (October 2006)	Minister visited Moscow to participate in the Inaugural Ceremony of the International Energy Week "Moscow Energy Dialogue"
6.	China (Beijing) (December 2006)	Minister visited Beijing to attend Energy Ministers Summit.
7.	Libya and Yemen (January/February 2007)	Minister visited Libya and Yemen to enhance India's presence in the upstream and downstream sectors in Libya and Yemen.



OVERSEAS VISITS OF MOS

Sl. No.	Countries visited and period	Objectives of the visits
1.	Turkmenistan (Ashgabat) (February, 2006)	MOS visited Turkmenistan (Ashgabat) to attend the 9th Steering Committee Meeting of the Turkmenistan-Afghanistan-Pakistan Gas Pipeline Project.
2.	Russia (Moscow) (March, 2006)	MOS visited Russia (Moscow) to participate in the G-8 Energy Ministerial Meeting in Moscow.
3.	Australia (Brisbane and Perth) (April, 2006)	MOS visited Australia (Brisbane and Perth) for promotional presentation on New Exploration Licensing Policy (NELP-VI) and Coal Bed Methane Policy (CBM-III)
4.	United Arab Emirates (Dubai) (April, 2006)	MOS visited UAE (Dubai) for promotional presentation on New Exploration Licensing Policy (NELP-VI)

7.4 An overview of International operations of oil PSUs.

The oils PSUs have vigorously pursued overseas opportunities with a view to enhance the energy security of India not only in the areas of E&P but also to undertake commercial operations in order to turn into global players. The International Cooperation Division has provided support in many of these initiatives through diplomatic interventions. A list of such ongoing projects is as follows:



Signing of MOU for Vietnam Offshore Block 127 & 128 at Hanoi on 24th May 2006



Country	Name of the Block	Participating Interest with details of other partners
Vietnam	Block 06.1	OVL-45% BP-35% (Operator) PV-20%
	Block 127	OVL-100%
	Block 128	OVL-100%
Iraq	Block 8	OVL-100%
Russia	Sakhalin-I	OVL-20% Exxon-30% (Operator) Sodeco-30% SMNG-115% RN Astra-8.5%
Myanmar	Block A-1	OVL-20% Daewoo-60% (Operator) KOGAS-10% GAIL-10%
	Block A-3	OVL-20% Daewoo-60% (Operator) KOGAS-10% GAIL-10%
Iran	Farsi Offshore Block	OVL-40% (Operator) IOC-40% OIL-20%
Libya	Block NC-188 & NC-189	OVL-49% TPOC-51% (Operator)
	Block 81-1	OVL-100%
	Block 86	OIL-50 % and Operator IOC- 50 %
	102(4)	OIL-50 % and Operator IOC- 50 %
Sudan	GNOP Block 1,2,&4	OVL-25% CNPC-40% Petronas-30%
		Sudapet-5% (Joint-Operatorship)



	Block 5A	OVL-24.125% Petronas-67.875% Sudapet-8% (Petronas and Sudapet Joint Operator)
	Block 5B	OVL-23.5% Petronas-39% Sudapet-13% Lundin-24.5% (Petronas and Sudapet JointOperator)
	Pipeline Project	OVL-90%OIL-10%
Syria	Block 24	OVL-60% IPR International -40% (Operator)
	Al Furat (4 PSA)	Bergomo Holding B.V holds following interest in the PSCs through its subsidiaries: 33.33% interest in the Ash Sham PSC; 37.50% interest in the Deir Ez Zor (old) PSC
		37.50% interest in THE Deir Ez Zor Annex IV PSC; interests in the Deep and Lateral rights appended to the above PSCs; 36.00% interest in the Gas Utilisation Agreement; The remaining interests in the PSCs are held by Shell. The share capital of Bergomo Holding B.V. is held by CNPC and ONGC Nile Ganga B.V. (ONG B.V.) in the ration of 50:50. ONG B.V. share has been funded by ONGC/OVL and Mittal Investment Sarl in the ratio of 77.95: 22.05.
Nigeria Sao Tome Principe JDA	Block-2	M/s Sinopec/Addax Petroleum/ ERHC Energy Inc. Consortium 65% PI (Sinopec designated as Operator), Equator Exploration Ltd. 9% PI,A & Hatman 2.5% PI, Foby Engineering 5% PI and Momo Deepwater JDZ 5% PI.
Nigeria	OPL-279 & OPL-285	Through ONGC Mittal Energy Limited



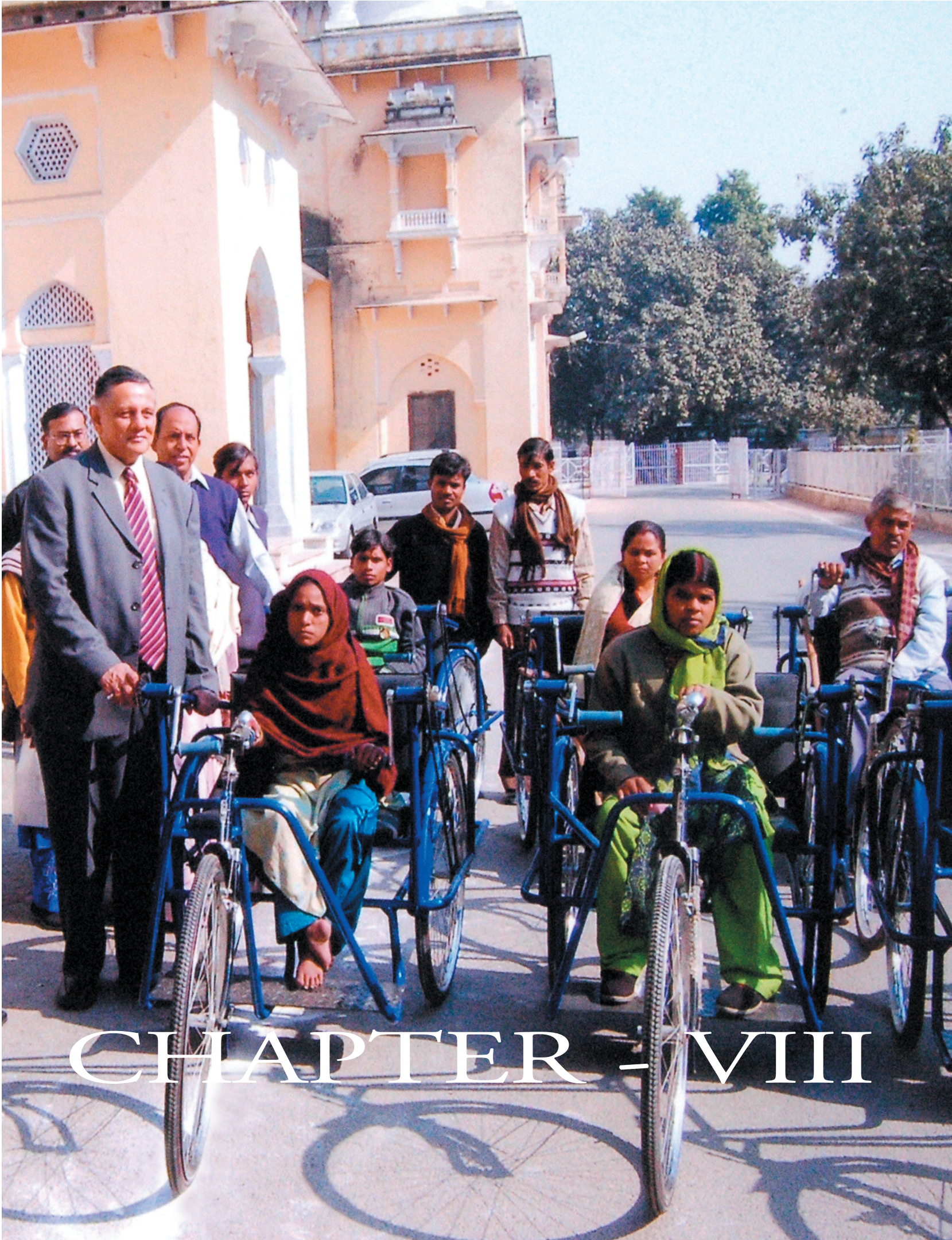
Nigeria	OPL 205	OIL has signed SPA and SHA for acquiring 25% equity shares of Suntera Nigeria 205 Limited from M/s Suntera Resources Ltd. Suntera Nigeria 205 Ltd. Is a Nigerian company having 79 % interest in Exploration Block OPL 205(onshore), Nigeria.
Egypt	Block 6	OVL-70%IPR-30%(OVL and IPR will jointly develop the block with IPR taking the lead during exploration phase)
Qatar	Najwar Najim	OVL-100%
Brazil	BC-10	OVL 15% Shell 50% (Operator)Petrobras 35%
Cuba	Repsol Block 25, 26, 27, 28, 29, 35A&36	OVL-30% Repsol-YPF-40% (Opertor) Norsk-Hydro-30%
Colombia	Omimex Colombia	OVL-50% Sinopec-50% (Joint Operatorship)
Ivory Coast	Exploration Block C1-112	OIL-11.5%
Gabon	Block-Shakthi	OIL-45% IOC-45% Marvisptc Ltd. 10%
Nigeria	OPL 205	OIL has SPA and SHA for acquiring 25%
Yemen	Blocks 82 & 83	OIL-15% MEDCOENERGS-45% KUWAIT ENERGY-25% IOC-15%
Refinery & Pipeline Projects		
Oman	Implementation of Integrated Management System at ORC	IOC
Sudan	pipeline project	OVL-90% OIL-10%



Marketing Projects		
Egypt	GAIL made strategic investment in three retail gas companies in Egypt, namely Fayum Gas Company (FGC), Shell CNG Egypt (SCNGE) and National Gas Company (Natgas), China Gas Holdings Limited (China Gas).	GAIL
Mauritius	Port terminal at Port Lous is going to be enhanced from 17600 MT to 2400 MT	Indian Oil Mauritius Ltd.
Mauritius	Retail outlet development-10 nos.	IOC
Mauritius	Laboratory	IOC
Sri Lanka	Downstream marketing of petroleum products	IOC
Dubai (UAE)	Sale of Lubricant for the first half of current year is 161KL	IOC ME FZE, Dubai
Gas Project		
China	Participation in China Gas Holdings Ltd (CGHL)	GAIL



Partners Across Borders



CHAPTER - VIII



WELFARE OF SCHEDULED CASTES/SCHEDULED TRIBES, OTHER BACKWARD CLASSES AND PHYSICALLY HANDICAPPED

8.1 The orders relating to the reservation for the Scheduled Castes/Scheduled Tribes, Other Backward Classes and Physically Handicapped persons issued from time to time by the Department of Personnel & Training, the Department of Public Enterprises, the Ministry of Social Justice and Empowerment and Ministry of Tribal Affairs are being implemented in the Ministry of Petroleum & Natural Gas and the Public Sector Undertakings under its administrative control. The SCT Cell of this Ministry monitors the implementation of reservation policies in PSUs as well as in the Ministry. The PSUs have also constituted Implementation Cells under the supervision of their Liaison Officers to safeguard the interests of SCs/STs, OBCs and Physically Handicapped (PH) employees and to redress their grievances. The Liaison Officers of the PSUs are responsible for ensuring implementation of the Presidential Directives as well as the various orders of the Government. Remedial action on the grievances of the SCs/STs, OBCs and PH employees of PSUs received through Members of Parliament, National Commission for SCs and STs, National Commission for Scheduled Area and Scheduled Tribe are taken, wherever necessary.

The status of appointment of SCs/STs/OBCs/ Physically Handicapped persons is monitored by the Ministry through Quarterly report furnished by PSUs separately.

During the Special Recruitment Drive launched by DOPT to fill up the backlog vacancies reserved for SCs and STs, progress was monitored at higher levels to achieve the targets drawn and reports were sent to DOPT/DPE as per formats prescribed and also as per time schedule drawn by DOPT. Reports as provided by PSUs projected 196 vacancies out of 301 as filled up during the said drive and 11 vacancies could not be filled up due to non availability of suitable candidates for technical posts. For other unfilled vacancies in Group C and D, PSUs are already having surplus staffs in Group C and D and there has been little or no recruitment in these grades for the last several years. Therefore, these unfilled vacancies in Group C and D may be treated as frozen. A statement showing the status of the backlog of vacancies reserved for SCs/STs as on 31.12.2006, in the oil companies under the administrative control of this Ministry is given in para 8.3.

In pursuance of the observations of Parliamentary Committee on the Welfare of SCs/STs/PH persons and the Presidential Directives on Reservations for SCs/STs in service a team lead by the Liaison Officer of this Ministry inspects the Reservation Roster maintained by the Units of PSUs, annually. In 2006 the team has inspected rosters of 43 out of 48 units of PSUs where Rosters are maintained.



8.2 SPECIAL COMPONENT PLAN (SCP) AND TRIBAL SUB PLAN (TSP)

In accordance with the Government policy, all Public Sector Undertakings under the administrative control of the Ministry have made allocation in their Annual Plan for the Year 2006-07 for various activities related to the welfare and socio-economic development of Scheduled Castes, Scheduled Tribes and people of weaker sections residing in the neighborhoods of project locations through Special Component Plan and Tribal Sub-Plan which are as follows:

(i) Construction of school/college buildings, scholarships, adult education, distribution of teaching materials, establishing library and other aid to SC/ ST students.

(ii) Construction of community latrines on the lines of Sulabh Shouchalaya etc. in villages inhabited mainly by SC/ST and weaker sections of the society.

(iii) Financial assistance through co-operative societies for providing facilities of handlooms, weaving, etc. to enable them to be self employed.

(iv) Provision of drinking water facilities to nearby villages through ring wells/tube wells etc.

(v) Provision of community health facilities, free medical services, medicines through medical camp and family planning camps etc.

(vi) Financial assistance to physically handicapped persons for their rehabilitation.

(vii) Vocational training/guidance under the scheme "Earn While You Learn". Training programmes are arranged in various trades like basket making, weaving, coir rope making, sewing, poultry training, fishing, tailoring, typing, driving and also supply of tools like machines etc.

(viii) Distribution of seeds and fertilizers free of cost to farmers and construction of approach roads/adoption of villages.

(ix) Social forestry schemes by distributing seeds of fruit bearing trees, saplings, other plants etc.



Women Training Centre under the scheme 'Earn while you Learn'



8.3 BACKLOG OF SC/ST/OBC/PH IN OIL COMPANIES UNDER THE ADMINISTRATIVE CONTROL OF THE MINISTRY AS ON 31.12.2006

(a) Direct Recruitment

PSU	Number of Backlog Reserved Vacancies remaining (Direct Recruitment)							
	Group A		Group B		Group C		Group D	
	SC	ST	SC	ST	SC	ST	SC	ST
Balmer Lawrie	-	-	-	-	9	7	36	25
OIL	1*	-	-	-	-	-	-	-
EIL	-	-	-	-	-	-	-	-
BPCL	-	-	-	-	-	13***	-	10
NRL	4**	-	-	-	-	-	-	-
IOC	-	-	-	-	-	-	-	-****
GAIL	-	-	-	-	-	-	-	-
HPCL	-	-	-	-	-	-	-	-
Total	5	-	-	-	9	20	36	35

* 1 SC appointee in Group A of OIL was declared unfit.

** Posts are technical and highly skilled and not enough suitable candidates were found. Process is on for finding suitable candidates.

*** In BPCL Refinery Mumbai, SRD was undertaken for 7 Group C posts only. However, the posts are technical and due to unavailability of suitable candidates only 1 post could be filled. Another SRD is under process very shortly.

**** IOC had previously intimated 16 backlogs as on 01.09.2005 currently which is showing as 10. Therefore, it is understood that the previous vacancies were wiped out during the period.

For rest of the vacancies in Group C and D, we have already intimated that some PSUs have surplus staff and have stopped recruitment since last few years. So these should be treated as frozen.



(b) Promotion

PSU	Number of Backlog Reserved Vacancies remaining (Promotion)							
	Group A		Group B		Group C		Group D	
	SC	ST	SC	ST	SC	ST	SC	ST
Balmer Lawrie	-	2	6	5	5	3	-	-
EIL	-	10	-	9	-	-	-	-
BPCL	-	-	-	-	-	-	-	-
CPCL	-	-	-	-	-	-	-	-
HPCL	-	-	-	-	-	-	-	-
Total	-	12	6	14	5	3	-	-

The PSUs have intimated that the backlog vacancies are still remaining due to non-availability of eligible candidates in the feeder grade. However, these vacancies are carried forward so that these can be utilized by the future eligible reserved category candidates.

8.4 The Expenditure incurred by Public Sector Undertakings on the activities under Special Component Plan (SCP) and Tribal Sub-Plan (TSP) up to 31.12.2006 is as under:



S. No.	Name of the PSU	Expenditure incurred (Rs. In Lakhs)		Total (Rs. In Lakhs)
		SCP	TSP	
1	IOC	67.52	12.58	80.11
2	Balmer-Lawrie	7.74	combined	7.74
3	HPCL	385.00	combined	385.00
4	Biecco Lawrie	0.30	combined	0.30
5	CPCL	12.71	combined	12.71
6	EIL	5.09	2.38	7.47
7	GAIL	*	*	*
8	KRL	5.39	combined	5.39
9	BRPL	18.90	28.45	47.35
10	BPCL	75.0	combined	75.0
11	OIL	NIL	NIL	NIL
12	ONGC	73.69	51.31	125.00
13	NRL	41.93	combined	41.93
14.	OIDB	NIL	NIL	NIL

* In GAIL SCP/TSP programmes are included under Corporate Social Responsibility Programmes. The expenditure incurred on the whole programme in 2006 is Rs. 853.64 lakhs.



CHAPTER – IX



WELFARE, DEVELOPMENT AND EMPOWERMENT OF WOMEN

9.1 The Ministry of Petroleum & Natural Gas and Public Sector Undertakings/Organisations under its administrative control have been taking full initiatives towards welfare and development as also to empower the women employees. With a view to deal with gender sensitization and to promote the cause of women empowerment, special programmes are organised focusing on their professional development and welfare activities. These include external and in-house training, programmes on women health, sponsoring them to attend the National Meet of the Forum of Women in Public Sector, etc.

9.2 Women Fora have been formed in the PSUs to look after the interest of the women employees. List of Do's and Don'ts prepared by the National Commission for Women has been circulated for attention of all employees. Committees have been set up to attend to redressal of complaints on 'Sexual harassment at work place'.

9.3 In the Ministry of Petroleum & Natural Gas, a Women Cell has been constituted since January 1998 to cater to women's issues/grievances and to look into complaints of sexual harassment, if any. The Women Cell has been reconstituted on 18.01.2006. The guidelines of the Supreme Court, the Ministry of Human Resources Development and Ministry of Labour are implemented in this regard. This cell is headed by a senior lady officer.



HPCL's Rasoi Ghar



9.4 As on 31.12.2006, against the total strength of three hundred & five (305), two hundred & sixty one (261) employees are in position at present in the Ministry (Proper) out of which forty six (46) are women.

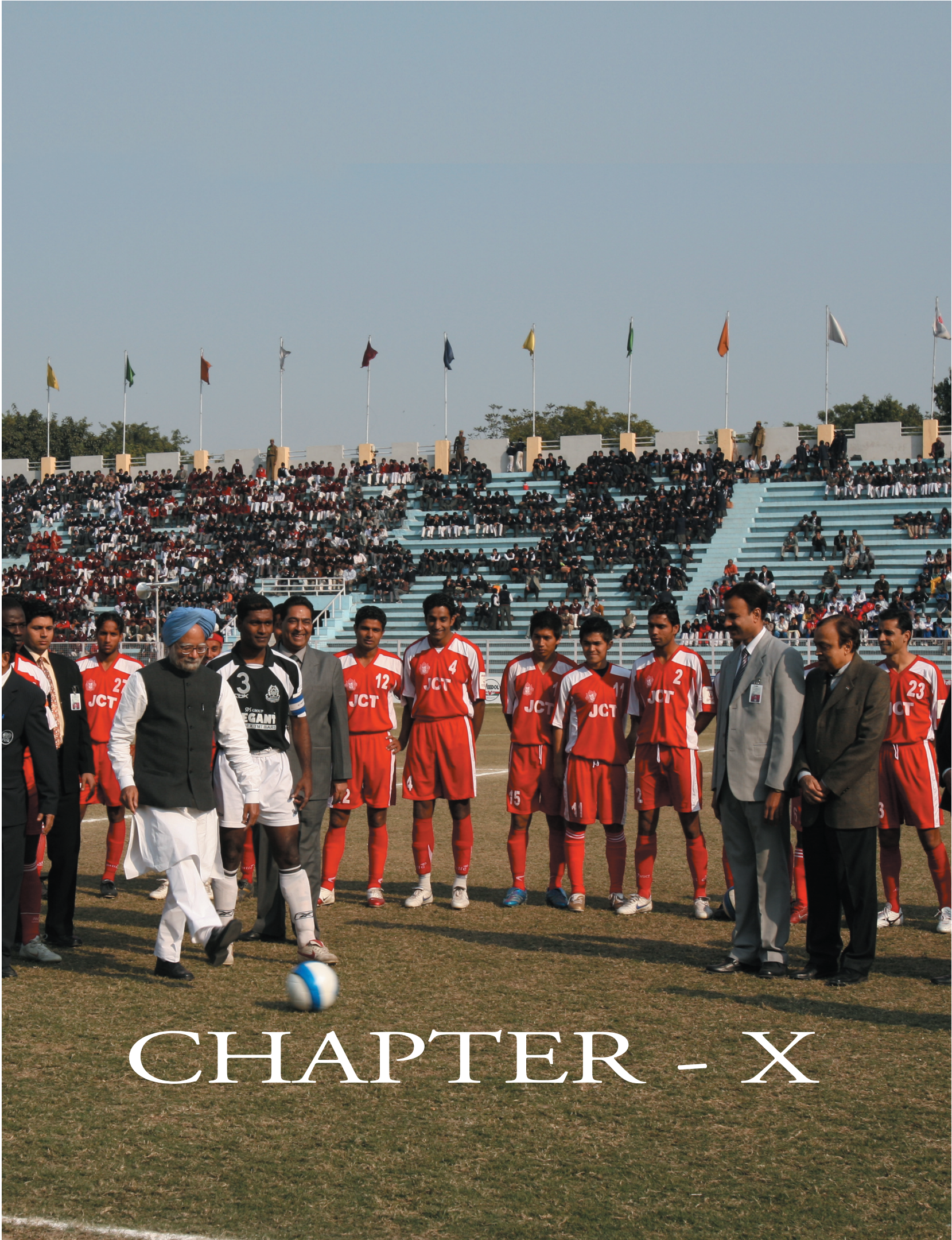
9.5 The number of women employees vis-à-vis total number of employees as on 31.12.2006 in the oil PSUs is tabulated as below:-



Education for Girl Child



Sl. No.	Name of PSU	Total No. of Employees	Total No. of Women Employees
1.	ONGC	33,963	1,925
2.	IOCL	30,029	2,311
3.	HPCL	10,947	697
4.	BPCL	13,947	1,156
5.	GAIL (India) Limited	3,453	167
6.	EIL	2,576	285
7.	OIL	8,510	321
8.	CPCL	1,661	74
9.	BRPL	1,720	78
10.	NRL	719	26
11.	MRPL	1,092	37
12.	Biecco Lawrie	456	5
13.	Balmer Lawrie	1,409	70



CHAPTER - X



DEVELOPMENT OF NORTH - EASTERN REGION

10.1 The Ministry of Petroleum & Natural Gas has no budget allocation for implementation of centrally sponsored schemes and programmes in any States including North-Eastern States in the Petroleum Sector. However, the oil PSUs, under the administrative control of this Ministry, on their own and through their own resources have been implementing schemes and projects on commercial considerations as also some socio-economic programmes for the development of North-Eastern Region. Following are the contributions of the oil PSUs in social, employment and training activities.

10.1.1OIL & NATURAL GAS CORPORATION LIMITED (ONGC)

ONGC has been actively pursuing the exploration activities in the North Eastern Sector, viz., Assam, Tripura, Nagaland, etc. ONGC is routinely keeping the Outlay for E&P activities in the North-East at about 10% of its total annual outlay. ONGC has taken several steps as part of its Socio Economic Development Programme (SEDP), henceforth called the Corporate Citizen Policy (CPP). The endeavour is to upgrade/evaluate the overall industrial and socio- economic level of the area. The amount spent in 2005-06 on various heads of CSR in the North East is as under:



Encouraging Primary Education



Activities	Amount (Rs. In Lakhs)
Education	62.98
Healthcare	49.67
Community Development	31.11
Promotion of sports, Art & Culture	30.53
Total	174.29

ONGC has taken up steps to provide Urban Amenities in Rural Areas (PURA), a vision of His Excellency, the President of India. PURA envisages bridging the rural-urban gap and achieving a balance socio-economic development. ONGC has set up the ONGC-PURA Trust with a seed capital of Rupees Ten Crore. To begin with it would operate in the states of Tripura, Assam, Nagaland, in the North East States among others.

10.1.2 OIL INDIA LIMITED

Oil India Limited views Social Welfare as a genuine expression of goodwill and responsibility towards humanity and the nation. The projects undertaken by OIL from time to time are as follows:

- Oil India Limited has developed over 1400 Kms. of roads and built around 150 bridges in its operational areas in Assam and Arunachal Pradesh, through its Area Development Scheme.

- OIL, under its rural development scheme, is engaged in various welfare activities based on real needs of the village population of its operational areas.

- OIL runs a Handicrafts Training and Production Centre, where stipendiary training is extended to rural women.

- Villagers after systematic scrutiny are imparted training in scientific approach to agriculture.

- Bio-gas plants have been installed in villages.

- Environment cleaning and tree plantation are vigorously encouraged by the company.

- OIL has marked special funds for upliftment of education, health and socio-economic development of SCs/STs, under the Special Component Plan and Tribal Sub-Plan.

- OIL provides mobile dispensary services, free medical camps, family planning and



Handicraft Centre at OIL's Field Headquarters at Duliajan



welfare services, free CAT scanning facilities and supports free Eye Camps.

- OIL has a legacy of promoting and fostering sports.

- The 150 bedded modern hospital of OIL at Duliajan (Assam) caters not only to the needs of its employees and their dependants, but also provides services to common people in and around its operational areas from time to time.

- The OIL hospitals at Moran and Kharsang (Arunachal Pradesh) also provide similar services to the common people in and around its areas. OIL has introduced Mobile Dispensary services, where its Medical team visits from time to time interior villages and provides essential free medical care and also during floods and other calamities to help prevent epidemics.

- OIL also provides financial assistance to various NGOs for construction of primary health centers and educational infrastructure in the villages for common people in and around its operational areas.

- OIL has an ongoing "Apprentice Trainee Scheme" whereby the vocational skills of students from the industrial training institutes of Assam are further sharpened. Under Oil India Rural Development Society to further the Company's policy of encouraging local unemployed youths to supply and produce materials and services for the Company's operational needs, OIL has introduced a programme of entrepreneurial skills to teach young people in and around its oilfield areas as to how start and maintain business ventures.

- OIL has undertaken a new Community Welfare initiative towards promoting agro-based industries through creation of Self-Help Groups. An MOU with State Institute of Rural Development (SIRD), Assam to implement various economic activities in the region. With SIRD, OIL proposes to promote projects, which can create self-employment avenues and promote entrepreneurship in OIL's area of operations, towards generating substantial source of livelihood. OIL has already invested Rs.150 lakh in the above project and will also contribute Rs.3 Crore in the next three years. The project aims to generate employment avenues for 1000 self-help groups and 10,000 families under the Special Swarna Jayanti Gram Swaraj Yojana.

- OIL in partnership with SIRD, Indian Council of Agricultural Research (ICAR), Technology Information, Forecasting and Assessment Council (TIFAC), Don Bosco Youth and Educational Services (DBYES) and State Bank of India (SBI) are working to help the rural community through training programmes, financial subsidy, etc. in OIL's operational areas.

- OIL recently engaged the services of a third party to carry out a social audit of the Company's Social Welfare Programmes and initiatives to assess the impact and public perception of the same. The Group's findings and analysis are being studied, so that the Company can take up much needed projects under its Corporate Social Responsibility Programme in the future.

- Over Rs. 8 crore have been spent on these activities by way of constructing roads,





Mobile Dispensary of OIL

bridges, schools and colleges, treatment of the sick in remote areas through mobile dispensaries, providing treatment in OIL hospitals and conducting eye camps etc.

10.1.3. GAIL (INDIA) LIMITED(GAIL)

GAIL started its activities in Assam in 1992 and has been supplying gas to around 50 customers since then. The average gas supply in Assam is 0.47 MMSCMD. The supply of gas is made to Assam State Electricity Board (ASEB) as a fuel for their power plants at Maibella and Geleki in the district of Sibsagar; Hindustan Fertilizers Corporation Ltd. (HFCL) as a feedstock for their fertilizer plants at Namrup in the district of Dibrugarh; and as a fuel to large number of tea estates for tea leaf processing.

In Tripura, GAIL (India) Limited has created pipeline network to connect different gas fields of ONGC to the consumers. GAIL has laid around 60 km of pipeline connecting ONGC gas fields at Agartala Dome, Rokhia and Konaban, and is supplying around 1.34 MMSCMD natural gas to power plants of Government of Tripura and NEEPCO.

In addition to this, GAIL is also supplying natural gas to Tripura Natural Gas Company Limited (TNGCL), which subsequently supplies gas to a large number of domestic consumers. GAIL has recently acquired a majority stake of 29% in this company under a Joint Venture route, in alliance with Tripura Industrial Development Corporation (TIDC) and Assam Gas Company Limited (AGCL).

In addition to supply, distribution and marketing of natural gas, GAIL has constructed and has been operating a LPG Plant at Lakwa in the district of Sibsagar, which incurred an investment of around Rs.240 crore. The LPG plant has a capacity to produce 85,000 tonnes of LPG per annum for meeting the requirement of about 6 lakh domestic LPG consumers. LPG produced from this plant is presently being supplied to IOCL, AOD's bottling plants at North Guwahati & Silchar and, in future, would be supplied to a host of other small new bottling plants coming up in the states of Nagaland, Manipur, Arunachal Pradesh, Meghalaya and Mizoram.

GAIL's natural gas and LPG businesses provide direct and indirect employment to a large number of people in the north-east region and contribute significantly to the state exchequer by way of tax revenues.

In the area of Petrochemicals, GAIL has taken proactive initiatives to set up Assam Gas Cracker Project in Joint Venture at Lepetkata in the district of Dibrugarh. GAIL holds 70% of equity in the JV, named Brahmaputra Cracker and Polymers Limited.

GAIL has also integrated backwards by way of securing one E&P Block in Tripura under



NELP – IV bidding and another E&P Block in Assam under NELP – V bidding. GAIL holds 80% and 35% respectively of the equity in these blocks. GAIL has initiated action for the early development of these fields.

GAIL has also been associated with the people of North-East Region and has significantly contributed towards society & community development, in and around the areas adjoining its installations.

GAIL has also undertaken several projects under its Social Responsibility Programmes with special thrust on community development, education, environment protection, healthcare, infrastructure, etc. in the region. The Company's efforts in this direction are being stepped up over the current financial year in a more planned and comprehensive manner.



A view of Gas Processing Unit of GAIL



10.1.4 BONGAIGAON REFINERY & PETROCHEMICALS LTD. (BRPL)

Bongaigaon Refinery & Petrochemicals Limited (BRPL) has made a gross investment of Rs. 1,024 crore up to 31st March 2006 in putting up various plants and associated manufacturing facilities at Dhaligaon. During the year 2006-07, a further capital investment of Rs. 95.29 crore is envisaged against various projects.

The Refinery business of BRPL has been in operation since 1979. The Petrochemicals and Polyester Staple Fibre plants were phase-wise added later on. These units, particularly the Petrochemicals & PSF plants, have a vital role in providing business to few ancillary units of the North Eastern region, both in the Govt. sector and the private sector, who supplies packing materials, raw material, etc. to BRPL. Similarly, some of the products from BRPL like Petroleum Coke, Di- Methyle Terephthalate, Polyester Staple Fibre, etc. constitute the raw materials for some of the down-stream industries in the region. Thus BRPL has been contributing a lot to the industrial and economic development of the region.

Further BRPL has been taking up various social upliftment schemes from time to time in its neighborhood under the Special Component Plan and Tribal Sub-Plan. The outlay for these activities is gradually being increased over the years and the various schemes under the aforesaid Plans are given due importance. For the year 2006-07, the company has earmarked Rs. 1.0 crore for socio-economic upliftment under the Special Component Plan and Tribal Sub- Plan in the region.

10.1.5 NUMALIGARH REFINERY LIMITED (NRL)

Numaligarh Refinery has been set up as a grass-root refinery at Numaligarh in the District of Golaghat (Assam) in fulfillment of the commitment made by the Government of India in the historic "Assam Accord" for providing the required thrust towards industrial and economic development of Assam.

Retail Marketing Activities

For improving viability, NRL has authorization from the Government for setting up a chain of 510 retail outlets in various parts of the country for marketing auto fuels. The company launched its retail network "NRL ENERGY STATIONS" during the year 2004-05. A total of 60 energy stations have been commissioned and the response received from customers has been quite encouraging. Out of 60, 36 nos. of Retail Outlets have been set up in North East. Work is in progress for developing another 127 energy stations.





NRL Energy Station

Motor Spirit (MS) Project

A 225 TMTPA capacity Motor Sprit project has been mechanically completed on 31.05.2006 at an approved cost of Rs. 296.86 crore for production of MS conforming to Euro-II norms from surplus Naphtha available in the refinery.

Marketing Terminal at Siliguri

To improve evacuation of products in future, NRL has entered into an agreement with OIL for transportation of white oil products from Numaligarh to Siliguri through a pipeline. Construction and operation of the pipeline is under OIL's scope. The despatch facilities at Numaligarh and receiving terminal at Siliguri are being constructed by NRL. The work for Siliguri terminal is in progress.

Diesel Quality Upgradation Project

NRL has producing HSD confirming to BS-II & Euro-III grade upto 90% capacity utilization without additional capital investment.

Wax Plant

Assam crude offers good potential for production of Paraffin & Microcrystalline wax. In order to find out the potential of wax in the intermediate streams, studies were carried out through IIP. Also a market study on Supply/Demand scenario of Paraffin & Microcrystalline wax was done. Further techno-commercial studies are presently being carried out.

10.2 NORTH EAST REFINERIES

10.2.1 There are four refineries in Assam, viz., Guwahati, Digboi, Bongaigaon Refineries and Petrochemicals Limited (BRPL) and Numaligarh Refineries Limited (NRL). Guwahati and Digboi refineries are fully owned by Indian Oil Corporation (IOC), BRPL is subsidiary of IOC and NRL is a subsidiary of Bharat Petroleum Corporation Limited (BPC).





NRL Refinery night view

These refineries mostly refine crude produced by ONGC, OIL and Ravva crude. As these refineries are of sub-economic size and suffer from locational disadvantages, they need Government's intervention for ensuring their viability after the dismantling of the APM. Even though these refineries are unviable, it is necessary to keep them operational and viable in view of the need to stimulate industrial development and to provide for socio-economic development in the northeast region.

The year of commissioning and the capacity of NE refineries are given in the following table:

Refinery	Year of Commissioning	Capacity (MMT)*
Digboi	1901	0.65
Guwahati	1962	1.00
BRPL	1979	2.35
NRL	2000	3.00
Total		7.00

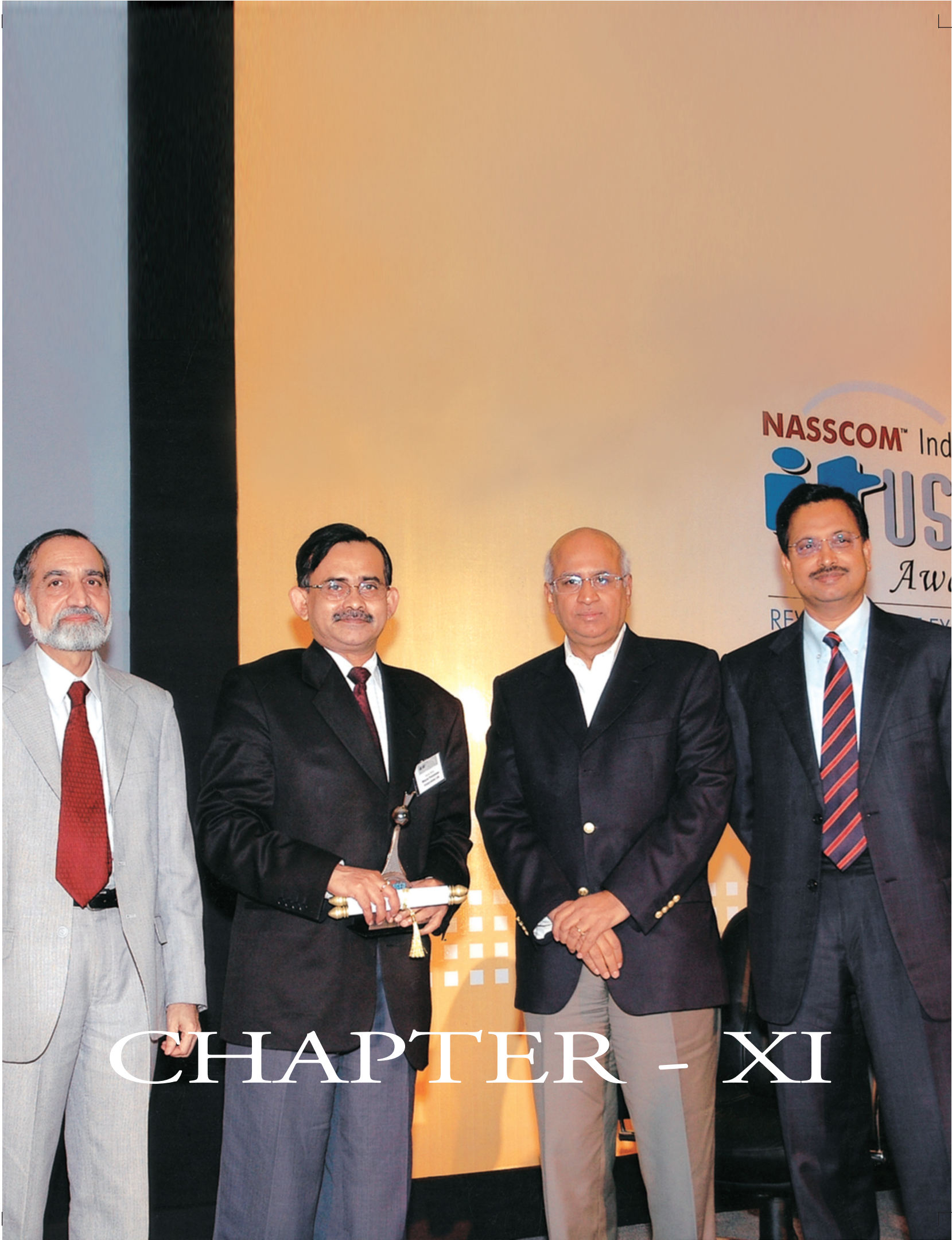
*Million Metric Tonne.



A comparison of profit after tax of NRL and BRPL for the years 2002-03, 2003-04, 2004-05, 2005-06 & 2006-07 (April – December, 2006) is given below.

(Rs. in crore)

Name of the Refinery	2002-03	2003-04	2004-05	2005-06	2006-07 (April-December, 2006)
NRL	174.60	214.95	409.15	448.93	497.26
BRPL	178.50	303.74	478.30	174.76	166.88



CHAPTER - XI



GENERAL

11.1 PROGRESSIVE USE OF HINDI

11.1.1 The Ministry of Petroleum & Natural Gas is implementing provisions of the Official Language Act, 1963 and Rules framed thereunder. It is also responsible for the implementation of Official Language Policy in various Offices of Public Sector Undertakings under its administrative control.

11.1.2 This Ministry has been notified under Rule 10 (4) of the Official Language (Use for Official Purpose of the Union) Rules, 1976. Three sections of the Ministry viz. Administration Section, Library and SC/ST Cell have been identified under Rule 8 (4) for doing their entire work in Hindi. The Establishment Section is also required to do entire work in Hindi in respect of group 'C' and 'D' employees. Eleven types of works have been identified under the aforesaid Rule for doing in Hindi only. Further, instructions have been issued, under the said Rules to all Officers/employees of the Ministry who are proficient in Hindi, to prepare and submit drafts etc. of following categories of communications in Hindi language only:

(a) All communications to State Government & Union Territory Administration in Region 'A' and Region 'B' and all offices, Undertakings, etc. of Central Government situated in these Regions or to any person in these Regions.

(b) Replies to all incoming communications written in Hindi.

(c) Reply to application, appeal or representation written or signed by an employee in Hindi.

11.1.3 The Ministry has prepared a time-bound programme to impart in-services training to all its employees who do not possess working knowledge of Hindi. Under this programme, 3 employees were nominated for Prabodh class under Hindi Teaching Scheme during 2006-07. A time-bound programme for imparting Hindi Stenography/Hindi typing training to Stenographers and Lower Division Clerks (LDCs) of the Ministry has also been prepared, under which 3 Stenographers and 2 LDCs were nominated for training.

11.1.4 The first working day of every month is observed as Hindi Divas in the Ministry. All the Officers/employees are expected to undertake official work only in Hindi on that day. Similarly, the PSUs under the Ministry have also been advised to observe Hindi Divas every month in their offices.

11.1.5 The 'Hindi Fortnight' was celebrated in the Ministry during 14-28 September, 2006 and a number of competitions viz., Hindi essay



writing competition, Hindi noting/drafting competition etc. were organized. 18 participants were given cash awards.

11.1.6 On the occasion of Hindi Divas/Week/ Fortnight/Month, the message from Hon'ble Minister for P&NG and Hon'ble Cabinet Secretary was circulated among all the Officers of the Ministry and all of the PSUs.

11.1.7 The Parliamentary Committee on Official Language inspected 18 offices of PSUs under the administrative control of the Ministry scattered throughout the country. 16 PSU offices were entrusted with the coordination work also. The location in-charge and offices of official language actively participated in the inspections. All the PSUs were made aware of findings of the Committee and orders were issued for removing short comings.

11.1.8 All computers were provided with Hindi software during the year.

11.1.9 In order to undertake the Official Language implementation work effectively, an Official Language implementation Committee (OLIC) is functioning in the Ministry under the chairmanship of Joint Secretary (Admn.). All the Public Sector Undertakings under the Ministry are members of the Committee. This Committee reviews the overall progress of implementation of the Official Language Policy in the Ministry and the Public Sector Undertakings, as also the progress of implementation of the Annual Programme circulated by Department of Official Language.

11.1.10 Quarterly progress reports on progressive use of Hindi are sent to Department of Official Language, and Quarterly progress reports received from Public Sector Undertakings are reviewed in the Ministry.

11.1.11 So far, 317 offices of the Public Sector Undertakings, in which 80 percent staff acquired working knowledge of Hindi, have been notified in pursuance of Rule 10 (4) of the Official Language (Use for Official Purpose of the Union) Rules, 1976. One office was denotified due to closure of the project. The Public Sector Undertakings have been advised to conduct survey of their offices with a view to ascertain the number and percentage of employees who have acquired working knowledge of Hindi.

11.1.12 The Annual Programme for the financial year 2006-07 received from the Department of Official Language was circulated to all officers of the Ministry and Chief Executives of PSUs/Officers. Various Sections in the Ministry and all PSUs were instructed to ensure its proper implementation.

11.1.13 Books, magazine and newspapers published in Hindi are available in Ministry's library. Help books, such as Administrative and Technical Terminology in Hindi, English-Hindi Dictionaries etc. have been provided to various Sections and Desks.

11.1.14 With a view to assess position of compliance of Official Language Rules and use of Hindi in the various offices of PSUs in different parts of the country, an Inspection Team has been constituted under the Chairmanship of a Joint Secretary who is also the Chairman of OLIC of the Ministry. 25 offices in region "A", "B" and "C" have been inspected in 2006-07.



11.1.15 The Meeting of Hindi Salahkar Samiti of Ministry was held on 09.01.2007 in Parliament House Annexe. The Members appreciated the work being done in Hindi in the Ministry and in the PSUs under its administrative control.

11.2 PUBLIC GRIEVANCE CELL

In accordance with the guidelines of the Cabinet Secretariat, Government of India, a Public Grievance Cell has been functioning in the Ministry of Petroleum & Natural Gas. This Cell has been attending to the grievances of members of the public against the Public Sector Oil Companies and other departments under the administrative control of this Ministry. All possible efforts are being made to ensure the regular monitoring of the public grievances received through Department of Public Grievances, Department of Administrative Reforms and Public Grievances and other Departments of the Government as well as the members of the public. A systematic mechanism has been evolved so as to ensure speedy and expeditious redressal of public grievances. This Public Grievance Cell is functioning under the charge of Director of Public Grievances.

During the year 2006-07 (upto 31st December, 2006), the Public Grievance Cell of this Ministry received 2,385 grievances out of which 692 grievances have been redressed. The pendency of the grievances as on 31st March, 2006 was 114 grievances only.

11.3 INFORMATION FACILITATION COUNTER

The Information Facilitation Counter of the Ministry of Petroleum & Natural Gas was set up on 30th June, 1997. Its main responsibilities are to ensure transparency in the working of this Ministry and providing relevant information on all aspects of Oil Industry to the members of public. The Citizens' Charter of this Ministry is the guiding force which aims at educating the common man about the consumers' entitlements to public services, including the standards of performance, quality of products, mode of access to information, etc.

The type of information provided to the public has been ranging from the supply of Basic Petroleum Statistics to the provision of information on various locations in the country rostered under various Marketing Plans for Retail Outlets, LPG Distributorships and Kerosene Agencies. Dealer Selection Guidelines (both in Hindi and English) are provided to the members of the public to enlighten them about the eligibility criteria.

During the year 2006-07, about 2,500 members of the public have benefited from the Information Facilitation Counter.

11.4 e-GOVERNANCE INITIATIVES

NIC centre of the Ministry of Petroleum & Natural Gas has been providing the necessary informatics and networking support to the ministry for its efficient and effective functioning at various levels since 1986. The center has also been assisting the ministry in development and



implementation of various e-governance systems/applications for decision support and office automation. With the support of NIC center, several initiatives have been taken by the ministry towards creating awareness and promotion of use of information and communication technologies (ICT) in the ministry.

The following are some of the key e-Governance Initiatives/Applications taken up in the ministry.

- The required ICT Infrastructure in the form of 130-node LAN with OFC backbone, L2 & L3 switches has been established. The LAN is served by state-of-the-art Servers & Client Systems etc. and is catering for internet/email access as well as for information sharing and for promoting intranet based applications in the ministry. Necessary Cyber Security Infrastructure consisting of a centralized Antivirus Patch Server, Firewall have also been installed, supported/serviced by a dedicated team of cyber security personnel.

- IntraPortal has been implemented in the ministry to facilitate the officials of the ministry in accessing various information in an authorized manner from a single window. The portal is actively used for dissemination of Online Pay-Slips, Income-Tax statement, Income-Tax calculation Sheet, GPF statement and online fillable and printable application forms pertaining to EL, GPF withdrawal, Medical Claims etc. Circulars, Meetings and Events information uploading system has been integrated with this portal to support various sections for uploading their information in an authorized manner.

- Website (http://petroleum.nic.in) of the ministry has been completely redesigned and enriched with relevant information. Various replies to the queries related to RTI have been provided on this site.

- Office Procedure Automation (OPA) – an online File/Receipt Tracking and Monitoring System has been implemented in the ministry to monitor the pendency of cases, tracking of files, accounting of receipts and timely disposal of important cases. With the help of OPA, diarists are now able to neatly maintain a daily, monthly and yearly register of receipts and files and generate various reports as per the need.

- Composite Payroll System (CPS) has been implemented in Cash Section of the ministry to facilitate DDO, Employees and PAO Section of the Ministry. This package helps in generating Salary, DA arrears, Income Tax, GPF, honorarium, OTA, Bonus, Tuition Fees and various information pertaining to Banks and Income-Tax department.

- Telephone Bills Payment & Monitoring System has been implemented in the Administrative Section of the ministry to facilitate the collection of the bills from the residence/office of officers before due date of payment, compilation of bills and timely release of payments to the



service providers. This system also helps in monitoring expenditure of each telephone on monthly and yearly basis and also to disseminate the information on telephone numbers of various employees. With the help of this package, various reports like Exchange wise Sanction Orders, notesheet for approval and telephone number wise Annual Register are also being generated.

- Regular Trainings on various Office Tools to the officers/officials of the ministry have been provided.

The following Projects/Activities are proposed to be taken up during the year 2007-08

- Extension of LAN to provide Cyber connectivity upto the level of Office Assistants.
- Introduction of Video Conferencing Facility for interaction with various OIL Sector PSUs.
- Targeted Training for increasing the ICT & Computer Security awareness among concerned officers/officials of the Ministry.
- Development of MIS encompassing Parliament Questions/Answers, Court Case Monitoring, Audit Paras/ Inspections Monitoring and RTI Request/Appeal Information.

11.5 OUTSTANDING AUDIT OBJECTIONS

Audit had shown a total number of 50 objections as outstanding in its Inspection Report for the year 2005-06 submitted to the Ministry. Attempts have been made to settle the outstanding Audit observations expeditiously.

11.6 C & AG'S REPORT

A summary of important Audit observations made available by the office of C&AG for the year 2006-07 are at Appendix VIII.

11.7 RECENT CHANGES IN PRICING AND TAXATION OF PETROLEUM PRODUCTS

The trend in the international prices of Indian basket of crude oil and sensitive petroleum products for the years 2002-03, 2003-04 ,2005-06 and 2006-07 (upto 04/02/2007) is depicted below:



Trend in the international oil prices & domestic prices

Period	Crude oil (Indian Basket) $/bbl	Petrol $/bbl	Diesel $/bbl	Kerosene $/bbl	LPG $/MT
March 2002	23.31	26.43	23.27	23.65	194.00
2002-03	26.66	30.15	28.93	29.33	280.40
2003-04	27.96	35.03	30.48	31.19	278.45
2004-05	39.22	49.01	46.91	49.50	368.52
2005-06	55.72	64.51	64.70	69.43	481.04
2006-07 (upto 04/02/2007)	63.13	72.82	74.96	78.11	498.84

Note: Indian basket comprises price of Brent (dated) and Oman/Dubai average in the ratio of 43:57 upto 2004-05 42:58 for 2005-06 & 40.8:59.2 for 2006-07.

With the import dependence of domestic refineries as high as 78% for their crude oil requirement and with the dismantling of APM for petrol and diesel and shift over to import parity pricing, the impact of rising international prices were not fully reflected in domestic selling prices. Despite the increase in the international prices, the selling prices of petrol and diesel were not revised by the oil marketing companies (OMC's) in line with international prices. This was done to protect the interest of vulnerable sections of the economy. Similarly, the basic prices of PDS Kerosene and domestic LPG remained largely unrevised since March, 2002 and November 2004 respectively despite the steep increase in crude prices.

11.7.1 Reduction/Changes in Central taxes

- The excise duties on petrol were scaled down from 30% to 26%, on diesel from 14% to 11% and on LPG from 16% to 8% effective June 16th 2004.

- Effective 19th August 2004, further reduction in excise duties on refined products was given effect to. The applicable excise duty on petrol was lowered from 26% to 23% and that on diesel brought down from 11% to 8%. This was combined with reduction in the customs duty on petrol and diesel from 20% to 15%. Similarly, excise duty on PDS kerosene was scaled down from 16%



to 12% and customs duty on LPG and Kerosene from 10% to 5%.

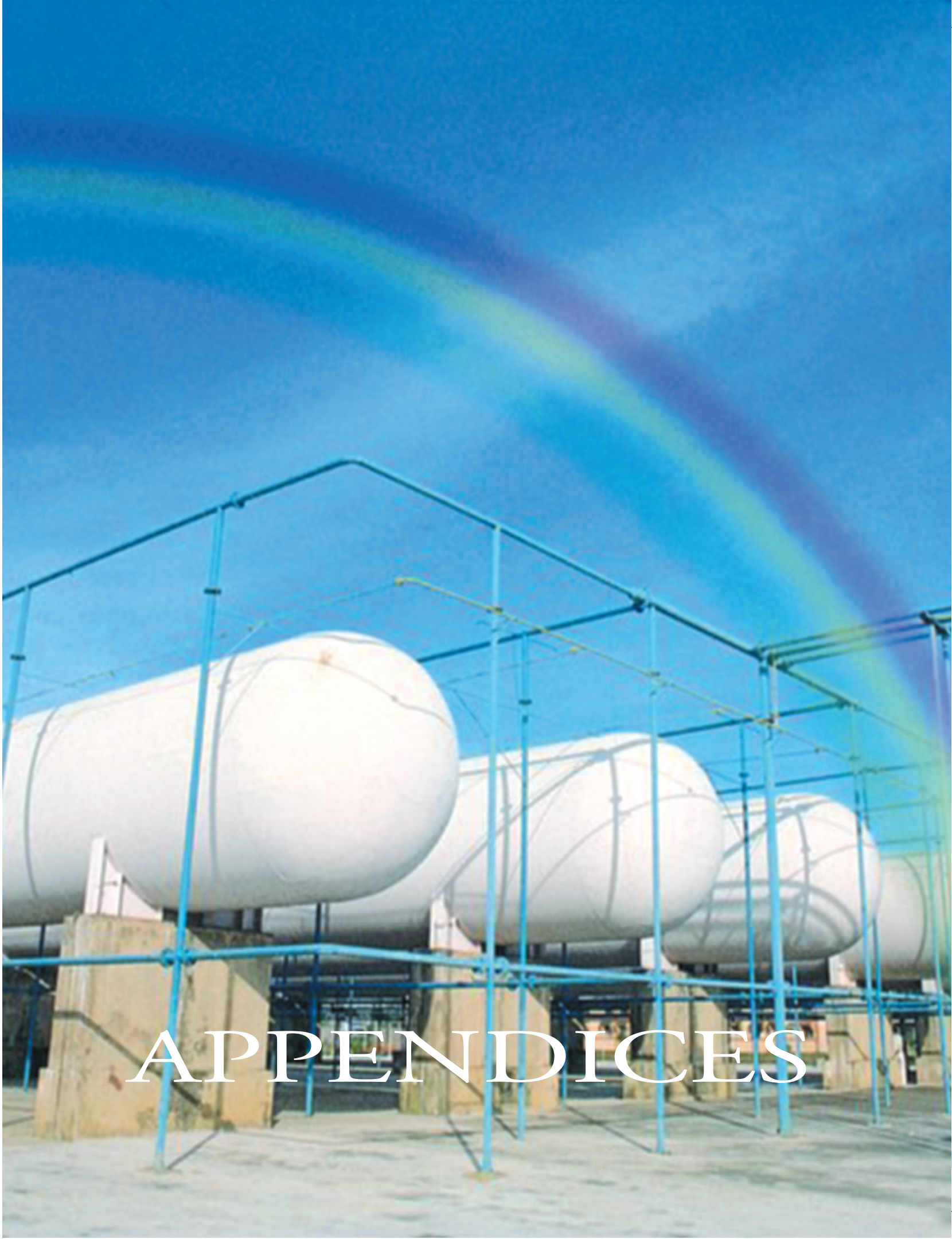
- Effective 1st March 2005, the customs and excise duty on PDS Kerosene and LPG for domestic use were reduced to zero.

- Effective 1st March 2005, the customs duty on petrol and diesel were reduced from 15% to 10% and that on crude oil brought down from 10% to 5%. The customs duty on aviation turbine fuel (ATF), Furnace Oil (FO) [for general use], low sulphur heavy stock (LSHS) [for general use] and bitumen were reduced from 20% to 10%. Customs duty on Naphtha, FO and LSHS for fertilizer use continued to remain NIL. The resultant loss of tax revenue was neutralised by way of increase in the excise duties on petrol and diesel. Accordingly, the excise duty on petrol was revised from 23% plus Rs.7.50 per litre to 8% plus Rs.13.00 per litre (from Rs.12.07 per litre to Rs.14.59 per litre) and on diesel from 8% plus Rs.1.50 per litre to 8% plus Rs.3.25 per litre (from Rs.3.15 per litre to Rs.4.80 per litre). Based on current prices effective 30/11/2006 the excise duty on petrol is Rs.15.05 per litre and on diesel is Rs.5.14 per litre.

- Consequent to enactment of Finance Bill 2006, LPG (Domestic) becomes "Declared Goods" under CST Act and the maximum sales tax/VAT rate is 4% effective 19/4/06 across all states/ Union Territories. This will reduce the sales tax levied by States to 4% as against VAT rate of 12.5% levied by most of the States currently. This is also expected to marginally reduce the under-recoveries of oil marketing companies without revising retail-selling prices of domestic LPG.

- Effective 16/06/2006 Government has reduced Customs Duty on Petrol and Diesel from 10 percent to 7.5 percent in line with recommendations made by the Rangarajan Committee

- Besides, several State Governments like Andhra Pradesh, Tamil Nadu (only on Diesel), Himachal Pradesh, Maharashtra, Delhi, Goa, Uttaranchal, Manipur, Haryana, Assam and Punjab have reduced the sales tax on petrol and Diesel to cushion the burden of the recent price hike on these products effected on 6th June'2006. The reduction has been targeted towards giving relief to the consumer who had to bear the brunt of the price hike.



APPENDICES

WORK ALLOCATED TO MINISTRY OF PETROLEUM AND NATURAL GAS

1 Exploration for, and exploitation of petroleum resources, including natural gas and Coal Bed Methane.

2 Production, supply, distribution, marketing and pricing of petroleum, including natural gas, Coal Bed Methane and petroleum products.

3 Oil refineries including Lube Plants.

4 Additives for petroleum and petroleum products.

5 Lube Blending and greases.

6 Planning, development and control, of and assistance to all industries dealt with by the Ministry.

7 All attached or subordinate offices or other organizations concerned with any of the subjects specified in the list.

8 Planning, development and regulation of oilfield services.

9 Public sector projects falling under the subject included in this list. Engineers India Limited and IBP Company, together with its subsidiaries, except such projects as are specifically allotted to any other Ministry/ Department.

10 The Oil Fields (Regulation and Development) Act, 1948 (53 of 1948).

11 The Oil and Natural Gas Commission Act, 1959 (43 of 1959).

12 The Petroleum & Minerals Pipelines (Acquisition of right of User in Land) Act, 1962 (50 of 1962).

13 The Esso (Acquisition of Undertakings in India) Act, 1974 (4 of 1974).

14 The Oil Industry (Development) Act, 1974 (47 of 1974)

15 The Burmah-Shell (Acquisition of Undertakings in India) Act, 1976 (2 of 1976).

16 The Caltex (Acquisition of Shares of Caltex Oil Refining (India) Limited and of the Undertakings in India of Caltex (India) Limited Act, 1977.

17 Administration of the Petroleum Act, 1934 (30 of 1934) and the rules made thereunder.

LIST OF PUBLIC SECTOR UNDERTAKINGS AND OTHER ORGANISATIONS UNDER THE ADMINISTRATIVE CONTROL OF THE MINISTRY OF PETROLEUM & NATURAL GAS

I.	**Oil Companies in which Government of India has a shareholding (31.03.2006)**		
1.	Oil & Natural Gas Corporation Limited		74.14%
2.	Indian Oil Corporation Limited		82.03%
3.	Hindustan Petroleum Corporation Limited		51.01%
4.	Bharat Petroleum Corporation Limited		66.20%
5.	GAIL (India) Limited		57.34%
6.	Engineers India Limited		90.40%
7.	Oil India Limited		98.13%
8.	Biecco Lawrie & Co. Ltd.		57.37%
9.	Balmer Lawrie & Co. Ltd.		61.80%
II.	**Subsidiaries and Other Companies.**		
1.	ONGC Videsh Limited	–	wholly owned by ONGC
2.	Mangalore Refinery & Petrochemicals Limited	–	subsidiary of ONGC
3.	Indian Oil Blending Limited	–	wholly owned by IOC
4.	Bongaigaon Refinery & Petrochemicals Limited	–	subsidiary of IOC
5.	IBP Co. Ltd.	–	subsidiary of IOC
6.	Chennai Petroleum Corporation Limited	–	subsidiary of IOC
7.	Indian Oil Mauritius Ltd.	–	subsidiary of IOC
8.	Numaligarh Refineries Limited	–	subsidiary of BPCL
9.	Kochi Refineries Limited	–	subsidiary of BPCL
10.	Certification Engineers International Limited	–	wholly owned by EIL
11.	EIL Asia Pacific Sdn BHD	–	wholly owned by EIL

III. Other Organisations

1. Oil Industry Development Board
2. Petroleum Conservation Research Association
3. Oil Industry Safety Directorate
4. Centre for High Technology
5. Petroleum India International
6. Directorate General of Hydrocarbons

PRODUCTION OF CRUDE OIL AND NATURAL GAS

ITEM	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07* (April-Dec)
1	2	3	4	5	6	7	8
1. **CRUDE OIL PRODUCTION $ ('000' Tonnes)**							
(a) Onshore:							
Gujarat	5815	6002	6042	6131	6187	6251	4697
Assam	5199	5095	4660	4592	4703	4474	3329
Arunachal Pradesh	78	69	74	77	83	104	81
Tamil Nadu	436	440	395	375	391	385	267
Andhra Pradesh	263	283	300	281	226	216	185
Total (a)	**11791**	**11889**	**11471**	**11456**	**11590**	**11430**	**8559**
of which							
OIL	3286	3182	2951	3002	3196	3234	2351
ONGC	8428	8636	8445	8380	8320	8095	6087
JVC/Private	77	71	75	74	74	101	121
(b) Offshore:							
ONGC (Mumbai High)	16629	16074	17560	17677	18165	16309	13409
JVC/Private	4006	4069	4013	4240	4226	4451	3516
Total (b)	**20635**	**20143**	**21573**	**21917**	**22391**	**20760**	**16925**
Grand Total (a+b)	**32426**	**32032**	**33044**	**33373**	**33981**	**32190**	**25484**
2. **NATURAL GAS PRODUCTION (Million Cubic Metres)**							
(a) Onshore:							
Gujarat	3149	3280	3531	3517	3710	3831	2557
Assam	2204	1992	2047	2204	2249	2408	1901
Arunachal Pradesh	32	32	36	44	40	48	25
Tripura	376	416	446	508	497	480	388
Tamil Nadu	200	349	466	605	678	906	838
Andhra Pradesh	1604	1797	2038	1927	1707	1663	1152
Rajasthan	160	101	162	168	213	242	177
Total (a)	**7725**	**7967**	**8726**	**8973**	**9094**	**9578**	**7038**
of which							
OIL	1861	1618	1744	1887	2010	2270	1702
ONGC	5555	5725	5871	5779	5658	5751	4441
JVC/Private	309	624	1111	1307	1426	1557	895
(b) Offshore:							
ONGC (Mumbai High)	18465	18317	18367	17805	17313	16823	12178
JVC/Private	3287	3430	4296	5184	5356	5801	4310
Total (b)	**21752**	**21747**	**22663**	**22989**	**22669**	**22624**	**16488**
Grand Total (a+b)	**29477**	**29714**	**31389**	**31962**	**31763**	**32202**	**23526**

*: Provisional $: Includes condensates.

Source: ONGC, OIL and DGH.

REFINERY CRUDE THROUGHPUT

('000' Tonne)

Refinery / Location	Refinery Crude Throughout						
	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07* (April-Dec)
1	2	3	4	5	6	7	8
(a) PUBLIC SECTOR	**77411**	**77620**	**82015**	**89495**	**93107**	**96946**	**79927**
IOC, Guwahati, Assam	707	656	458	891	1002	864	626
IOC, Barauni, Bihar	3122	2876	2994	4304	5082	5553	4041
IOC, Koyali, Gujarat	12006	11697	12434	12758	11698	11543	9641
IOC, Haldia, West Bengal	3873	4026	4513	4518	5418	5502	4371
IOC, Mathura, Uttar Pradesh	7133	8031	8207	8248	6387	7938	6703
IOC, Digboi, Assam	678	653	581	602	651	615	453
IOC, Panipat, Haryana	5707	5822	6101	6338	6390	6507	6359
Total IOC	**33226**	**33761**	**35288**	**37659**	**36628**	**38522**	**32194**
BPCL, Mumbai, Maharashtra	8683	8744	8711	8757	9138	10298	8697
BPCL, Kochi, Kerala	7520	6797	7580	7854	7924	6939	5814
Total BPCL	**16203**	**15541**	**16291**	**16611**	**17062**	**17237**	**14511**
HPCL, Mumbai, Maharashtra	5575	5641	6078	6108	6118	6249	5567
HPCL, Visakh, Andhra Pradesh	6405	6706	6851	7591	8121	7980	7019
Total HPCL	**11980**	**12347**	**12929**	**13699**	**14239**	**14229**	**12586**
CPCL, Manali, Tamil Nadu	6046	6123	6176	6387	8181	9680	7267
CPCL, Narimanam, Tamil Nadu	579	566	643	653	742	682	450
Total CPCL	**6625**	**6689**	**6819**	**7040**	**8923**	**10362**	**7717**
BRPL, Bongaigaon, Assam	1488	1475	1463	2126	2311	2356	1617
NRL, Numaligarh, Assam	1451	2307	1879	2200	2042	2133	1923
ONGC, Tatipaka, Andhra Pradesh	-	13	93	91	93	93	70
MRPL, Mangalore, Karnataka	6438	5487	7253	10069	11809	12014	9309
(b) PRIVATE SECTOR	**26033**	**29654**	**30544**	**32345**	**34309**	**33163**	**27509**
RPL, Jamnagar, Gujarat	26033	29654	30544	32345	34309	33163	27509
Total (a+b)	**103444**	**107274**	**112559**	**121840**	**127416**	**130109**	**107436**

*: Provisional

Source: Public Sector Undertakings / Private Company.

Note:

1) CPCL and BRPL are subsidiaries of IOC.

2) NRL is subsidiary of BPCL.

3) MRPL is subsidiary of ONGC.

PRODUCTION OF PETROLEUM PRODUCTS

('000' Tonne)

Products	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07* (April-Dec)
1	2	3	4	5	6	7	8
				(a) From Crude Oil			
1. Light Distillates	**25048**	**26539**	**28619**	**31971**	**32865**	**32427**	**28141**
of which							
LPG	4088	4778	4903	5348	5570	5525	4647
Mogas	8070	9699	10361	10999	11057	10502	9211
Naphtha	9908	9180	9650	11317	14100	14509	12357
OthersLD	2982	2882	3705	4307	2138	1891	1926
2. Middle Distillates	**52445**	**54409**	**55937**	**60018**	**62509**	**64432**	**51976**
of which							
Kerosene	8714	9681	10028	10187	9298	9078	6351
ATF/RTF/Jet A-1	2513	2595	3053	4289	5201	6196	5543
HSD	39052	39899	40207	43316	45903	47572	39028
LDO	1481	1703	2079	1659	1546	923	568
OthersMD	685	531	570	567	561	663	486
3. Heavy Ends	**18121**	**19056**	**19584**	**21474**	**23205**	**22891**	**18726**
of which							
Furnace Oil	6479	7488	7529	8737	10560	10320	9258
LSHS/HHS/RFO	4913	4739	4638	4635	4410	3985	2480
Lube Oils	684	651	684	666	646	677	600
Bitumen	2721	2561	2941	3397	3349	3576	2669
Petroleum Coke	2473	2784	2659	2743	3162	3182	2728
Paraffin Wax	51	45	42	53	64	63	46
Other Waxes	61	37	3	0	4	3	0
OthersHE	739	751	1088	1243	1010	1085	945
Total (1+2+3)	**95614**	**100004**	**104140**	**113463**	**118579**	**119750**	**98843**
				(b) From Natural Gas			
LPG	2045	2205	2370	2320	2240	2185	1560

*: Provisional

LD: Includes Propylene, C-3, Propane, Hexane, Special Boiling Point Spirit, Benzene, Toluene, Petroleum Hydro Carbon Solvent, Natural Heptane, Methyl Tertiary Butyl Ether, Poly Isobutine, Poly Butadine Feed Stock and Methyl Ethyl Keetone Feed Stock.

MD: Includes Mineral Turpentine Oil, JP-5, Linear Alkyl Benzene Feed Stock, Aromex, Jute Batching Oil, Solvent 1425, Low Sulphur Heavy Fuel HSD, Desulphurisation Hydrocracker Bottom and Special Kerosene.

HE: Includes Carbon Black Feed Stock, Sulphur, Solar Oil, Light Aluminium Rolling Oil and Extracts.

SALES/CONSUMPTION OF PETROLEUM PRODUCTS

(Qty :'000')

	Products	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07 (April-Dec)
1.	**Light Distillates of which**	**29314**	**29618**	**31755**	**34335**	**35204**	**33474**	**23814**
	LPG	7016	7728	8351	9305	10245	10292	7702
	Mogas	6613	7011	7570	7897	8251	8646	6887
	Naphtha	11673	11728	11929	11868	13993	12263	7252
	NGL	6	27	32	0	0	0	0
	Others	4006	3124	3873	5265	2715	2273	1973
2	**Middle Distillates of which**	**53467**	**51439**	**52065**	**52023**	**53906**	**54192**	**42558**
	SKO	11307	10432	10405	10230	9395	9377	7040
	ATF	2249	2256	2269	2484	2811	3295	2909
	HSDO	37958	36546	36644	37074	39651	40124	31694
	LDO	1399	1592	2063	1619	1476	883	547
	Others	554	613	684	616	573	513	368
3	**Heavy Ends of which**	**17293**	**19375**	**20306**	**21393**	**22524**	**24272**	**15356**
	Furnace Oil @	7664	8451	8027	8312	9136	8856	6145
	LSHS/HHS	4989	4531	4711	4633	4404	3907	2475
	Lubes/Greases	1115	1137	1250	1427	1347	2112	640
	Bitumen	2774	2584	2986	3373	3337	3500	2542
	Petroleum Coke	448	1798	2563	2877	3129	4442	2688
	Paraffin Wax	43	45	41	41	60	225	40
	Other Waxes	62	51	13	20	20	111	3
	Others	330	775	715	710	1090	1119	823
	Total	**100074**	**100432**	**104126**	**107751**	**111634**	**111937**	**81729**

Note : Total & product-wise consumption includes private sales also.

@ : LSHS sales by pvt. parties included in FO. Break-up to these two products is not available.

IMPORTS / EXPORTS OF CRUDE OIL AND PETROLEUM PRODUCTS

(Qty :'000' Tonne, Value : Rs.Crore)

ITEM	2000-01		2001-02		2002-03		2003-04	
	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value
1	2	3	4	5	6	7	8	9
GROSS IMPORTS								
A. Crude Oil	**74097**	**65932**	**78706**	**60397**	**81989**	**76195**	**90434**	**83528**
B. Petroleum Products								
I. Light Distillates	**4018**	**5438**	**3967**	**4287**	**3857**	**5418**	**4529**	**6034**
1. LPG	853	1332	659	810	1073	1867	1708	2558
2. MS	-	-	-	-	-	-	-	-
3. Naphtha	3165	4106	3308	3477	2784	3551	2371	2884
4. Propane/MTBE	-	-	-	-	-	-	450	592
II. Middle Distillates	**1919**	**2389**	**424**	**425**	**806**	**934**	**906**	**1015**
1. ATF	1	3	2	9	2	7	2	9
2. SKO	1918	2386	391	388	698	808	804	890
3. HSD	-	-	31	28	106	119	100	116
III. Heavy Ends	**3330**	**4266**	**2618**	**2537**	**2565**	**2495**	**2566**	**2674**
1. FO / LSHS	1728	1309	1425	1030	1256	1084	953	810
2. Lubes / Others[HEI]	1602	2957	1193	1507	1309	1411	1613	1864
Total(B)	**9267**	**12093**	**7009**	**7249**	**7228**	**8847**	**8001**	**9723**
Grand Total(A+B)	**83364**	**78025**	**85715**	**67646**	**89217**	**85042**	**98435**	**93251**
EXPORTS								
Petroleum Products								
I. Light Distillates	**4221**	**4935**	**5008**	**4927**	**4493**	**5475**	**5448**	**7100**
1. LPG	-	-	-	-	-	-	-	-
2. MS	1202	1442	2406	2570	2336	3011	2979	4021
3. Naphtha	2882	3273	2515	2234	2067	2325	2176	2653
4. TAME	137	220	87	123	90	139	83	117
5. Reformate	-	-	-	-	-	-	210	309
II. Middle Distillates	**1757**	**2046**	**3084**	**2747**	**3875**	**4337**	**7841**	**8713**
1. SKO	-	-	-	-	-	-	-	-
2. HSD/LDO	1597	1872	2890	2571	3178	3547	6181	6763
3. ATF	160	174	194	176	697	790	1660	1950
III. Heavy Ends	**2387**	**691**	**1973**	**545**	**1921**	**1056**	**1331**	**968**
1. FO/LSHS	508	320	482	255	1120	902	1310	928
2. VGO/Lubes	1879	371	272	211	101	109	17	36
3. Coke/Bitumen/ White Oil/Paraffin	-	-	1219	79	700	45	4	4
Total	**8365**	**7672**	**10065**	**8219**	**10289**	**10868**	**14620**	**16781**
NET IMPORTS								
A. Crude Oil	**74097**	**65932**	**78706**	**60397**	**81989**	**76195**	**90434**	**83528**
B. Pol.Products	**902**	**4421**	**-3056**	**-970**	**-3061**	**-2021**	**-6619**	**-7058**
Grand Total	**74999**	**70353**	**75650**	**59427**	**78928**	**74174**	**83815**	**76470**

TAME: Tertiary Amyl Methyl Ether. Source: Petroleum Planning & Analysis Cell, New Delhi.

HEI: Includes Bitumen, Lube Oil Base Stock, Low Sulphur Waxy Residue, Carbon Black Feed Stock, Rubber Processing Oil and Paraffin Wax.

Contd....

IMPORTS / EXPORTS OF CRUDE OIL AND PETROLEUM PRODUCTS

(Qty :'000' Tonne, Value : Rs.Crore)

ITEM	2004-05		2005-06		2006-07	
	Qty.	Value	Qty.	Value	Qty.	Value
1	10	11	12	13	14	15
	GROSS IMPORTS					
A.Crude Oil	**95861**	**117003**	**99409**	**171702**	**81597**	**166843**
B. Petroleum Products						
I. Light Distillates	**5391**	**9973**	**6074**	**14514**	**6694**	**18192**
1. LPG	2334	4413	2719	6579	1655	4130
2. MS	233	501	485	1283	381	1222
3. Naphtha	2214	4029	2473	5735	4208	11835
4. Propane/MTBE	610	1030	397	917	450	1005
II. Middle Distillates	**1027**	**2047**	**1615**	**3948**	**1794**	**5340**
1. ATF	3	14	2	11	2	17
2. SKO	210	429	881	2214	1029	3153
3. HSD	814	1604	732	1723	763	2170
III. Heavy Ends	**2410**	**2868**	**3988**	**7113**	**2994**	**6440**
1. FO / LSHS	741	692	789	1099	656	993
2. Lubes / Others[HEI]	1669	2176	3199	6014	2338	5447
Total(B)	**8828**	**14888**	**11677**	**25575**	**11482**	**29972**
Grand Total(A+B)	**104689**	**131891**	**111086**	**197277**	**93079**	**196815**
	EXPORTS					
Petroleum Products						
I. Light Distillates	**6288**	**11512**	**7565**	**17102**	**8649**	**23236**
1. LPG	145	306	53	164	89	263
2. MS	2897	5625	2273	5579	2607	7581
3. Naphtha	2926	5030	4996	10744	5740	14746
4. TAME	-	-	10	25	-	-
5. Reformate	320	551	233	590	213	646
II. Middle Distillates	**9973**	**16690**	**11366**	**26152**	**11312**	**31016**
1. SKO	207	460	121	371	115	428
2. HSD/LDO	7286	11782	8464	18798	8600	22952
3. ATF	2480	4448	2781	6983	2597	7636
III. Heavy Ends	**1950**	**1726**	**2574**	**3531**	**3180**	**4192**
1. FO/LSHS	1792	1517	1800	2244	3047	3987
2. VGO/Lubes	102	137	700	1203	7	48
3. Coke/Bitumen/ White Oil/Paraffin	56	72	74	84	126	157
Total	**18211**	**29928**	**21505**	**46785**	**23141**	**58444**
	NET IMPORTS					
A. Crude Oil	**95861**	**117003**	**99409**	**171702**	**81597**	**166843**
B. Pol.Products	**-9383**	**-15040**	**-9828**	**-21210**	**-11659**	**-28472**
Grand Total	**86478**	**101963**	**89581**	**150492**	**69938**	**138371**

TAME: Tertiary Amyl Methyl Ether. Source: Petroleum Planning & Analysis Cell, New Delhi.

HEI: Includes Bitumen, Lube Oil Base Stock, Low Sulphur Waxy Residue, Carbon Black Feed Stock, Rubber Processing Oil and Paraffin Wax. * Provisional

C & AG'S REPORT
AUDIT REPORT NO. 8 OF 2006

GAIL (INDIA) LIMITED

Performance review on Telecom Business

The company started its GAIL-Tel project with an investment of Rs. 262.95 crore without preparing Detailed Project Report. It also implemented Phase IIB of the project without considering the actual unsatisfactory performance of the previous phases. The project could not achieve its targets in terms of capacity sales or sales revenue during any of the four years of its operations till March 2005. The project had been incurring losses since 2003-04 and the cumulative loss of the project till September 2005 was Rs. 9.03 crore.

The Company also lost projected revenue of Rs. 442.19 crore due to delays ranging from nine to 19 months in the completion of various phases of the project. Internal delays in the processing of tenders and placement of orders contributed to the project delay.

An investment of Rs. 36.66 crore on Dense Wavelength Division Multiplexing equipment Rs. 11.48 crore on the Optical Fibre cables and Rs. 12.99 crore on second duct made by the Company could not be put to fruitful use.

(Chapter VI)

Oil and Natural Gas Corporation Limited

Performance review Availability and utilisation of critical equipment of offshore installations in Mumbai Region

The production of Mumbai High Offshore of ONGC comprising three fields (assets) made a sizeable portion of the country's hydrocarbon production. For ensuring uninterrupted production, ONGC had fixed targets of 100 per cent system availability and 95 per cent equipment availability of critical equipment engaged in production in the offshore fields.

ONGC achieved the targeted system availability of critical equipment in Mumbai Offshore but could not achieve the targeted equipment availability due to maintenance related problems.

There did not exist any policy in regard to maintenance, revamping and replacement of critical equipment, though the Management had since initiated corrective actions in this regard.

Non-adherence to overhaul and preventative maintenance schedule of critical equipment caused high tripping, unplanned shutdown and pre-mature failure of the equipment. Deferment of production/ revenue in Mumbai High due to maintenance reasons amounted to Rs. 61 crore in 2003-04. The delay in procurement of spares and shortages of maintenance manpower further led to high down time of equipment and consequent lower availability of critical equipment.

The utilisation of most of the equipment was below the minimum run hours requirements due to changing behaviour and depletion of fields but the equipment requirements were not reassessed in time to ensure its optimum utilisation. The utilisation of turbine generators on low load factor revealed excessive fuel gas consumption as compared to norms.

In Neelam field, the installed capacity of gas compression was below the actual gas production since inception and delayed action for enhancement of gas compression facility resulted in flaring of gas valued at Rs. 126.39 crore for the period 1998 to 2005.

AUDIT REPORT NO. 12 OF 2006

Balmer Lawrie and Company Limited contributed Rs. 15.07 crore to a superannuation fund required to be maintained solely by its officers and in which the Company did not have any legal or contractual obligation to contribute, resulting in extension of undue benefit to a group of employees.

(Para 14.1.1)

Failure to implement the orders issued by the excise authorities in time due to inability to manage the software led to blockade of Bharat Petroleum Corporation Limited's fund of Rs. 7.67 crore and unnecessary litigation.

(Para 14.2.1)

Supply of lubricant by Bharat Petroleum Corporation Limited to a new customer without financial security and continuation of the supply even after dishonour of cheques led to non-recovery of dues of Rs. 69.53 lakh.

(Para 14.2.2)

Lax monitoring of the operations of a depot and failure to take timely action by Bharat Petroleum Corporation Limited against the financial irregularities of the operator rendered an amount of Rs. 57.39 lakh unrecoverable.

(Para 14.2.3)

Deficiency in design coupled with execution of sub-standard work resulted in loss of Rs. one crore to Engineers India Limited.

(Para 14.3.1)

Agra unit of GAIL (India) Limited sold Natural Gas as well as Re-gasified Liquid Natural Gas to various consumers in Agra and Firozabad. Due to tampering of Meter skids by consumers, gas valuing Rs. 10.10 crore was not billed.

(Para 14.4.1)

GAIL (India) Limited did not co-ordinate with ONGC and the Government of Tripura for lying and use of its Konaban-Rokhia pipeline resulting in a loss of revenue of Rs. 9.12 crore during April 1998 to February 2002.

(Para 14.4.2)

Due to lack of planning and commercial appreciation in investment of surplus funds by (GAIL India Limited), the Gas Pool lost an interest of Rs. 6.72 crore during March 1999 to March 2005.

(Para 14.4.3)

GAIL (India) Limited purchased land at NOIDA but did not fruitfully utilise it resulting in blockage of funds amounting to Rs. 1.36 crore and payment of extension charges of Rs. 1.14 crore for delayed construction.

(Para 14.4.4)

GAIL (India) Limited accepted units of Unit Trust of India instead of bank guarantee as security and constructed its terminal for supply of gas without waiting for the corresponding progress by the buyer's plant resulting in blockage of Rs. 1.15 crore.

(Para 14.4.5)

Due to shifting of bottling plant away from its refinery, Hindustan Petroleum Corporation Limited incurred an extra expenditure of Rs. 70.60 crore between 2000-01 and 2004-05 on transportation of bulk Liquified Petroleum Gas from Mumbai to bottling plant at Usar and its re-transportation to Mumbai for sale to consumers.

(Para 14.5.1)

Hindustan Petroleum Corporation Limited incurred avoidable expenditure of Rs. 2.56 crore on safekeeping arrangement of products due to significant delays in completing the repairs of decommissioned tanks.

(Para 14.5.2)

Excessive time was taken by Hindustan Petroleum Corporation Limited in firming up a decision for

dismantling and disposal of the virtual jetty at Kandla Port. Further delay in award of the contract during 2003 and 2004 for the dismantling and disposal of the jetty resulted in an avoidable expenditure of Rs. 1.46 crore towards lease rent of the jetty space.

(Para 14.5.3)

Indian Oil Corporation Limited installed Sulphur Recovery plant with unrealistic capacity and assumed higher Sulphur content in HSD feed stock. As a result the unit remained idle for two and a half years due to insufficient feed with a lower Sulphur content and an investment of Rs. 13.05 crore remained fruitless apart from loss of interest of Rs. 1.63 crore.

(Para 14.6.1)

Indian Oil Corporation could not recover an amount of Rs. 13.69 crore from Dabhol Power Company due to (i) absence of system for timely flow of documents between its various departments and consequent inordinate delay in raising final bills and (ii) non-collection of 'C' forms in advance as per agreement with the customer.

(Para 14.6.2)

Indian Oil Corporation Limited failure to ensure the availability of bitumen in bulk quantity either locally or through imports before embarking upon the project for creation of bitumen handling facilities led to wasteful expenditure of Rs. 3.94 crore.

(Para 14.6.3)

Allowing unsecured credit by Indian Oil Corporation Limited to a customer, beyond approved terms, resulted in seriously jeopardizing the recovery of sale proceeds amounting to Rs. 1.97 crore.

(Para 14.6.4)

Indian Oil Corporation Limited constructed a housing colony for its employees at Varanasi without obtaining approval of the local authority and without ascertaining basic amenities, leading to idling of assets valuing Rs. 1.54 crore.

(Para 14.6.5)

Indian Oil Corporation Limited continued supply of lubricants on credit without security to a suspended retail outlet resulting in non-realisation of sale proceeds, interest and penalty thereto amounting to Rs. 1.44 crore.

(Para 14.6.6)

Due to delay in closure of Gorakhpur depot, Indian Oil Corporation Limited incurred an avoidable expenditure of Rs. 66.75 lakh during May 2002 to March 2004.

(Para 14.6.7)

Oil and Natural Gas Corporation Limited incurred an avoidable expenditure of Rs. 42.77 crore due to delay in award of contract for logging services and subsequent injudicious termination of the contract, which led to payment for the services at higher rates and idling of its rigs.

(Para 14.7.1)

Oil and Natural Gas Corporation Limited suffered loss of Rs. 19.61 crore between October 2001 and October 2002 due to delay of 13 months in submission of application to Gujarat Electricity Boars for wheeling of surplus power from its Hazira plant to Mehsana unit.

(Para 14.7.2)

Oil and Natural Gas Corporation Limited failure in arrangement of gas compression facility at the Group Gathering Station-II at Ankleshwar, resulted in avoidable flaring of gas valued at Rs. 10.65 crore during the period from April 2000 to April 2003.

(Para 14.7.3)

Approval of the Food Grade Hexane/Special Boiling Point solvent project without giving due consideration to the current demand situation and unauthorized use of these products led to wasteful expenditure of Rs. 9.05 crore between 1998-99 and 2001-02 by Oil and Natural Gas Corporation Limited.

(Para 14.7.4)

Oil and Natural Gas Corporation Limited failure to obtain prior clearance from forest authorities for drilling at a location forming part of 'Desert National Park' and non-provision of an alternative drilling location in its Annual Drilling Plan, led to idling of rig for 292 days in 2002 and wasteful expenditure of Rs. 7.21 crore.

(Para 14.7.5)

Oil and Natural Gas Corporation Limited suffered a loss of Rs. 3.92 crore during the year 2003-04 on account of idling of rig due to delay in transportation of rig material.

(Para 14.7.6)

Oil and Natural Gas Corporation Limited incurred wasteful expenditure of Rs. 1.27 crore during 1999 to 2003 due to delay in examination of the third party inspection report against import Liquid Nitrogen Transportation Tanks.

(Para 14.7.7)

Oil and Natural Gas Corporation Limited made an irregular payment of operational allowance of Rs. 51.10 lakh to ineligible employees during the period from February 2001 to January 2005.

(Para 14.7.8)

Oil India Limited purchased a project of petroleum properties from ONGC Videsh Limited without adequate assessment of its prospects. The project became unsuccessful due to absence of commercial gas zones leading to loss of Rs. 31.55 crore.

(Para 14.8.1)