

Chapter I



A Century of Oil Refining in India
IndianOil's Digboi Refinery-operational since 1901



Puja performed by Shri Ram Naik for marking the commencement of re-development of Bombay High at NH-8 Platform Mumbai Offshore on 12.1.2001.

INTRODUCTION

CHAPTER 1

- 1.1 The Ministry of Petroleum and Natural Gas is concerned with exploration & production of oil & natural gas and 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.
- 1.2.1 Shri Ram Naik continued to hold charge as Minister of Petroleum and Natural Gas and Shri Santosh Kumar Gangwar as Minister of State in the Ministry of Petroleum and Natural Gas.
- 1.2.2 Shri E. Ponnuswamy relinquished charge of the office of Minister of State in the Ministry of Petroleum and Natural Gas with effect from 7.2.2001.
- 1.3 Shri P. Shankar assumed the charge of Secretary, Petroleum and Natural Gas, on 02.11.2000. Prior to this, Dr. S. Narayan worked as Secretary, Petroleum & Natural Gas, from 20.10.1999 to 01.11.2000.

PRINCIPAL ACHIEVEMENTS

- 1.4 The important statistical data relating to the physical performance of the oil sector is given in Appendix-III.

CRUDE PRODUCTION

- 1.5 Crude oil production in the country during 1999-2000 was 31.95 Million Metric Tonnes (MMT) against a target of 33.04 MMT. The production target for the year 2000-2001 is 32.46 MMT including 0.5 MMT of additional production target of Oil & Natural Gas Corporation Limited (ONGC) over and above their annual Memorandum of Understanding (MOU) target of 24.60 MMT.
- 1.6 Several measures were taken by the Government to intensify exploration and enhance hydrocarbon reserves. These included exploration and development of new fields, additional development of existing fields, implementation of Enhanced/Improved Oil Recovery Schemes, recourse to specialised technology, enlisting the services of international experts and encouraging participation of private and joint venture companies in the exploration programme through various rounds of bidding announced by Government of India including the New Exploration Licensing Policy (NELP).
- 1.7 Under the first round of NELP, 48 blocks were offered. Out of these, 25 blocks were awarded. Production Sharing Contracts have since been signed for 24 out of 25 blocks by Government of India with national and private oil companies. The second round of NELP has also been recently announced wherein 25 blocks have been offered. Promotional presentations have been made at Delhi, London (UK), Houston (USA), Tokyo (Japan) and Singapore during January/February 2001. The bids closing date for receipt of the offers is 31.3.2001.
- 1.8 ONGC Videsh Limited, a wholly owned subsidiary of ONGC, has signed an agreement with ROSNEFT, the Russian National Oil Company, on 10.2.2001 to acquire 20% equity in Sakhalin-I Oil & Gas Project in Russia. The Indian investment in this project is

estimated at Rs. 8000 crore. This will help in acquiring about 2-4 million tonnes of equity oil per annum and 5-8 million cubic metres of natural gas per day.

1.9 IMPORTS AND EXPORTS

The import of crude oil between April-November 2000 was 50.859 MMT valued at about Rs. 47,672.69 crore and of other petroleum products was 2.945 MMT valued at Rs. 3,772.12 crore. Exports of petroleum products during April-August 2000 was 0.478 MMT valued at about Rs. 484.90 crore.

1.10 REFINING

The refining capacity as on 1.4.2000 was 112.04 Million Metric Tonnes Per Annum (MMTPA) and it has increased to 112.54 MMTPA as of December 2000. Availability of petroleum products during 2000-2001 from domestic refineries and non-refinery sources is adequate to meet the domestic demand except for Liquefied Petroleum Gas (LPG) and Kerosene. In fact, the availability of petrol and diesel is in excess of domestic requirement and the surplus quantity is being exported during the current year.

1.11 GREENING OF FUEL

Measures have been taken to produce eco-friendly fuels. Diesel Hydrode-sulphurisation (DHDS) plants have been commissioned in nine refineries at a cost of over Rs. 5,500 crore for reducing the sulphur content from 1.0% max. to 0.25% max. Low sulphur diesel (0.25% max.) and unleaded petrol are being supplied throughout the country with effect from 1.1.2000 and 1.2.2000 respectively. Further, from 1.4.2000 onwards, ultra low sulphur diesel with sulphur



IndianOil's Gujarat Refinery.

content of 0.05% (max.) is being supplied from select retail outlets in National Capital Region (NCR) to non-commercial vehicles conforming to Euro-II norms. Ultra low sulphur unleaded petrol with sulphur content of 0.05% (max.) is also being supplied to all types of vehicles in NCR from 1.4.2000.

1.12 PLAN OUTLAY

The Revised Plan Outlay of PSUs of the Ministry of Petroleum and Natural Gas for the year 2000-2001 is Rs. 12,790.05 crore and Budget Estimate for the year 2001-2002 is Rs. 17,147.34 crore. These outlays will be met from the internal and extra budgetary resources of the Public Sector Undertakings.

1.13 EARNING OF PUBLIC SECTOR UNDERTAKINGS

The profit before tax and the profit after tax made by the Public Sector Undertakings in the oil sector during 1999-2000 were about Rs. 13,530 crore and Rs. 9,698 crore respectively. The profit before tax and the profit after tax anticipated for 2000-2001 are about Rs. 14,837 crore and Rs. 10,152 crore respectively. The profit before and after tax estimated to be generated by this sector during 2001-2002 would be about Rs. 15,286 crore and Rs. 10,936 crore respectively.

1.14 CONSERVATION OF PETROLEUM PRODUCTS

Government has initiated measures to conserve petroleum products. These include adoption of engine designs, training programmes in transport sector, promotion of fuel-efficient practices/equipment, technology up-gradation projects, rectification, replacement and promotion of fuel efficient lift irrigation pump-sets/foot-valves, promotion of fuel-efficient appliances like kerosene/LPG stoves. In addition,

Action Group Meetings are also held to disseminate information on transport, industrial and agriculture sector. These activities are conducted through Petroleum Conservation Research Association (PCRA) and oil companies.

1.15 RELIEF TO EARTHQUAKE VICTIMS IN GUJARAT

A devastating earthquake struck the state of Gujarat on 26.1.2001. This natural calamity took thousands of innocent lives, left many more injured and rendered lakhs of people homeless apart from causing extensive damage to property. The public sector oil companies participated in a big way in organising relief work in the earthquake affected areas. Supply of petroleum products was maintained. The Oil PSUs have contributed Rs.40 crore to the Prime Minister's Relief Fund and have also decided to adopt villages in Bhuj Taluka of Gujarat for rehabilitation work.

OTHER ACHIEVEMENTS

1.16 RELEASE OF LPG CONNECTIONS

During the calendar year 2000, Oil Marketing Companies (OMCs) have released about 120 lakh LPG connections against a target of 100 lakh numbers. The waiting list for LPG connections has been liquidated and LPG connections are now available across the counter in the country. The target for the calendar year 2001 is to release 1.3 crore LPG connections. To achieve this target, Government has targetted smaller towns/rural areas which were hitherto virgin markets. For this, it is envisaged to set up 540 exclusively rural distributorships out of 2,873 new distributorships being set up in different parts of the country. As on 1.10.2000, the total number of LPG consumers is 541.51 lakh.

1.17 SPECIAL SCHEME FOR DEFENCE PERSONNEL KILLED IN KARGIL ACTION.

The Government has formulated a special scheme to allot 500 LPG distributorships/retail outlet dealerships to widows/dependents of defence personnel killed in 'Operation Vijay' action. The

allotments under the special scheme are made on the recommendations of the Ministry of Defence. Out of 445 recommendations received from them so far, allotments in 416 cases – 244 retail outlets and 172 LPG distributorships – have been approved. The oil companies have been instructed to issue the Letters of Intent.

1.18 DEALER SELECTION BOARDS

In order to expedite the process of selection of dealers/distributors for RO/LPG/SKO-LDO so that petroleum products can be reached to all parts of the country as quickly as possible, 59 Dealer Selection Boards, headed by retired High Court/District Judges, for different states in the country, have been appointed.

1.19 COAL BED METHANE (CBM)

Keeping in view the large reserves of Coal in the country, Government has already approved policy for exploration and exploitation of Coal Bed Methane (CBM) as an alternative resource of energy. Some blocks have been identified in Bihar, Madhya Pradesh, Gujarat and West Bengal. The terms and conditions for harnessing CBM require consultations with the State Governments. Government of West Bengal has already given consent. Other State Governments have not consented so far. While policy will be implemented after consent of other State Governments is received, in the meanwhile, a few pilot projects for CBM in the country have been undertaken. ONGC has also undertaken R&D projects in West Bengal and Bihar. Government has also approved exploration and exploitation of CBM in Raniganj area of West Bengal to M/s Great Eastern Energy Corporation Limited.

1.20 FACILITATION COUNTER AND WEBSITE

The Information Facilitation Counter is in operation. In the year 2000, about 4000 parties availed of this facility. In addition to this, Facilitation Counter also provided guidance to the visiting public on how to avail of the information through this Ministry's website "petroleum.nic.in". The e-mail address of this counter is fc.png@sb.nic.in. Messages have started pouring in through the Internet also.



EXPLORATION AND PRODUCTION

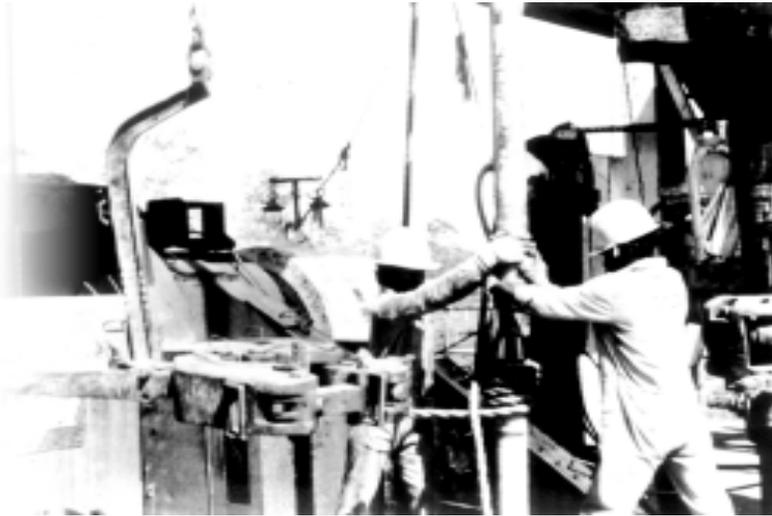
CHAPTER II

2.1 CRUDE OIL PRODUCTION

2.1.1 Oil & Natural Gas Corporation Limited (ONGC) and Oil India Limited (OIL), the two national oil companies, and a few private and joint venture (JV) companies are engaged in the exploration and production (E&P) of oil and natural gas in the country. Crude oil production during 1999-2000 was 31.95 MMT against the target of 33.04 MMT. The achievement of crude oil production by ONGC and OIL is about 96% with respect to their MOU targets. The crude oil production target during the year 2000-2001 has been set at 32.46 MMT, including 0.5 MMT of additional production target of ONGC over and above their annual MOU target of 24.60 MMT.

2.1.2 Several measures were taken to enhance hydrocarbon reserves and increase production. These include:-

- (i) Exploration in the new frontier areas like deep water and other geologically and logistically difficult areas.
- (ii) Continuation of exploration in the existing areas.
- (iii) Development of new fields and additional development of the existing fields.
- (iv) Implementation of Improved Oil Recovery (IOR) and Enhanced Oil Recovery (EOR) Schemes and extension of some EOR Schemes from pilot scale to full scale field application.
- (v) Implementation of specialised technologies like extended reach drilling, horizontal drilling and drain hole drilling.
- (vi) Obtaining the services of international experts wherever considered necessary.
- (vii) Maintenance of reservoir health through work-over



Drillers at work - Drilling Rig at Lakwa (Assam).

operations, pressure maintenance methods.

- (viii) 3-D seismic survey of the old fields for better reservoir delineation .
- (ix) Optimisation and redistribution of water injection.
- (x) In-fill drilling mostly in the unswept areas of the reservoirs.

2.1.3 One of the landmarks in liberalisation in petroleum sector is encouragement of participation of foreign and Indian companies in the exploration and development activities to supplement the efforts of national oil companies to narrow down the gap between supply and demand. A number of contracts have been awarded to both foreign and Indian companies to undertake exploration activities and development of fields on production sharing basis.

2.1.4 Since 1991, Government of India has been inviting bids on regular basis with several rounds of bidding carried out till operationalisation of New Exploration Licensing Policy (NELP). During this period, a total of 35 blocks were awarded of which, Production Sharing Contracts were signed for 26 blocks.

2.1.5 After the operationalisation of NELP, under its first round, 48 blocks were offered, out of which 25

blocks were awarded. Production Sharing Contracts for 24 blocks out of the awarded blocks have since been signed by Government of India with national and private oil companies. The second round, NELP-II has been announced on 15.12.2000 wherein 25 blocks have been offered.

2.2 STRATEGY OF IX PLAN

During the IX Plan, the strategy identified for E&P activities includes:-

- (i) Optimisation of production of crude oil and natural gas from domestic basins and existing fields especially the Mumbai High field.
- (ii) An optimal mix of intensive exploration (in producing areas) and extensive exploration (in other areas including frontier areas and deep waters) for increasing the reserve base.
- (iii) Emphasis on quality of exploration by national oil companies for enhanced success.
- (iv) Steps for increasing recovery factors from major producing fields of national oil companies.
- (v) Increased private participation through operationalisation of NELP.
- (vi) Acquisition of equity oil abroad.
- (vii) Exploration of Coal Bed Methane.

2.3 ACQUISITION OF EQUITY OIL ABROAD

In view of the widening gap between demand and supply of oil and gas, acquisition of equity oil from abroad is an important plank of the strategy to achieve oil security. Government is encouraging oil Public Sector Undertakings (PSUs) to take up opportunities available abroad for acquiring exploration acreages, either on their own or through strategic alliances/joint ventures.

ONGC Videsh Ltd., a wholly owned subsidiary of ONGC, has been actively pursuing opportunities in select countries like Vietnam, Russia, Iraq, Venezuela and Algeria to acquire attractive overseas exploration acreages and producing properties.

OIL has also got a 20% participating interest in a block in Oman with TOTAL of France for exploration of oil and gas.

2.4 NEW EXPLORATION LICENSING POLICY (NELP)

In January 1999, Government of India had invited bids under the first round of the NELP-I with attractive fiscal terms and incentives. Under this policy, the upstream public sector companies viz., ONGC and OIL are to compete and have been provided level playing field by giving them the same fiscal and contract terms as are available to private companies. In NELP-I, a total of 48 blocks (12 on-land blocks, 26 shallow water blocks and 10 deep water blocks in the East Coast-beyond 400 m iso-bath) were offered. Of these, 25 blocks (2 on-land blocks, 16 shallow water blocks and 7 deep water blocks-beyond 400 m iso-bath) were awarded and Production Sharing Contracts for 24 blocks have already been signed. The NELP-II has also been announced on 15.12.2000 wherein 25 blocks (8 offshore deep water in West Coast, 8 shallow water and 9 on-land blocks) have been offered. Promotional presentations have been made in New Delhi, London (UK), Houston (USA), Tokyo (Japan) and Singapore during January/February 2001. The bids closing date for receipt of the offers is 31.3.2001.

2.5 COAL BED METHANE (CBM)

Pursuant to the approval of CBM policy by the Government, necessary steps to implement the policy and offer of blocks for bidding have been taken. After giving due consideration to future

Coal Mining Programme, blocks have been identified by Directorate General of Hydrocarbons (DGH), in consultation with the Ministry of Coal, for exploration and exploitation of CBM. These blocks would be offered for global competitive bidding after getting clearances from all the concerned states. Governments of West Bengal and Gujarat have given their concurrence to the CBM policy while those of Madhya Pradesh and Jharkhand are yet to respond finally. Clearances from Ministries of Home, External Affairs, Environment & Forests and Defence for offer of these blocks have been obtained. Bid documents viz. Notice Inviting Offer (NIO), Bid Evaluation Criteria (BEC), Bid Format (BF) and Model Contract (MC) have been finalised.

Further, some activities have also taken place for exploration of CBM. A few companies have already made pilot testing for CBM in the country. ONGC has been working on CBM exploration as an R&D project since 1994 and has drilled six R&D wells, two in Durgapur in West Bengal and four in Jharia in Jharkhand. ONGC has been given a block in North Raniganj area in West Bengal for CBM exploration on nomination basis. Preliminary geological field studies have been undertaken in the area and slim hole drilling has also been started in Raniganj to evaluate the coal seams for CBM potential. Government has also approved the exploration and exploitation of CBM by M/s Great Eastern Energy Corporation Ltd. in Raniganj area in West Bengal.

2.6 OIL & NATURAL GAS CORPORATION LIMITED (ONGC)

Oil and Natural Gas Corporation Limited (ONGC), engaged in the exploration and exploitation of oil and natural gas, was incorporated under the Companies Act, 1956 on 23.6.1993. The authorised and paid-up capital of ONGC as on 31.3.2000 were Rs.15,000 crore and



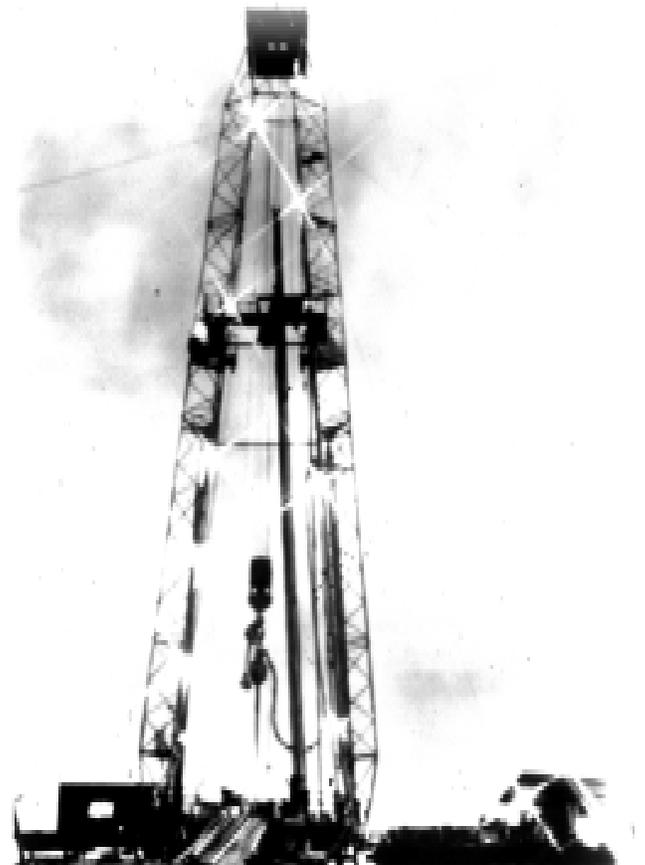
Rs.1,425.927 crore respectively. ONGC Videsh Limited is a wholly owned subsidiary of the Corporation.

HIGHLIGHTS FOR THE YEAR 2000-2001 (upto December 2000)

2.6.1. NEW HYDROCARBON FINDS

Exploratory efforts during the year 2000-2001 resulted in six new hydrocarbon finds viz., Suryaraopetta & Gopavaram (Krishna Godavari On-land Basin), KD-1 (KG Offshore - Deepwater), WO-24 & BRC-1 (Bombay Offshore) and GK-39 (Kutch Offshore).

Under Coal Bed Methane exploration, the second R&D well-Jharia-2 in Damodar Basin flowed gas @ 14,947 m³/d, which is significant with reference to production rates obtained from such reservoirs world over.



Drilling Rig - Borhola.

2.6.2 PHYSICAL PERFORMANCE DURING 2000-01

Description	1999-2000 Actual	2000-01 Target (BE/MOU)	2000-01 Actual Upto Nov. 2000	2000-01 Anticipated *
SEISMIC SURVEY				
On-land				
2D (GLK)	3125	4302	1844	3570
3D (GLK)	12022	12725	6497	12675
Offshore				
2D & 3D (LK)	133931	65000	14711.5	111508
DRILLING				
Wells (Nos.)				
Exploratory	145	180	81	162
Development	146	152	98	146
Total	291	332	179	308
Metreage ('000 m)				
Exploratory	384.58	476.74	212.66	395.53
Development	283.68	320.83	223.03	296.85
Total	668.26	797.59	435.69	692.38
PRODUCTION				
Crude Oil (MMT)	24.648	24.600	16.8	25.1
Gas Sales (MMM3)	18816.002	18247	12921	19470
LPG (000' T)	1205.971	1071	819	1205
NGL (000' T)	1931.408	1559	1332	2004
C2-C3 (000' T)	556.579	570	378	541
Total Value Added Products (000' T)	3693.957	3200	2528	3750

* Anticipated figures for 2000-01 for Seismic Survey and Drilling are Revised Estimate (RE) as per Annual Plan 2001-02 of ONGC.

2.6.3 FINANCIAL PERFORMANCE DURING 2000-01

Parameters	(Rs. in Crore)			
	1999-2000 (Actual)	2000-01 (BE)	2000-01 (Actual) Upto Sept. 2000	2000-01 (Anticipated) (RE)
Plan Outlay	4069	5207	2541	4818
Total Income (Incl. Interest Income)	21102 **	18070	11992	22941
Net Profit	3629	3830	2534	4261

** Excluding prior period adjustment

2.6.4 ACHIEVEMENTS

- ONGC posted a profit of Rs. 2,534 crore during the first half of 2000-2001 as compared to Rs. 1,508 crore for the corresponding period of 1999-2000, registering an increase of 68%. The gross revenue has gone up to Rs. 11,992 crore during the period as compared to Rs. 8,607 crore for the corresponding period of 1999-2000, registering a growth of 39%.
- Additional Co-Generation Plant at Uran has been completed.
- Enhanced Oil Recovery (EOR) scheme-Commercial In-situ Combustion Santhal Phase-II has been completed and In-situ Combustion Balol Phase-II is in final stages of completion.
- Integrated Communication Network (ICNET) project to provide enterprise-wide connectivity for data transfer for upcoming IT applications viz. IMMS, UFSO, EPINET, SHRAMIK, LIBNET has been completed.
- ISO-14001 certification awarded to Uran Plant, ISO-9001 to Institute of Drilling Technology (IDT), Dehradun and ISO-9002 to Quality Assurance Department for all its divisions and units in a single certification.
- Inventory has come down from Rs. 1,247.08 crore as on 31.03.1999 to Rs. 1,240.23 crore as on 31.03.2000, which is the lowest of the decade. Inventory has further come down to Rs. 1,177 crore as on 30.09.2000.
- Special Commendation Golden Peacock for outstanding achievement in the field of Environment Management awarded to Ankleshwar Asset of Western Region during the 2nd World Congress on Environment Management at New Delhi on 3.6.2000.
- In Eastern Region, Central Workshop, Sibsagar has been adjudged as the best Engineering Installation

and the rig model designed & fabricated at the workshop secured the first prize in the NE Oil & Coal Mines Safety Week Celebrations 1999.

- IMMS (Integrated Material Management System) to facilitate online inventory management has been commissioned at ONGC offices at Chennai, KG Project, Cauvery Project, Ankleshwar, Mehsana, Mumbai, Dehradun, Cambay & Kolkata and will be commissioned at all remaining work centres by Feb. 2001.

2.6.5 PROGRESS OF PROJECTS

As on 31.12.2000, following are the major projects of ONGC under various stages of implementation:

SL NO.	NAME	APPROVED COST (Rs. IN CRORE)	STATUS
1	Additional Cogeneration Plant at Uran	116.95	Completed in November 2000 ahead of schedule.
2	In-situ Combustion Santhal PH -II (Main)	278.37 332.62 (Revised)	Completed in October 2000.
3	In-situ Combustion Balol Main	118.49	All packages except modification work have been completed. Modification work is in progress.
4	ZA platform project	302.24	Approved by Board on 1.12.99. Contract was signed with M/s NPCC, UAE on 21.12.2000.
5	Additional Gas Compressor at Heera	177.64	Approved by Board on 1.12.99. Engineering work in progress.

2.7 ONGC VIDESH LIMITED

ONGC Videsh Limited (ONGC-VL), a wholly owned subsidiary company of Oil and Natural Gas Corporation Ltd., is responsible for bringing equity oil from overseas by acquiring development acreages or through exploration ventures. The authorised and paid-up capital of the Company as on 31.03.2000 were Rs. 500 crore and Rs. 200 crore respectively. The Company earned a profit of Rs. 8.19 crore during 1999-2000 as compared to Rs. 7.38 crore in 1998-1999, registering an increase of 11%.

2.7.1 ACTIVITIES DURING 2000-2001:

The activities during 2000-2001 were focussed in Iraq, Vietnam and Russia to bring larger quantity of equity oil. The major activities are as under:

IRAQ

ONGC-VL is currently pursuing two opportunities in Iraq - a discovered field and an exploration block. ONGC-VL along with Reliance and Sonatrach has signed a joint participating agreement for a discovered field. The joint bid is proposed to be submitted to Ministry of Oil, Iraq after discussions among the partners.

The exploration block is situated in the southern part of Iraq and is highly prospective. This is the only block out of the nine blocks offered to different international oil companies having a discovered well-



Seismic Vessel of ONGC.

Abu Kheimah-1 (drilled earlier by ONGC). The contract has been initiated on 28.11.2000 during the visit of Minister of Oil, Iraq to India. However, the contract is to be ratified by Government of Iraq.

VIETNAM

ONGC-VL signed a Production Sharing Contract (PSC) with Petro Vietnam in 1988 for Vietnam Offshore Blocks 6, 12-E and 19. ONGC-VL has a 45% participating interest in the project along with BP (30%), Statoil and Petro Vietnam (15% each). Natural gas reserves in commercial quantities were discovered in two gas fields viz., Lan Tay and Lan Do. ONGC-VL has retained an area of 955 sq. km. (Block 06.1) in Block 6. The development plan has been approved. All the commercial agreements are expected to be in place by December 2000. The contracting/engineering activities have been going on simultaneously. The first gas is expected to be delivered in the year 2002.

RUSSIA

Sakhalin Project:

ONGC -VL has acquired a 20% interest from ROSNEFT, the Russian National Oil Company, in the Sakhalin-I offshore project located in Russia, on 10.2.2001. The investment of ONGC-VL, estimated at Rs. 8000 crore, will help in acquiring equity oil of about 2-4 million tonnes per annum and 5-8 million cubic metres of natural gas per day. Investment by ONGC-VL in Sakhalin Phase-I is also expected to provide further opportunities to it in Russia.

2.7.2 MOUs SIGNED DURING 2000-2001

1. ONGC-VL has signed an MOU with PDVSA, the National Oil Company of Venezuela, to co-operate in upstream oil industry.
2. ONGC-VL and Sonatrach, the National Oil

Company of Algeria, have signed an MOU on 10.11.2000 with joint projects as key area of cooperation in the upstream sector.

3. ONGC-ML and Pertamina, the National Oil Company of Indonesia, have signed an MOU on 22.11.2000 for undertaking joint ventures.

2.8 OIL INDIA LIMITED

Oil India Limited (OIL) was incorporated on 18.02.1959. On 14.10.1981, it became a fully owned Government of India enterprise.

OIL produces crude oil and natural gas from its oilfields in Assam and Arunachal Pradesh and natural gas from its gas fields in Rajasthan. In addition to exploration and production, the transportation of crude oil produced in Northeast



India both by OIL & ONGC, is carried out through its integrated cross-country pipeline to five refineries in the region. The Company also produces Liquefied Petroleum Gas (LPG) at its LPG recovery plant at Duliajan, Assam.

The authorised & paid-up capital of OIL as on 31.03.2000 were Rs. 250 crore and Rs. 142.67 crore respectively.

2.8.1 NEW HYDROCARBON FINDS

During 2000-2001 (upto December 2000), OIL's exploratory efforts led to the discovery of crude oil in the Kuhiarbari structure near OIL's Dikom/Kathaloni oilfield in Assam. In addition, crude oil was also discovered in a saddle between two discovered structures in OIL's Tengakhat oilfield area through an exploratory well.



The cross country crude oil pipeline, which measures an extensive 1157 Kilometers, runs through a host of hills in North East region and crosses 78 rivers to deliver oil to the four refineries in Assam and one in Bihar giving an uninterrupted service of 38 years from 1962.

2.8.2 PHYSICAL PERFORMANCE

Parameter	1999-00 Achievement	Target 2000-01	Achievement Upto 31/12/00 (2000-01)	Anticipated Achievement during 2000-01
Seismic Survey				
Onshore				
2D SLKM Dept.	1685.61	1400	416.04	1400
3D SQKM	163.34	150	36.92	150
3D SQKM Cont.	–	200	–	–
2D GLKM	–	1145	–	70
Offshore				
2D & 3D LKM	–	2000	–	–
3D SQKM	–	–	–	350
Drilling				
Exploratory				
Metreage ('000M)	40.210	58.08	28.514	50.948
Well Nos.	11	16	8	14
Development				
Metreage ('000M)	50.146	77.00	38.266	55.00
Well Nos.	16	22	9	17
Crude Oil Prd. (MMT)	3.283	3.39	2.466	3.33
Natural Gas Sale (MMSCM)	1169.861	1175	999.416	1175
LPG Production ('000 T)	51.39	50.00	38.042	50.00

2.8.3 FINANCIAL PERFORMANCE

Rs. crore

Parameter	1999-00 Achievement	Target 2000-01	Achievement Upto 31/12/00 (00-01)	Anticipated Achievement during 2000-01
Plan Outlay	403.47	600.00	421	600.01
Total Income	1846.82	1793.02	1609	2119.21
Net Profit	409.79	315.43	248	327.32
Internal Resource	450.85	783.45	259	200.19

2.8.4 ACHIEVEMENTS

- During the year 2000-2001, OIL expects to record the highest ever crude oil and natural gas production of 3.33 MMT and 1,740 Million Standard Cubic Metres (MMSCM) respectively, and to bring down the gas flaring to the lowest ever level during the year .
- The pumping of imported crude oil to Bongaigaon Refinery was started through OIL's Bongaigaon- Barauni trunk pipeline on 27.12.2000. The imported crude oil upto Barauni is coming through Indian Oil Corporation Ltd.'s (IndianOil) Haldia- Barauni Pipeline.
- OIL has signed a gas supply agreement with RAPL for supply of 5 MMSCMD of gas for the gas cracker project in Assam.

2.8.5 PROGRESS OF PROJECTS

OIL is carrying out the normal exploration and developmental activities in its operational areas in Assam and Arunachal Pradesh.

Following are the major projects of OIL, which are under various stages of implementation: -

Name of the project/ Location	Approved Cost (Rs./Crore)	Anticipated Completion	Status
Laying of Spur line from main trunk pipeline between Badulipar for crude oil supply to Numaligarh Refinery	30.00	31/03/2001	Pipeline commissioned and crude oil being supplied to Numaligarh Refinery. At present, electric & cathodic work and a few civil engineering works are in progress.
Reverse Pumping of 1.50 MMTPA crude oil from Barauni to	21.73	31/03/2001	Crude oil storage tank & pipeline work completed in Barauni and laying of pipeline from

Bongaigaon

Pump Station-6, Bongaigaon to Barauni completed. Overall progress of the project is about 70%.

Tankfarm at Tengakhat with de-watering facilities to increase storage capacity by 50,000 kls and to improve crude oil quality.

30.00 31/03/2003

Action has been initiated for procurement of land. Process for award of contract for technical consultancy is under process.

Development of non-associated Gas field in Tengakhat & Deohal areas in Assam to increase gas production in view of anticipated increase in demand in future

20.00

31/03/2004

Process for award of contract for technical consultancy is under process.

2.9 GAS AUTHORITY OF INDIA LIMITED

2.9.1 Gas Authority of India Ltd. (GAIL), set up in 1984, is the largest natural gas transmission company in India.



The Company owns and operates a network of over 4,000 kilometres of pipeline. This includes the prestigious Hazira-Bijaipur-Jagdishpur (HBJ) Pipeline, a 2,702 kilometre long pipeline which runs from Hazira on the western coast of India through Bijaipur to Jagdishpur in North India having links with Delhi and over 1,300 kms. of regional pipelines in different states including Maharashtra (Mumbai area), Gujarat, Rajasthan, Andhra Pradesh, Tamil Nadu, Pondicherry, Assam and Tripura. The Company

currently handles 61 million cubic metres approximately of natural gas per day representing about 95 percent of the total amount of natural gas handled by pipelines in India. In the fiscal year ended 31.03.2000, the Company sold approximately 29.36 MMSCM of gas through the HBJ Pipeline and 30.5 MMSCM of natural gas per day through the various Regional Pipelines. The authorised and paid-up capital of the Company as on 31.3.2000 were Rs.1000 crore and Rs. 845.65 crore respectively.

2.9.2 The Company operates six natural gas processing plants with an installed capacity to produce a total of 9,61,000 tonnes of Liquefied Petroleum Gas per year. Four of the Company's natural gas processing plants are located along the HBJ Pipeline - two at Bijaipur in Madhya Pradesh and one each at Vaghodia in Gujarat and Pata (Auraiya) in Uttar Pradesh. The other two natural gas processing plants are located at Usar near Mumbai in Maharashtra and Lakwa in Assam.

2.9.3 The Company also operates a petrochemical complex at Pata in Uttar Pradesh with an installed capacity to produce 2,60,000 tonnes of polyethylene and 10,000 tonnes of butane per year.

2.9.4 MAJOR PROJECTS COMMISSIONED

Kandla-Loni LPG Pipeline

The Company has commissioned a 1,250 kilometre long pipeline to transport Liquefied Petroleum Gas from Kandla and Jamnagar in Gujarat to Loni in Uttar Pradesh. The project has been completed ahead of schedule and within the approved cost. Its initial capacity is 1.7 million metric tonnes per annum (MMTPA), which may be subsequently increased to 2.5 MMTPA.

2.9.5 ONGOING PROJECTS

Light End Fractionate Over Head

LEF O/H Project is being executed at Bijaipur at an

estimated cost of about Rs.94 crore with a processing capacity of 2.12 MMSCMD of gas.

Gas Processing Complex at Gandhar

This project is being set up at an estimated cost of Rs. 361 crore with a gas processing capacity of 5 MMSCMD. The plant is designed to produce 2,07,000 TPA of LPG.

2.9.6 JOINT VENTURE (JV) COMPANIES

In the area of growth and consolidation of its existing business and diversification into the related activities, GAIL has notable initiatives in Joint Venture companies viz., Mahanagar Gas Limited (JV with British Gas of U.K.) in Mumbai and Indraprastha Gas Limited (JV with Bharat Petroleum Corporation Limited) in Delhi for City Gas Distribution Schemes including CNG for the transport sector. Besides,



Shri Ram Naik at the inaugural function of LPG supply from Naseerabad LPG Terminal to BPCL.

GAIL has an equity participation with IndianOil, ONGC and BPCL in Petronet LNG Limited for setting up Liquefied Natural Gas (LNG) terminals at Dahej in Gujarat and Kochi in Kerala and import of LNG in the country. GAIL also has a Joint Cooperation Agreement with M/s TOTAL – Fina – ELF and Tata Electric Company for import of LNG and setting up of an LNG terminal in Mumbai area.

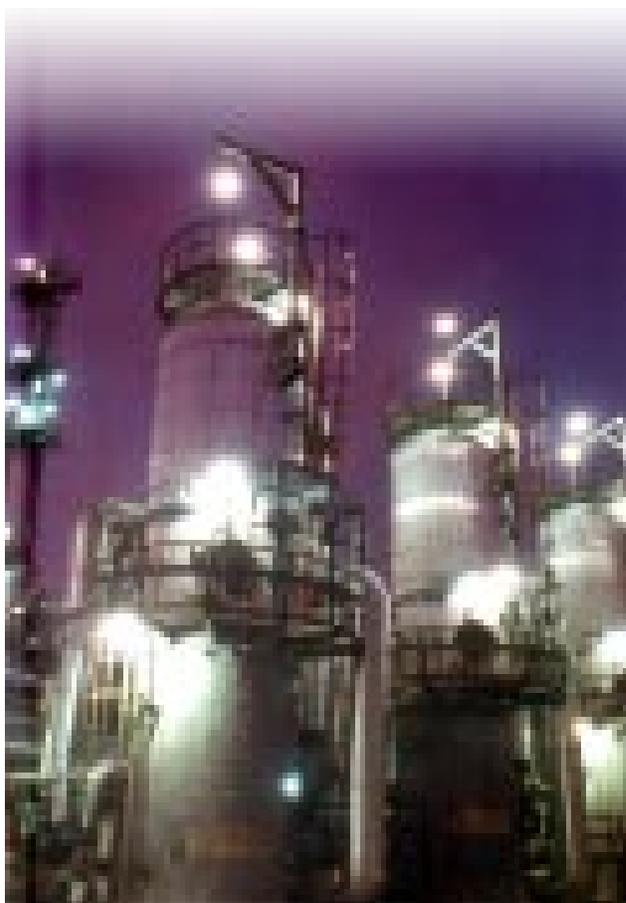
GAIL has been awarded two blocks under NELP for carrying out exploration and production activities jointly with ONGC and GAZPROM of France.

Mangalore to Madurai (700 Km. approx.) in the states of Karnataka and Tamil Nadu.

2.9.7 FUTURE PLANS

GAIL's plans include an investment of over Rs.10,000 crore over the next 10 years mainly in the areas of natural gas & LPG transmission and distribution infrastructure, import of LNG – its marketing and distribution, gas processing, petrochemicals, exploration & production of gas and non-conventional gas. GAIL is also considering tying up with major companies having access to right of way for providing a nationwide integrated communication grid for Telecom Sector.

The Company is also examining the feasibility of constructing two LPG pipelines in Southern India, one from Visakhapatnam to Secunderabad in Andhra Pradesh (600 Km) and the other from



A view of Gas Processing Unit (GPU) of UPPC, Pata.

2.9.8 PERFORMANCE AT A GLANCE

A. PHYSICAL

Description	Unit	Actual		Provisional
		1998-99	1999-00	2000-01 (Upto Dec. 2000)
Gas Sales	MMSCM	21,034	21,942	17,030
LPG/SBP/ others				
Production	('000 MT)	709.02	825.41	685.00
Petrochemical				
Production	('000 MT)	0.248	118.807	134.00

B. FINANCIAL

Rs. in crore

Description	Actual		Provisional
	1998-99	1999-2000	2000-2001 (Upto Dec. 2000)
Profit After Tax	1060	861	819
Gross Internal	1399	1350	1207

C. DIVIDEND

GAIL has paid a dividend of Rs. 253.70 crore (excluding Corporate Dividend Tax) for the year 1999-2000 as against Rs. 295.98 crore in the previous year.

2.9.9 For excellent performance in the use of Hindi as official language, Gas Authority of India Limited was awarded the "Indira Gandhi Rajbhasha Shield" for the year 1999-2000 in the category of PSUs in region 'A'.



REFINING

CHAPTER III

3.1 REFINING CAPACITY AND THROUGHPUT

3.1.1 The refining capacity of 112.04 MMTPA as on 1.4.2000 has increased to 112.54 MMTPA as on 1.12.2000.

3.1.2 At present, there are 17 refineries operating in the country, 15 in Public Sector, one in Joint Sector, and one in Private Sector. Out of the 15 PSU refineries, seven are owned by Indian Oil Corporation Limited (IndianOil), two by Hindustan Petroleum Corporation Limited (HPCL), two by Chennai Petroleum Corporation Limited (CPCL) and one each by Bharat Petroleum Corporation Limited (BPCL), Kochi Refineries Limited (KRL), Bongaigaon Refinery & Petrochemicals Limited (BRPL) and Numaligarh Refinery Limited (NRL). There is one refinery in Joint Sector viz., Mangalore Refinery & Petrochemicals Limited (MRPL) and one refinery in Private sector viz., Reliance Petroleum Limited (RPL).

3.1.3 Government has also decided on the integration of stand-alone refineries in public sector. Kochi Refineries Ltd. and Numaligarh Refinery Limited would be made subsidiaries of Bharat Petroleum Corporation Limited while Bongaigaon Refinery & Petrochemicals Limited and Chennai Petroleum Corporation Limited would become subsidiaries of IndianOil. This arrangement will strengthen the stand-alone refineries to face the challenges of deregulation and enhance the supply of petroleum products to IndianOil and BPCL in the Southern and North Eastern regions.

3.1.4 The foundation stone of IndianOil's Paradip Refinery was laid on 24.5.2000. This refinery is expected to be commissioned by the year 2003-2004 and will cost around Rs. 8,300 crore. The construction work in respect of Bhatinda Refinery of HPCL was launched on 2.6.2000. This Refinery, estimated to

cost above Rs. 9,800 crore, is expected to be commissioned in the year 2004-2005. In July 2000, the government also approved the expansion of the Chennai Refinery from 6.5 MMTPA to 9.5 MMTPA at an estimated cost of Rs. 2,360 crore. Another Joint Venture Refinery, Bharat Oman Refinery at Bina is expected to be commissioned during the X Plan period.

3.2 IMPORT/EXPORT OF CRUDE OIL AND PETROLEUM PRODUCTS DURING 2000-2001.

3.2.1 IMPORTS

Crude Oil: In the year 1999-2000, about 44,989 MMT of crude oil was imported valued at about Rs. 30,695.33 crore for PSUs and JVs. Import of crude oil during April-November 2000 was 50.859 MMT valued at about Rs. 47,672.69 crore, which includes the imports made by PSUs, JVs and private parties.

Petroleum Products: During 1999-2000, 13.067 MMT of products was imported at a cost of about Rs. 11,119.02 crore by IOC. During the current year upto November 2000, the import of petroleum products by IndianOil, JVs and private parties was 2.945 MMT valued at about Rs. 3,772.12 crore.

3.2.2 EXPORTS

During 1999-2000, the export of petroleum products (including supplies to Nepal but excluding JVs & private parties) was 0.899 MMT for a value of about Rs. 632.28 crore. The export of petroleum products during April-August 2000 was 0.478 MMT valued at about 484.90 crore.

3.3 NUMALIGARH REFINERY LIMITED (NRL)

3.3.1 Numaligarh Refinery has been set up as a grassroots refinery at Numaligarh in the district of Golaghat



in Assam. M/s. Bharat Petroleum Corporation Limited (BPCL), IBP Co. Ltd. (IBP) & Government of Assam have an equity structure of 32%, 19% and 10% respectively in this company.



Bird's eye view of the Refinery of NRL.

3.3.2 The Refinery is designed to process 3 MMTPA of indigenous crude oil adopting state-of-the-art technologies. The commissioning process of the Refinery began in April 1999 and with the commissioning of the Hydrocracker Unit (HCU) in June 2000, the Refinery has become fully operational. NRL has also implemented the adjacent marketing terminal project for handling and despatch of products produced by the Refinery. Evacuation of products from the marketing terminal started in April 2000.

3.3.2 The Refinery is likely to process around 1.551 MMT of crude during the current year (2000-2001).

3.4 KOCHI REFINERIES LIMITED (KRL)

3.4.1 The Refinery's initial installed capacity at the inception in September 1966 was 2.5 MMTPA. The capacity of the Refinery has been expanded from time to time and at present, it is 7.5 MMTPA. The secondary processing facilities have also been expanded to 1.4 MMTPA. The authorised capital and paid-up capital of the Company are Rs. 150 crore and Rs. 68.94 crore respectively.



3.4.2 PHYSICAL PERFORMANCE:

During the year 1999-2000, the Refinery processed 7.83 MMT of crude oil. The capacity utilisation was 104.4% and this was the twelfth consecutive year when the Refinery achieved capacity utilisation of over 100%. KRL also set a record in crude oil throughput, production of diesel, aviation turbine fuel & toluene and FCCU throughput.

The anticipated crude oil throughput for 2000-2001 is 7.50 MMT. Crude oil processed till 30.11.2000 was 4.96 MMT.

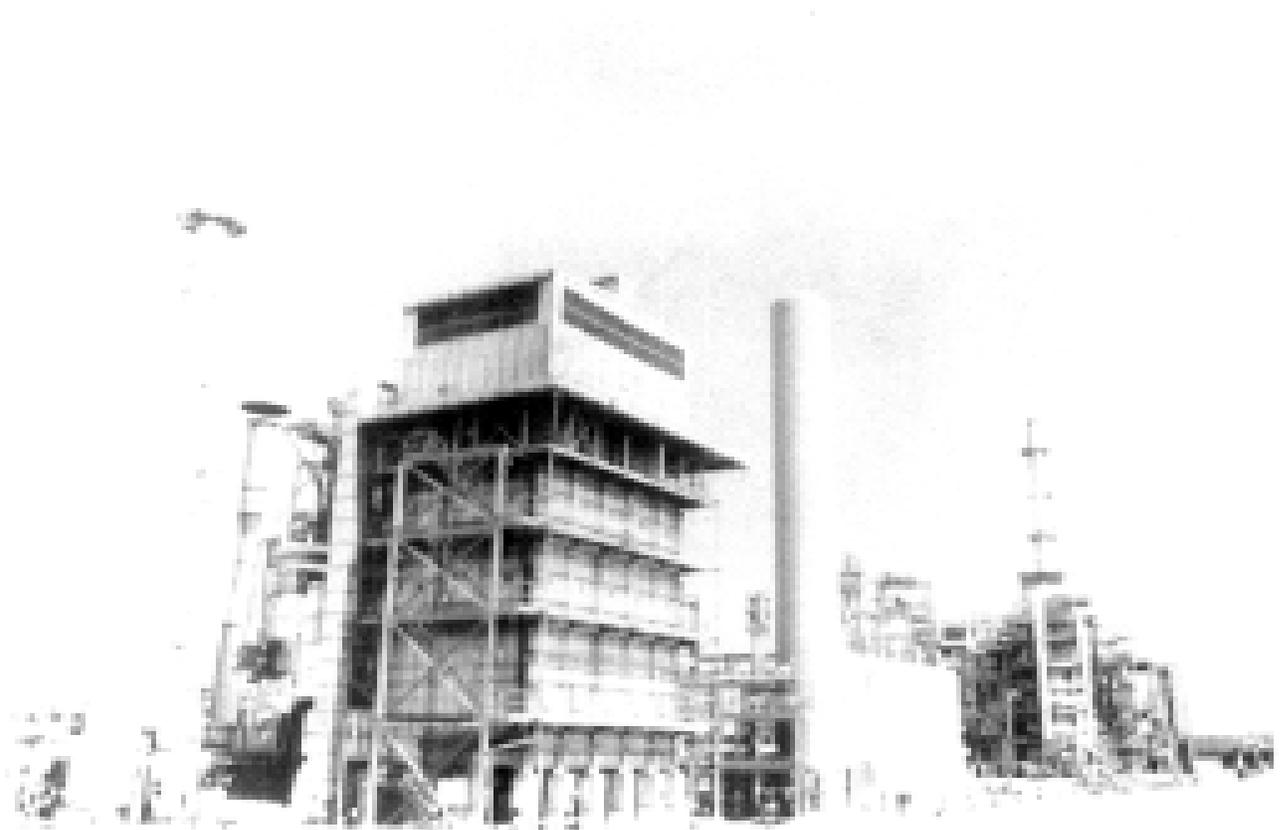
3.4.3 FINANCIAL PERFORMANCE:

During the year 1999-2000, the Company achieved an all time high turnover of Rs. 5,768 crore against Rs. 4,167 crore during 1998-1999. The profit before tax (PBT) was Rs.283.71 crore as against Rs.496.23 crore in the previous year. The volatility in crude oil prices during the year has been a major factor for the unexpected drop in profits. In addition, profit for the previous year included Rs.74 crore towards past dues from Oil Coordination Committee. The Company paid a dividend of 166% during 1999-2000 against 36% during previous year.

The Company contributed a sum of Rs. 2,052.53 crore to the exchequer by way of taxes, duties, etc. during the year against Rs.1,360.41 crore in 1998-1999.

3.4.4 Safety & Environment Protection

The Company continued to meet all environmental standards laid down by the various regulatory bodies with respect to discharge of effluent water and gaseous emissions. The Company has bagged the Kerala State Pollution Control Award for making substantial and sustained efforts in pollution control for the year 1999. This is the second successive year of receiving this award by the Company.



For a greener tomorrow : KRL's Diesel Hydrodesulphurisation Unit which was commissioned by Shri Ram Naik on 13.4.2000. It helps the company produce eco-friendly diesel.

The Company commissioned its Diesel Hydro De-Sulphurisation plant in March 2000 and commercial production has commenced. The project, with the approved cost of Rs. 852 crore, is for reducing the sulphur content in High Speed Diesel from 1% to 0.25%.

A scheme is under implementation at an estimated cost of Rs. 28 crore for reducing sulphur content from 0.25% to 0.05% in part of the diesel oil produced, and is scheduled for completion by 2002.

The Company was honoured by the British Safety Council with the National Safety Award for the year.

3.4.5 MOU TARGETS

KRL achieved an "EXCELLENT" rating under the MOU parameters for the ninth consecutive year.

3.4.6 ONGOING PROJECTS

Corporate Office

The Company's proposed Corporate Office Complex at Maradu, near Kochi city, is expected to be completed by March 2001.

Enhancement of LPG Recovery

The project envisages enhancement of LPG recovery from the crude unit by 20,000 tonnes per annum (TPA), conversion of 1,84,000 TPA of Naphtha to HSD and increase in crude throughput by 40,000 TPA. In addition, around 63,000 TPA of Fuel Oil saving is expected on account of pre-heat optimisation. The estimated cost of the project is Rs. 63.96 crore.

Tank Farm Automation

This project, costing Rs. 30.73 crore, envisages online blending automation for MS, HSD, FO and LSHS products. The project is scheduled for completion by March 2001.

3.5 CHENNAI PETROLEUM CORPORATION LIMITED

3.5.1 Chennai Petroleum Corporation Limited (formerly Madras Refineries Limited) was formed in 1965 to set up a refinery at Manali with an initial refining capacity of 2.5 MMTPA. The refining capacity was expanded from time to time and CPCL also became multilocational when Cauvery Basin Refinery (CBR) was commissioned in November 1993, with a capacity of 0.5 MMTPA. The overall refining capacity of CPCL is 7.0 MMTPA. The authorised capital and paid-up capital of the company are Rs. 200 crore and Rs. 149 crore respectively.



The Secondary Processing facilities consisted of Lube Complex, Visbreaker and a series of, desulphurisation plants but subsequent to expansion, they were also diversified by adding FCCU, Wax unit and Petrochemical feedstock preparation unit.

3.5.2 Physical Performance:

During the year 1999-2000, the Refinery processed 7.01 MMT of crude oil. The capacity utilisation was 100% thus maintaining a consistent record. The company achieved an all time record production of Lube Base Stocks, ATF, HSD, Propylene, LABFS, PBFS and AQFS.

The anticipated crude oil throughput for 2000-2001 is 6.62 MMT. Crude oil processed till 31.12.2000 was 4.92 MMT.

3.5.3 Financial Performance

During the year 1999-2000, the Company achieved an all time high turnover of Rs. 5,521 crore against Rs. 3,747 crore during 1998-1999.



Shri S. Rammohan, Chairman and Managing Director and Shri V.R. Raman, General Manager, CBR, received the Oil Conservation award on behalf of CPCL from Shri Santosh Kumar Gangwar in presence of Shri Ram Naik at the valedictory function of the Oil Conservation Fortnight at New Delhi on January 31, 2001.

The profit before tax (PBT) was Rs. 191.69 crore as against Rs. 275.65 crore in the previous year. The volatility in the crude oil prices during the year has been a major factor for the unexpected drop in profits. The Company paid a dividend of 30% during 1999-2000 against 35% during previous year.

The Company contributed a sum of Rs. 1,827.28 crore to the exchequer by way of taxes, duties, etc. during the year against Rs.1,348.03 crore in 1998-1999.

3.5.4 Safety & Environment Protection

The Company continued to meet all environmental standards laid down by various regulatory bodies with respect to discharge of effluent water and gaseous emissions. The Company has bagged the prestigious Golden Peacock Environment Management Award from World Environment Forum, U.K. in June 1999.

Diesel Hydrodesulphurisation Project was commissioned in January 2000 at an approved cost of Rs. 766 crore.

A project to install Additional Reactor in DHDS Unit for reducing sulphur in diesel to 0.05% is under implementation at a cost of Rs. 25 crore and is scheduled to be completed by October 2001.

3.5.5 MOU Targets

CPCL achieved an "EXCELLENT" rating under the MOU parameters.

3.5.6 Projects.

(i) Completed:

Apart from DHDS, a multi grade Bitumen Despatch Facility at a cost of Rs. 3.6 crore and re-routing the LPG/Propylene Safety Relief valves on Spheres/ Bullets to flare (OISD requirement) at a cost of Rs. 2.38 crore were also completed during 1999.

(ii) On-Going:

(a) 3.0 MMTPA Expansion at Manali:

CPCL has obtained the CCEA approval from the Government of India for expanding its refining capacity at Manali by 3.0 MMTPA at an estimated investment of Rs. 2,360.38 crore. Selection of technologies for the various process units is in different stages of completion. Detailed appraisal of the project has been completed by ICICI, IDBI and IFCI. Project activities have commenced, orders are placed for critical equipment and site grading is in progress. The project is expected to be completed by July 2003.

(b) Capacity Expansion at Cauvery Basin Refinery

The existing capacity of 0.5 MMTPA is being expanded to 1.0 MMTPA at a cost of Rs. 30 crore and is expected to be completed by June / July 2001.

(c) Oil Jetty Project

In order to meet the crude requirement at Cauvery Basin Refinery at Nagapattinam, a permanent Oil Jetty facility is being set up at an estimated cost of Rs. 96 crore.

(d) Other Projects

In addition, a JV Power Project of 500 MW capacity at a cost of Rs. 2,837 crore is on the anvil. CPCL is also planning to invest in a JV of Chennai-Tiruchy-Madurai Petronet Pipeline Project.

3.6 BONGAIGAON REFINERY & PETROCHEMICALS LIMITED (BRPL)

3.6.1 BRPL was incorporated on 20.02.1974 with the objective of installation of a Refinery having crude processing capacity of 1 MTPA 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 MTPA in 1995-96 by commissioning of expansion units.



The authorised equity capital of the Company is Rs. 200 crore. The paid-up capital as on date is Rs. 199.82 crore.

3.6.2 Physical Performance :

Performance highlights of the Refinery as well as Petrochemical Units for 1999-2000 and 2000-2001 are as follows:

ITEM	1999-2000	2000-2001 (Anticipated)
a) Crude throughput (million tonnes)	1.90	1.80
b) Production of Major Petrochemical Products (tonnes)		
- Para xylene	17,268	17,000
- Ortho xylene	1,726	2,000
- DMT	24,960	25,000
- PSF	19,531	18,500



Greenery surrounding main road leading to BRPL Complex.

The lower processing of crude vis-a-vis capacity of 2.35 MTPA during the recent years is primarily due to lower crude availability from N.E. fields. The Company has therefore embarked upon a project along with M/s.Indian Oil Corporation Ltd. and Oil India Ltd. to transport imported crude oil from Haldia, West Bengal to Bongaigaon, Assam to maximise plant capacity utilisation.

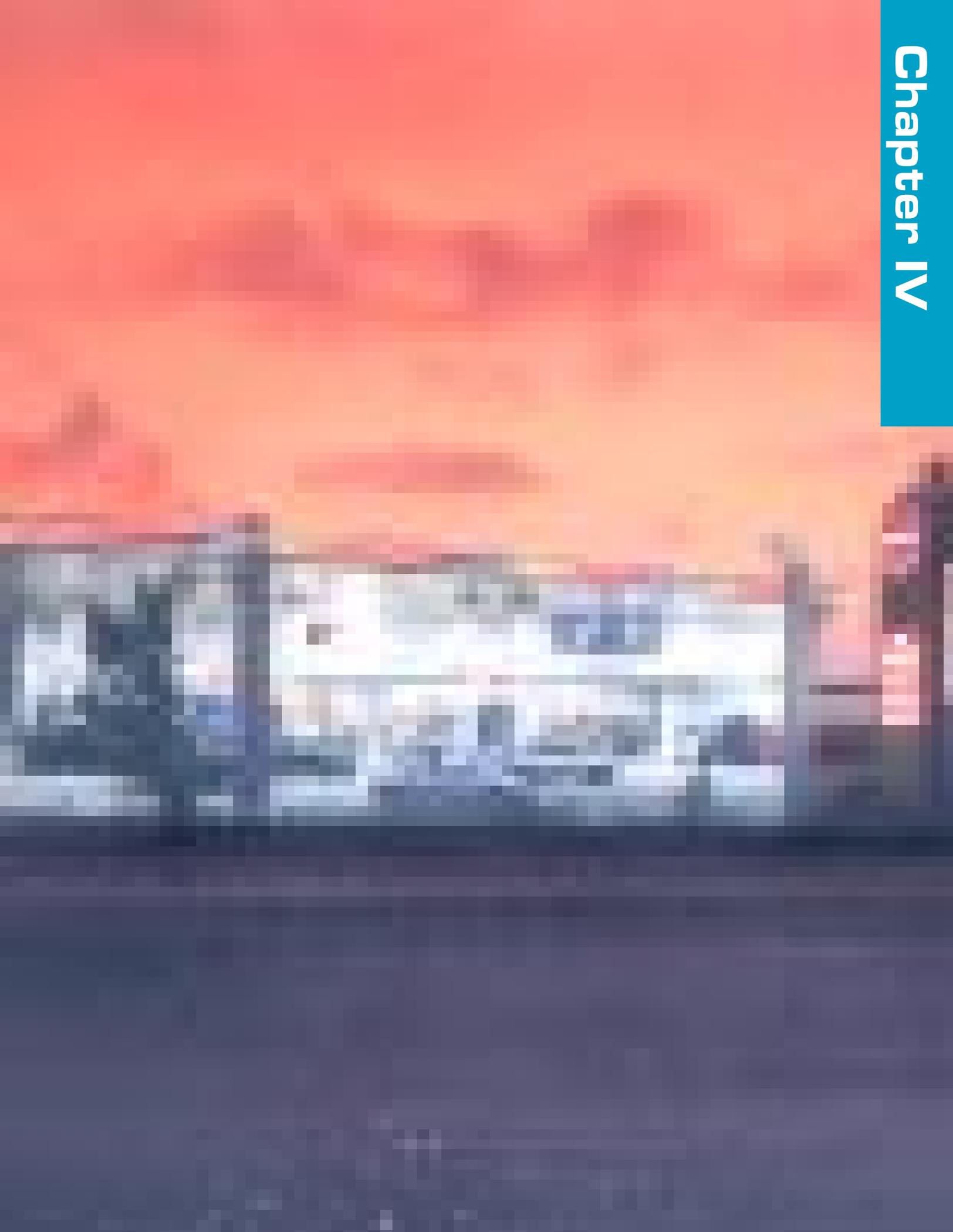
Production of petrochemicals has been lower due to depressed market.

3.6.3 Financial Performance :

The Company achieved a turnover of Rs. 1,291.52 crore in 1999-2000 as against Rs. 939.36 crore in the previous year. The net profit for the year 1999-2000 was Rs. 32.24 crore and the dividend paid by the Company was Rs. 9.67 crore. The net profit after tax for the year 2000-2001 is expected to be Rs.20 crore. The high price of crude oil in the international market not commensurating with product prices is expected to result in a lower margin and profit in 2000-2001.



View of the plant at BRPL.



MARKETING AND DISTRIBUTION

CHAPTER IV

4 GROWTH

The Oil Industry in India registered a mixed growth in the demand of petroleum products during April-December 2000 compared with the demand during April-December 1999. There was a positive growth in the demand for LPG of 12.8%, Motor Spirit (MS) of 12% and Naphtha/NGL of 19.3%. On the other hand, there was a negative growth of 5.6% in the demand for Kerosene, 2.8% in Diesel, 22.9% in Lubes, 4.5% in Bitumen, 4.2% in LDO and 1.2% in FO/LSHS. However, the overall growth in the demand of petroleum products was 2.8%.

4.1 BHARAT PETROLEUM CORPORATION LIMITED (BPCL)

4.1.1 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 feedstocks. The Corporation has an all India presence through its extensive marketing network. The authorised and paid-up shares capital of the Corporation were increased to Rs. 300 crore on 21.11.2000 consequent upon declaring bonus shares in the ratio of 1:1. The Government of India holding in BPCL is 66.2%.



4.1.2 During the year 1999-2000, BPCL refinery achieved a throughput of 8.9 MMT. The throughput achieved upto December 2000 has been 8.6 MMT. The total sale of petroleum products during 1999-2000 was 18.86 MMT as against 17.50 MMT in 1998-99. The sale volume

achieved upto December 2000 has been 14.4 MMT.

The profit after tax during 1999-2000 was Rs. 703.86 crore as against Rs. 701 crore during the previous year. For the year 1999-2000, the Corporation maintained the same rate of dividend as that of previous year by declaring a dividend of Rs. 187.5 crore equivalent to 125% of the paid-up capital.

4.1.3 During the year 1999-2000, the Corporation sold 18.86 MMT of petroleum products representing a growth of 7.8 % which was higher than the Industry growth rate. The market share was further strengthened from 20.55 % in 1998-1999 to 20.89% during the year 1999-2000 enabling the Corporation to retain its second position in the Industry. During the year 1999-2000, the Corporation commissioned 66 new retail outlets, 3 SKO dealerships and 153 new LPG distributorships. During the period April-December 2000, 32 new retail outlet dealerships, 7 SKO dealerships and 60 new LPG distributorships were commissioned. The Corporation released 21.21 lakh new LPG connections during the year 1999-2000 and approximately 20 lakh new connections during April-December 2000. The gross tankages as on 31.3.2000 and 31.12.2000 stood at 54,970 metric tonnes (MTs) and 55,620 MTs respectively.



Hon'ble Prime Minister Shri A.B. Vajpayee, presents the MoU Award for excellence to Shri U. Sundararajan CMD BPCL.

4.1.4 PROJECTS.

Investment in JVC – Numaligarh Refinery Limited.

A 3 MMTPA capacity grassroots refinery along with a Marketing Terminal has been set up at Numaligarh in Assam by Numaligarh Refinery Limited (NRL). BPCL has contributed 32% of the equity of NRL with IBP and the Government of Assam contributing 19% and 10% respectively. The balance 39% is to be contributed by the public and others. The equity share of BPCL is expected to be revised to 51% through acquisition of 19% of IBP's equity.

All the Refinery units have been commissioned in June 2000. The Refinery has been operating smoothly within 60%-80% of production capacity during the first year of operation.

Modifications to Bitumen Blowing Unit (BBU) in the Refinery

Modifications to the BBU, including installation of BITUROX system, were carried out, which were aimed at increasing the production capacity of different grades of Bitumen. The project was completed within the approved cost of Rs. 22 crore and commissioned in September 2000.

4.1.5. AWARDS

i. Prime Minister's MOU Award for Excellence in Performance

BPCL has received the Prime Minister's MOU Award for "Excellence in Performance" for the year 1998-1999 from the Hon'ble Prime Minister.

ii. The "Best Enterprise Award for Women's Development"

In May 2000, BPCL was conferred the "Best Enterprise Award for Women's Development" for



BPCL's Retail Outlet.

the year 1998-1999 by National Petroleum Management Programme (NPMP).

iii. 1999 CIO – 100 "Leaders for the next Millennium" award

BPCL is among the 100 organisations worldwide for the "1999 CIO – 100 Leaders for the next Millennium" award. As a recipient of the award, BPCL exemplifies the highest level of operational and strategic excellence as also the company that is most likely to excel in the 21st century with its innovative practices, leveraging people and technology.

iv. FICCI Award for Rural Development

BPCL was conferred the FICCI Award 1999-2000 for Rural Development at a function held on 16.12.2000 at Vigyan Bhawan, New Delhi.

4.2 HINDUSTAN PETROLEUM CORPORATION LIMITED (HPCL)

4.2.1 HPCL is a mega Public Sector Undertaking (PSU) and is the second largest 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 the capacity of





HPCL's Retail Outlet.

7.5 MMTPA. The Corporation also operates the only joint venture refinery in the country – the Mangalore Refinery & Petrochemicals Limited with a capacity of 9 MMTPA, in association with Aditya Birla Group of Companies and is progressing towards setting up a 9 MMTPA refinery in the state of Punjab. The Corporation owns and operates the largest Lube Refinery of 3,35,000 tonnes capacity producing Lube Base Oils of international standards. The authorised and paid-up capital of the Corporation as on 31.03.2000 were Rs. 350 crore and Rs. 339.33 crore respectively. The Government of India holding in HPCL is 51.01%.

4.2.2 During the year 1999-2000, the two refineries of the Corporation achieved a combined crude throughput of 10.56 MMT compared with 9.07 MMT in 1998-1999. The throughput achieved upto December 2000 has been 9.10 MMT. The total sale of petroleum products during 1999-2000 was 17.5 MMT compared with 16.98 MMT in 1998-1999. Sales volume achieved upto December 2000 has been 13.3 MMT. The sales turnover increased to Rs. 34,368.03 crore in 1999-2000 from Rs. 25,994.6 crore in 1998-1999 and the net profit Rs. 1,057.14 crore from Rs. 901.26 crore. The Corporation declared a

dividend of Rs. 324.88 crore for the year 1999-2000 equivalent to 110% of the paid-up capital compared with Rs. 248.71 crore for the previous year. The sales turnover and the profit before tax of the Corporation during April-December 2000 have been Rs. 44,479 crore and Rs. 795 crore respectively.

4.2.3 During the year 1999-2000, the Corporation commissioned 133 retail outlets, 80 LPG distributorships and 6 Kerosene dealerships and released 21.01 lakh LPG connections. During April-December 2000, the Corporation commissioned 25 retail outlets and 22 LPG distributorships and released 19.7 lakh LPG connections.

4.2.4 Projects

A) Major Projects completed during the year.

Visakh Refinery Expansion Project (VREP) at a cost of Rs. 963 crore was completed during the year 1999-2000. As part of the Visakh Refinery Expansion Project, a new Crude Distillation Unit of 3 MMTPA was successfully commissioned in January 2000 and FCCU during August 2000.

DHDS Projects at Mumbai and Visakh Refineries at a total cost of Rs. 1,552 crore were successfully commissioned in March 2000 and June 2000 respectively.

All these projects have been completed within the approved cost.

B) Major Projects under Implementation

Visakh Secunderabad Pipeline Project:

The project for expanding the capacity of Visakh Vijayawada Pipeline (VJPL) from 4.1 MMTPA to 7.7 MMTPA in phases and its extension from Vijayawada to Secunderabad to cater to the important consumption zones of Andhra Pradesh is under construction. The project is estimated to cost Rs. 377.55 crore with a completion schedule of May 2002.

4.3 INDIAN OIL CORPORATION LIMITED (IndianOil)

4.3.1 IndianOil is the largest integrated oil company in the public sector in India. It is the only Indian company in Fortune magazine's 'Global 500' listing of the world's largest corporations, with a ranking of 232 for fiscal 1999. In the list of 800 largest non-US corporations published by Forbes magazine, IndianOil is ranked 100th. It owns and operates seven refineries - at Guwahati, Barauni, Gujarat, Haldia, Mathura, Panipat and Digboi having a combined installed capacity of 35.60 million tonnes per annum. It owns a 6,453 km long network of crude oil and product pipelines across the country, with an installed capacity of 43.45 million tonnes per annum. The authorised and paid-up capital of the Corporation as on 31.3.2000 were Rs. 2,500 crore and Rs. 389.31 crore respectively. The Government of India holding in IndianOil is 82.03%.

4.3.2 The refineries of IndianOil achieved a crude throughput of 32.42 million tonnes during 1999-2000 as against 30.36 million tonnes during 1998-1999. The throughput achieved upto December 2000 has been 24.73 million tonnes. IndianOil's pipelines achieved a throughput of 39.50 million tonnes during 1999-2000 as against 34.05 million tonnes during the year 1998-1999. The achievement upto December 2000 has been 29.48 million tonnes. During the



period April to December 2000, 203 new retail outlet dealerships, 5 new kerosene dealerships and 76 new LPG distributorships were commissioned. The Corporation released 47.37 lakh LPG connections in the year 1999-2000 and approximately 48.81 lakh new connections during April to December 2000.

4.3.3 The Corporation sold 48.79 MMT of petroleum products during the year 1999-2000, registering an increase of 2.74 MMT over the previous year. During April-December 2000, it has sold 35.862 MMT of petroleum products with a market participation of 53.50% at the end of December 2000.

4.3.4 The Corporation achieved a turnover of Rs. 94,141 crore in 1999-2000 as against Rs. 69,430 crore in 1998-1999. The profit before tax was Rs. 2,970 crore for the year 1999-2000 and the profit after tax was Rs. 2,443 crore. The corresponding figures in the previous year were Rs. 2,733 crore and Rs. 2,214 crore respectively. The anticipated turnover and profit after tax of the Corporation for the year 2000-2001 are Rs. 1,13,150 crore and Rs. 2,440 crore respectively.

The Corporation declared a dividend of 75% amounting to Rs. 584 crore for the year 1999-2000.

4.3.5 PROJECTS

Major projects completed during the period April-December 2000.

1. Matching Secondary Processing facilities at Mathura
2. Branch product pipeline to Meerut from Mathura-Jalandhar Pipeline
3. Construction of new terminal at Manmad
4. Construction of Bitumen Emulsion Plant at Panipat
5. Construction of BG loading facility at Kandla.
6. Construction of new terminal at JNPT, Mumbai
7. New Depot at Leh (J&K)



IndianOil's Retail Outlet.

8. Tankages at 10 existing locations
9. New LPG Bottling Plants at 12 new locations
10. LPG tankage at 7 locations

Major ongoing projects

1. Augmentation of Salaya-Mathura Pipeline.
2. Augmentation of Haldia-Barauni Crude Oil Pipeline.
3. Augmentation of Kandla-Bhatinda Pipeline.
4. Replacement of Barauni-Patna section of Barauni-Kanpur Pipeline.

MAJOR PROJECTS PLANNED

1. Production of Linear Alkyl Benzene at Gujarat Refinery
2. MS quality improvement at Gujarat, Haldia, Mathura, Panipat and Barauni Refineries
3. Installation of facilities for improvement of diesel quality & distillate yield improvement (OHCU) at Haldia Refinery
4. Additional DHDT (facilities for improving quality of HSD to meet Euro norms) at Mathura Refinery
5. Lube Oil Base Stock production Unit at Gujarat Refinery
6. Installation of additional crude oil handling facilities on West Coast and laying crude oil pipeline system.
7. Koyali-Dahej / Hazira Pipeline
8. Extension of Kurukshetra – Saharanpur Pipeline from Saharanpur to Roorkee
9. New Depots / Terminals / TOPs at eight locations
10. New LPG Bottling Plants

4.3.6 BUSINESS DEVELOPMENT

The Corporation had submitted six bids for exploration blocks under the first round of NELP – five with ONGC and one with Petronas Carigali. The

IndianOil-ONGC combine was awarded two blocks in Mumbai Offshore and in the Ganga Valley. Production Sharing Contracts have since been signed with the Government.

Within the IndianOil – ONGC Strategic Alliance, it has been decided to form a Joint Venture for providing Training & Consultancy service in India and abroad. The Boards of IndianOil and ONGC have entered into an MOU to address the Oil & Gas business opportunities in Iran.

The Corporation made substantive progress in the proposed refinery residue – based power projects at Panipat (Haryana) and Savli (Gujarat) in terms of necessary approvals and licences. A joint venture company, IndianOil Panipat Power Consortium Ltd., has been incorporated with Marubeni Corporation, Japan, for the Panipat project. For the Savli Project, the Corporation has signed an MOU with Mitsubishi Corporation, Japan, as a Joint Venture partner.

The Board of the Corporation has approved a Petrochemical Complex for production of PX/PTA at Panipat. An MOU was signed between the Corporation and Petronas, Malaysia for possible joint pursuit of this project.

A Joint Venture, IndianOil TCG Petrochem Ltd., has been formed with The Chatterjee Group (TCG) for bidding for the Government of India equity in Indian Petrochemicals Corporation Limited (IPCL) and other opportunities of mutual interest.

A detailed feasibility study has been completed for substantive expansion of the Cauvery Basin Refinery at Nagapattinam as a Joint Venture with Chennai Petroleum Corporation Ltd.

The Corporation in collaboration with GAIL, Indian Institute of Petroleum and BP has completed the techno-economic feasibility study on use of Di-Methyl-Ether (DME) as a power plant fuel and MOUs executed with a few power developers.

The officers and staff of the Corporation provided assistance to Emirates National Oil Co. (ENOC),

Dubai, in commissioning their condensate refinery. Technical Service Agreements with ENOC, Dubai and Petrotrin, Trinidad & Tobago have been renewed for the third consecutive year. An MOU was signed with Bahrain Training Institute for collaborative training. During the year, the Corporation earned about US \$ 1 million for Training & Consultancy services from overseas clients.

A Memorandum of Understanding was signed between the Government of India and the Government of Mauritius for the Corporation's participation in the entire downstream petroleum sector in Mauritius.

4.4. INDIAN OIL BLENDING LIMITED (IOBL)

The Indian Oil Blending Limited is a 100% owned subsidiary of IndianOil, engaged in manufacturing of lubricants and greases. During 1999-2000, IOBL



Filling process at IOBL plant.

earned a net profit of Rs.634 lakh as against Rs. 1,066 lakh in the previous year. A dividend of 25% was declared for the year 1999-2000.

4.5 IBP Co. Limited

4.5.1 IBP Co. Limited was incorporated in 1909. It became a subsidiary of IndianOil in 1970. Thereafter, it became an independent Government Company in 1972. The authorised and paid-up share capital of the Company as on 31.3.2000 were Rs.100 crore and Rs. 22.15 crore respectively. Government shareholding in IBP Co. Limited is 59.58%. Balmer Lawrie & Co. Limited is a subsidiary of IBP. The Company has participated in three Joint Venture Companies. These are Numaligarh Refinery, Indian Oiltanking Limited and Petronet India Limited. Over the years, the Company has diversified into other



activities, such as Industrial Explosives and Cryocontainers. It has now three distinct business groups viz., Business Group (Petroleum), Business Group (Chemicals) and Business Group (Engineering). During the year 1999-2000, construction of three terminals commenced at Sangrur in Punjab, Kondapally in Andhra Pradesh and Barauni in Bihar.

4.5.2. The physical performance of the Company during 1999-2000 with regard to sale of petroleum products to dealers/customers is 49,21,075 kl representing a 6.08% growth over previous year. The volume of sales is anticipated to be 50,00,000 kl in 2000-2001.

4.5.3 The Company achieved a turnover of Rs. 6,810 crore during 1999-2000 as against Rs. 5,670 crore in the previous year. The net profit earned for the year 1999-2000 was Rs.41.71 crore compared with Rs.35.23 crore in 1998-99. The Company paid a dividend of Rs. 10.19 crore for the year 1999-2000. The anticipated turnover of the Company for the year 2000-2001 is Rs. 8,600 crore and the profit after tax is expected to be Rs.50 crore.

4.5.4. Disinvestment in IBP

It has been decided by Government to retain 26% equity in IBP by divesting 33.6% of its holding to a strategic investor through international competitive bidding.

4.6 LPG MARKETING BY PUBLIC SECTOR OIL COMPANIES

4.6.1 Four Public Sector Oil Marketing Companies viz., Indian Oil Corporation Ltd., Bharat Petroleum Corporation Ltd., Hindustan Petroleum Corporation Ltd. & IBP Co. Ltd. are engaged in the marketing of LPG in the country. With the increased availability of LPG, number of LPG customers enrolled by them has also been increasing. The number of LPG customers served by them as on 1.1.2001 was about 560 lakh.

4.6.2 In the calendar year 2000, Government decided to liquidate the waiting list registered with the LPG distributors as on 1.12.1999 across the country by undertaking a programme to release 1 crore LPG (domestic) connections. During the calendar year 2000, OMCs have released about 120 lakh LPG connections against the target of 100 lakh numbers. With these releases, the total waiting list with the distributors has been liquidated.

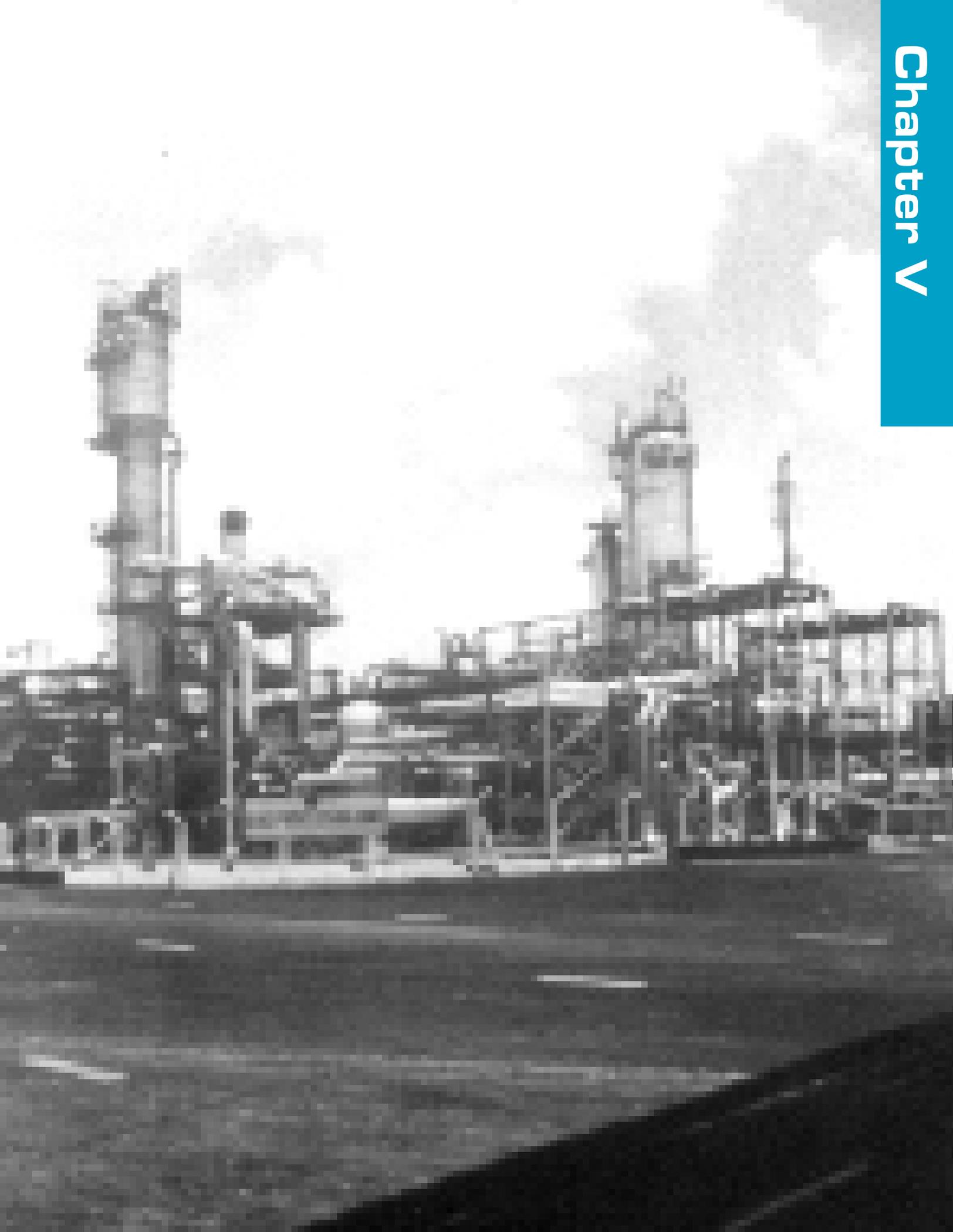
4.6.3 Consequent upon liquidation of LPG waiting list in urban areas, Government has planned to release 1.3 crore LPG connections in the calendar year 2001. To achieve this target, Government has targeted smaller towns/rural areas which were hitherto virgin markets. For this, Government has also envisaged setting up 540 exclusively rural distributorships under Marketing Plan 1996-1998 and about 700 more distributorships at the level of block/tehsil etc.

4.7 PARALLEL MARKETING OF LPG AND SKO

In order to increase the availability of LPG and Kerosene (SKO), the private sector was allowed to participate in the scheme of parallel marketing of LPG and Kerosene in April 1993 by decanalising their imports. Under the scheme, a private party can undertake the import of LPG and Kerosene after obtaining a rating certificate from one of the approved rating agencies given in the LPG (Regulation of Supply and Distribution) Order, 1993 and Kerosene (Restriction on Use and Fixation of Ceiling Price) Order, 1993 as amended from time to time. These products are to be sold at market determined prices by the private parties through their own distribution network. Initially, the public sector oil companies facilitated the import of LPG & Kerosene through their facilities. Upto 1.1.2001, 6,099.8 TMT of Kerosene and 875 TMT of LPG have been imported by the private sector under the scheme.



IBP Retail Outlet.



OTHER UNDERTAKINGS/ ORGANISATIONS

CHAPTER V

5.1 ENGINEERS INDIA LIMITED (E.I.L.)

5.1.1 Introduction

Engineers India Limited is a leading engineering and consultancy company in India situated at New Delhi. It has been serving petroleum, petrochemicals and other process industries and the metallurgical industries since the mid sixties. EIL provides a complete range of project services in these fields including process design, engineering, procurement, construction management, project management and supervisory assistance for commissioning and plant start-up. It has played a very significant role in setting up a large number of process plants in India and abroad. The authorised and paid-up capital of the company are Rs.100 crore and Rs. 56.16 crore respectively.



5.1.2 EIL's quality management system conforms to ISO-9001. The Registered Office and Headquarters of the Company is in New Delhi. In addition, the company has Regional Engineering Offices in Chennai and Vadodara, Branch Offices in Calcutta and Mumbai; Inspection/Procurement Offices at various locations all over India and London and Construction Offices at different project sites in India and abroad. The number of employees of the company is about 3,700.

5.1.3 IMPORTANT ASSIGNMENTS

The Company continued to make extensive efforts to keep its order book position healthy and commensurate with the manpower availability inspite of the stiff competitive situation.

Major contracts in the field of Refineries, Oil and Gas Processing and Pipelines were secured by EIL during the year. Major refinery jobs secured by EIL

during the year include Panipat Refinery Expansion Project of IndianOil, Refinery Modernisation and FCC Revamp Projects of BPCL, Ph-I facilities of Punjab Refinery Project of HPCL, CDU/VDU, NSU and offsites and utilities for expansion of 3 MMTPA of CPCL. In addition, the Company was also awarded with preparation of DFRs and technology evaluation reports for modification in specifications of Motor Spirit at Barauni, Haldia and Gujarat Refineries of IndianOil, pre-project activities for Refinery Capacity Expansion at Kochi, DFR for FCCU Revamp Project and installation of the second Hydrodesulphurisation project at Kochi of KRL.

EIL has also secured major jobs in the Pipelines field from GAIL. These include Ferozabad City Gas Distribution Expansion Project, KG Basin Ph-II Pipeline, NTPC Jhannore to GPC Gandhar Pipeline, Enhancement/Revamping of the Pipelines Network at Gas Processing Complex at Gandhar and DFR for setting up a Gas Pipeline Network from Kochi to Karnataka and Kerala.

In the field of Onshore Oil and Gas, GAIL awarded contracts for installation of CDU at Tatipaka and Mori, NGL Value Addition at Vaghodia, C4 Mix Hydrogenation and preparation of DFR for North-South Gujarat consumers. EIL was also awarded consultancy services for Flare Gas Recovery Project of ONGC Ltd.



IndianOil's latest Refinery at Panipat.

In the field of Metallurgy, EIL bagged feasibility studies for HZL for the second phase Expansion of Rampura-Agucha Mine and EIA/EMP/IBM Plan Applications, feasibility report for Bauxite Mine and 3 MMTPA Alumina Refinery of Utkal Alumina International Ltd. and inspection and expediting services for Smelter Expansion Project of NALCO.

M/s Dharamsi Morarji Chemical Co. awarded a contract to EIL for providing consultancy services for the LPG Terminal Project at Navlakhi.

The Company has also secured a number of small value assignments in the areas of environment engineering, specialist maintenance, risk analysis, advance control, optimisation and information technology.

Outside India, EIL was successful in getting two Managing Contractors services contracts, one from FAJR Petrochemical Co., Iran for Offsites & Utilities Project in Bandar Imam and another from Bou Ali Sina Petrochemical Co., Iran. for Third Aromatics Project. EIL's agreement with NODCO, Qatar for NODCO Refinery Expansion Project was also extended for another one year. Besides these, EIL was also awarded smaller assignments from Indonesia, Kuwait, Nigeria and U.S.A. EIL has a joint venture company with AMEC U.K. named as AMEC Engineers India Ltd. and a wholly owned subsidiary company in Malaysia named EIL Asia Pacific Sdn Bhd. It also has a subsidiary company - Certification Engineers International Ltd. for providing Certification and Inspection services.

5.1.4 POLICY INITIATIVES UNDERTAKEN DURING 2000-2001

Major policy initiatives taken by EIL include the following:

(i) Strategic Alliances

Alliances for technological upgradation (fuel gas desulphurisation, advance process control, etc.)

and for business acquisition (LNG projects, refinery residue based power plants) were pursued during the year.

(ii) Turnkey Assignments

Bidding for turnkey projects was taken up on a selective basis. Two projects of ONGC Ltd. (i) Topside Modifications Hookup for Mumbai High Pipeline Replacement Project and (ii) Water Injection Pipelines Replacement Project have been secured during 2000-2001.

(iii) Information Technology Services

Information Technology Services have been identified as a thrust area for developing business and undertaking assignments for clients outside the organisation. A target of Rs. 300 lakh has been set for 2000-2001. As on November end 2000, business worth Rs. 132 lakh had been secured.

(iv) Organisational Development

In its endeavour towards establishing a strong presence in the evolving competitive business environment, two organisational studies related to (i) Customer Satisfaction and (ii) Benchmarking Corporate Performance were initiated during 2000-2001. The targeted completion date for both these studies is February 2001.

(v) Human Resource Development

For updating the functional and technical skills of the employees, ninety training programmes were identified in the MOU for completion during 2000-2001.

5.1.5 The Company achieved a turnover of Rs. 615.67 crore during 1999-2000 compared with Rs. 391.73 crore in 1998-1999 and earned a net profit of Rs.126.20 crore as against Rs. 118.06 crore in the previous year. Dividend paid for the year 1999-2000 was Rs. 35.55 crore compared with Rs. 28.08 crore for 1998-1999.

5.2 BALMER LAWRIE & CO. LTD.



5.2.1 Balmer Lawrie & Co. Ltd., became a subsidiary of IBP Co. Ltd. in August 1972. The authorised capital and the paid-up capital of the Company as on 31.3.2000 were Rs. 30 crore and Rs. 16.29 crore respectively.

5.2.2 The Company is a diversified medium sized company with operations spread throughout India and overseas. The main activities of the Company are broadly classified in various Strategic Business Units viz., (i) Industrial Packaging (ii) Greases & Lubes (iii) Performance Chemicals (iv) Travel and Tours (v) Cargo (vi) Tea Exports (vii) Project Engineering and Consultancy and (viii) Research and Development.

5.2.3 During the year 2000-2001, the Company is expected to manufacture 32 lakh barrels/drums against 31.83 lakhs in 1999-2000. The Company is expected to produce 40,000 tonnes of greases and lubricants during 2000-2001 as against 39,000 tonnes in 1999-2000. Production of performance chemicals will be more or less in line with last year's production of 2,851 MT.

5.2.4 The total turnover of the company is anticipated to



Stuffing operation of NALCO's export material is in progress at Balmer Lawrie's Container Freight Station, Calcutta.

increase from Rs. 723.10 crore in 1999-2000 to Rs. 750 crore in 2000-2001. While the Company has achieved a profit after tax of Rs. 14.42 crore during 1999-2000, the anticipated profit after tax for the year 2000-2001 is Rs. 11 crore. The Company declared a dividend (including dividend tax) of Rs. 4.70 crore for the year 1999-2000 as against Rs. 5.43 crore for the previous year.

5.3 BIECCO LAWRIE LTD.

5.3.1 Biecco Lawrie Limited, a Government of India Enterprise, was established on 23.12.1919. The Company is a Kolkata based medium sized Engineering Company having two factories at Kolkata. The authorised capital and paid-up capital of the Company as on 31.3.2000 were Rs. 50 crore and Rs. 42 crore respectively.

5.3.2 The physical performance of the Company upto December 2000 with regard to sale of switchgear panels & switchgear spares and others was Rs. 1,616 lakh and that for electrical repair jobs was Rs. 106 lakh.

5.3.3 The total sales turnover of the Company for 1999-2000 was Rs. 78.45 crore against Rs. 71.82 crore in 1998-1999. This was mainly due to an increase in sales of Electrical Repair Jobs, Superior Kerosene Oil, Bitumen and Turnkey Electrification Project. The Company earned a marginal profit of Rs. 18 lakh during 1999-2000.

5.3.4 Considering the need to improve upon its performance level, all-pervasive efforts have been initiated to sharpen the competitive edge of the Company confirming its superior product quality and service. As a first step, the Company has obtained ISO-9001 accreditation in 1999. The organization is on the way to develop a Knowledge Management System.

5.4 PETROLEUM INDIA INTERNATIONAL (PII)

5.4.1 PII, a consortium of ten public sector companies, was established in 1986 with the common objective

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 in the petroleum & petrochemical sectors.



Following companies are in the PII.

Bharat Petroleum Corporation Limited

Bongaigaon Refinery & Petrochemicals Limited

Kochi Refineries Limited

Engineers India Limited

Hindustan Petroleum Corporation Limited

IBP Co. Limited

Indian Oil Corporation Limited

Indian Petrochemicals Corporation Limited

Chennai Petroleum Corporation Limited

Oil & Natural Gas Corporation Limited

Kuwait National Petroleum Company (KNPC), Kuwait.

Technip ESIA at Khaleej Joint Venture (TPJV), France.

Abu Dhabi National Oil Company (ADNOC), UAE

Jedah Oil Refinery Company (JORC), Saudi Arabia

Kellogg Plant Services inc., Kuwait

Empress a National Petroleos De Mocambique (petromoc), Mozambique

Toyo Engineering, Japan

LG Engineering, Thailand

MTBE Sdn Bhd & FPG Oleochemicals, Malaysia

Petronas Research & Scientific Services Sdn Bhd, Malaysia

China Petroleum Engg. Construction Corpn. (at Kuwait)

Velosi (M) Sdn Bhd, Malaysia

UOP LIC, USA (at Indonesia, Egypt)

Advanced Technical Services (ATS), Doha, Qatar

National Engg. & Technical Co., Nigeria

Galana, Madagascar

CMD, Portland, USA

Navi-Gates, USA

Bahrain Petroleum Co. B.S.C.

5.4.2 The range of PII services include:-

- (i) Technical back-up services
- (ii) Management and Technical Consultancy
- (iii) HRD & Training Services
- (iv) Turnaround Maintenance
- (v) Information Technology

5.4.3 PII has provided its services to various companies abroad during the last decade.

These include:

Nigerian National Petroleum Corporation (NNPC), Nigeria.

5.4.4 PII was certified as an ISO:9002:1994 organisation on 11.4.2000. The ISO:9002:1994 certification would serve as an effective expression of the Company's continuous endeavour and commitment

to provide world class quality products and services to its customers.

5.4.5 PII generated an income of Rs. 28.74 crore during 1999-2000 and earned a net profit of Rs. 10.60 crore. The anticipation for the year is Rs. 35.08 crore and Rs. 10.74 crore respectively.

5.5 OIL INDUSTRY DEVELOPMENT BOARD

5.5.1 FUNCTIONS OF THE BOARD

The Oil Industry Development Board was established in January 1975 under the Oil Industry (Development) Act, 1974 to provide financial and other assistance as is conducive for the development of Oil Industry. The financial assistance is given by way of loans and grants for activities such as prospecting for and exploration of mineral oil, refining, processing, transportation, storage, handling and marketing of mineral oil, and scientific, technological and economic research which could be directly or indirectly useful to oil industry etc. The OIDB has provided financial assistance of Rs.12,425 crore (approx.) in the form of loans to oil companies and grant-in-aid of Rs. 357 crore (approx.) to various institutions since its inception and till December 2000. The loan outstanding from oil companies to OIDB as on 31.12.2000 was Rs. 5,744 crore approximately.



5.5.2 RESOURCES OF THE BOARD

The funds for various activities envisaged under the Act are required to be made available by the Central Government after due appropriation by Parliament from the proceeds of cess levied and collected on indigenous crude oil. Since inception and up to March 2000, the Central Government has collected a sum of around Rs. 36,000 crore as cess; out of this, OIDB has received an amount of Rs. 902 crore till date, which constitutes 2.5% of

total cess collection. This sum together with the receipt generated as interest income on loans given to various oil sector companies has accumulated to Rs. 6,219 crore approximately as on 31.12.2000. On an average, the internal accruals to the funds during the last five years are in the range of Rs. 512 crore per annum. The total funds available for disbursement on an average during the last five years are in the range of Rs.1,400 crore (approx.) per annum.

5.5.3 MAJOR PROJECTS FUNDED BY OIDB

In the wake of economic liberalisation introduced by the Government, Petroleum sector in India is witnessing a fundamental shift. The emphasis is now on deregulation and traditional barriers in the industry are gradually getting lowered. Oil companies are bracing themselves for global competitiveness and technological innovations leading to cost cutting. Natural Gas has emerged as an important source of fuel and feedstock in various industrial sectors such as fertilizers, petrochemicals, power generation, sponge iron, etc. In this context, OIDB is gearing itself to play a more proactive role in the oil industry by extending its assistance to Joint Ventures, environment-friendly projects and educational institutes for development of infrastructure facilities for development of oil and gas sector.



Sh. H.L. Zutshi, CMD, HPCL, addressing the delegates on Disinvestment of Government equity in Oil PSUs in the Oil & Gas Millennium Meet.

Some of the major projects funded by OIDB are enumerated below:

i) Diesel Hydrode-sulphurisation Project (DHDS)

In order to reduce sulphur content in High Speed Diesel (HSD) being produced in India from the present 1% wt. to 0.25% wt., refineries were directed by the Hon'ble Supreme Court to put up required facilities by 1.4.1999. OIDB has provided assistance to the tune of Rs.1,970.74 crore (approx.) to three refineries viz. CPCL, KRL and BPCL for this purpose till December 2000.

ii) Numaligarh Refinery Limited (NRL)

OIDB has provided total funds to the tune of Rs. 334 crore to this refinery by way of loan assistance. It has also participated in the equity of NRL to the extent of 10% amounting to Rs. 90.80 crore.

iii) Gas Authority of India Limited (GAIL)

OIDB has provided a loan assistance of Rs. 200 crore to the LPG plant set up by GAIL at Auraiya in Uttar Pradesh. It has also provided assistance to the Agra-Ferozabad Gas Distribution Project of GAIL.

iv) Indraprastha Gas Limited (IGL)

IGL is a joint venture between GAIL, BPCL and the Government of the National Capital Region of Delhi. The Company is supplying natural gas to the domestic and commercial sectors and compressed natural gas to the automobile sector. Thus, this is a step towards providing citizens of Delhi with a clean and pollution free environment as well as an alternative fuel for public and private transport. The project is being given an assistance of Rs.100 crore.

5.5.4 ASSISTANCE TO OIL INDUSTRY

The Board renders assistance by way of grant of loans for projects, disbursement of grants for R&D

programmes, funding expenditure of Scientific Advisory Committee, Study Groups and Task Force etc. The rate of interest varies from 5% to 16% depending on the nature of the project funded. OIDB's financial assistance for exploration work in high risk areas carries rate of interest of 5% per annum and low risk areas 10% per annum. Interest rates on term loans vary depending on market conditions. Presently the interest rate is 12% per annum. The working capital loan is made available at an interest rate of 16% per annum in exceptional circumstances.

5.5.5 Disbursement of loans during the year 1999-2000 and 2000-2001 (upto December 2000) for plan projects:

(Rs. in crore)

Sl. No.	Organisation	Actual disbursement 1999-2000	Funds released during 2000-2001 (upto 31.12.2000)
1.	BPCL	28.26	249.26
2.	Balmer Lawrie & Co.	50.00	0.00
3.	Biecco Lawrie Limited	0.00	4.00
4.	Kochi Refineries Limited	350.00	75.00
5.	Gas Authority of India Limited	251.00	234.40
6.	IBP Co. Limited	98.81	30.00
7.	Chennai Petroleum Corporation Limited	170.00	303.28
8.	Oil India Limited	0.00	30.00
9.	Hindustan Petroleum Corporation Limited	0.00	150.00
10.	Numaligarh Refinery Limited	6.25	0.00
Total		954.32	1075.94

Disbursement of loans for non-plan projects to different companies amounted to Rs. 26 crore in 1999-2000 and Rs. 46.55 crore in 2000-2001 (upto December 2000).

5.5.6 Disbursement of grants to various Companies amounted to Rs. 45.41 crore during the year 1999-2000 and Rs. 3.57 crore during 2000-2001 (upto December 2000).

5.6 DIRECTORATE GENERAL OF HYDROCARBONS (DGH)



The Directorate General of Hydrocarbons (DGH) was established under the administrative control of Ministry of Petroleum and Natural Gas, by Government of India Resolution in 1993. Objectives of DGH are to promote sound management of the Indian petroleum and natural gas resources having a balanced regard for environment safety, technological and economic aspects of the petroleum activity. Details of the main activities undertaken by DGH during 2000-2001 are as under:

5.6.1 OPENING UP OF NEW AREAS FOR FUTURE EXPLORATION

In order to offer new acreages for exploration, Ministry of Petroleum and Natural Gas had approved 25 blocks, identified by DGH under the second round of NELP-II. Basin docket and data packages incorporating updated information were prepared by DGH in association with ONGC & OIL. For the first time, the entire information contained in Data Packages of all the blocks on offer under NELP- II and information docket of relevant basins were made in digitized form and are available on CD ROMs/Exabyte Tapes. An international website has also been opened for NELP-II, so that any company in the world can see limited but key data in its own office.

In its continued efforts to open up areas for future exploration, it is planned by DGH to acquire infill seismic and GM data in Eastern offshore and along Southern tip of India in deep water. Contract for the above surveys has been awarded in December

2000 to a Russian Company and the job is expected to be completed by May 2001.

Joint Venture speculative seismic survey carried out by DGH in the Ganga Valley and Vindhyan basin had resulted in identifying some prospects in Lower Vindhyan sediments and a marine embayment trend. Two blocks in the basins have been offered under second round of NELP.

A geoscientific study jointly with ONGC & OIL on Punjab basin was started in October 1999 and completed in May 2000. The study has led to identification of likely prospective areas, which may need further exploratory efforts like further seismic surveys and drilling of wells.

5.6.2 MONITORING OF PRODUCTION SHARING CONTRACTS

A total of 46 exploration blocks and 18 fields are currently under Private/JV operation. DGH monitors the execution and management of these Production Sharing Contracts on behalf of Government of India. During the year 1999-2000, Private/JV sector produced 12.6% and 12% of country's oil and gas production respectively.

5.6.3 FIELD DEVELOPMENT AND RESERVOIR & PRODUCTION MONITORING

DGH is monitoring reservoir and production performance especially of Mumbai High field and also of all joint venture and privately operated fields. The redevelopment plan of Mumbai High North of ONGC prepared alongwith the consultant GCA was reviewed by DGH and from January 2001, ONGC is implementing the plan as agreed with DGH. Special Integrated Development Plan Studies for Mid & South Tapti field are in progress in association with IRS, ONGC, Ahmedabad. Short-term study of Panna field is also in progress. DGH has also initiated the plan for development of Hazira field in association with IRS, ONGC, Ahmedabad.

5.6.4 SAFETY & ENVIRONMENT

During April to December 2000, Safety & Environment audit of three small size fields in Gujarat (viz. Hazira, Bhandut & Dhoka) , two medium size fields (viz. Panna-Mukta & Tapti) in offshore, Bhavnagar Shore base and three drilling rigs (two offshore & one onshore) were carried out by DGH.

5.7 OIL INDUSTRY SAFETY DIRECTORATE

5.7.1 OISD assists Safety Council of the Ministry of Petroleum and Natural Gas (MOP&NG) which is headed by Secretary, MOP&NG as Chairman and includes the Joint Secretaries, Advisors in the MOP&NG, Chief Executives of all the Public Sector Undertakings (PSUs) under the Ministry, Chief Controller of Explosives (CCE), Adviser (Fire) of the Government of India and the Director General of Factory Advice Service & Labour Institute as members.

5.7.2 Review/Revision of Standards

OISD standards are generally reviewed every 4

years after first publication to incorporate the latest technological changes and experience gained in their implementation so as to update them in line with the current international practices. During the last Safety Council Meeting, the process to issue amendments to the OISD standards was approved. Accordingly, amendments to 25 standards were approved by the steering committee.

As on 31.12.2000, overall status of standardisation is as follows:

Total no. of standards identified	97
(A) Published & Distributed	86
(B) Standards under various stages of preparation	11
Total	97

A CD containing all OISD standards with a user friendly program has been prepared and distributed to the industry.



Hon'ble Minister of Petroleum & Natural Gas, Shri Ram Naik, with Dr. Avinash Chandra (Director General of Hydrocarbons) and Shri C.R. Prasad (Ex. C&MD, GAIL) at Calgary, Canada.

5.7.3 External Safety Audits

The External Safety Audits are being conducted regularly. During the period April-December 2000, External Safety Audit of five refineries, four LPG Recovery Plants, 23 marketing locations i.e. POL Terminal/ Depot, LPG Plants, 70 E&P Installations and 2,096 km of cross country pipelines was carried out. Further, Pre-commissioning safety audit of seven projects in refineries and acceptance committee inspection of 19 new marketing locations was carried out during the period.

5.7.4 Monitoring of External Safety Audit Recommendations

The External Safety Audit reports are sent to the Chief Executives of the concerned oil companies for implementation. OISD on its part regularly monitors the progress of implementation of the recommendations of these audits. A booklet giving analysis of recommendations in upstream sector and marketing installations was prepared and distributed to industry members.

5.7.5 Accident Data Base and Dissemination of Safety Information

Major recommendations is disseminated to industry through Steering Committee Meetings, Workshops and OISD Journal - Petrosafe. OISD also publishes a monthly newsletter "OISD Newsletter" to disseminate information on various safety related activities.

5.7.6 Computerisation

A new Local Area Network (LAN) computer system with IBM Server, Scanner etc. was installed at OISD office. The OISD standards have been brought out in the form of CD and a new CD containing all 86 approved standards was prepared during the period.

5.7.7 OISD Web Site

OISD has launched its website i.e. www.oisd.org providing details on the various activities carried out.

5.8 CENTRE FOR HIGH TECHNOLOGY (CHT)

5.8.1 Centre for High Technology (CHT), a Registered Society functioning under the Ministry of Petroleum & Natural Gas, Government of India, acts as a



focal point of oil industry for co-ordinating and funding of research work in refining and marketing areas, exchange of information and experiences, assessing technology requirements and getting them developed indigenously etc. The major functions and responsibilities of CHT include :

- Advise and implement the scientific and technological programmes of the Ministry of Petroleum and Natural Gas and be its executive wing for co-ordination, import, acquisition and upgradation of technology.
- Assess the operational performance of the refineries specifically from the point of view of energy utilisation in the process units and advise the Ministry.
- Identify the gaps in R&D in refining processes and products and identify the organisation which can take up that work, fund the project work and monitor their progress.



The XI Refinery Technology Meet organised by CHT.

- Develop programmes in consultation with the industry for improving the performance through upgradation, use of new techniques and advanced technology.
- Develop a centralised pool of information on the operational, maintenance and technical experiences of the refineries for use by the industry.
- Co-ordinate and pursue the programmes of Scientific Advisory Committee of MOP&NG and other Government bodies / agencies as required.

5.8.2 CHT SPONSORED PROJECTS

- CHT, in line with the recommendations of the Scientific Advisory Committee on Hydrocarbons of Ministry of Petroleum & Natural Gas, sponsors important R&D programmes for developing indigenous technologies and for absorption of new technologies. These projects are financed by Oil Industry Development Board through CHT. Major R&D projects were completed during 2000-2001 and the projects which are in progress and those approved during 2000-2001 were continuously monitored.

Projects approved during 2000-2001

- Development of Catalyst and Technology for Deep Catalytic Cracking by IIP, Dehradun
- Development of Bio-catalytic Process for desulphurisation of Diesel by IIP, Dehradun
- Commercialisation of Indigenous Reverse Osmosis Membrane Technology by CSMCRI, Bhavnagar
- Study on Boundary Lubrication Mechanism and its Applications by IISc., Bangalore
- Catalyst development for Isomerisation of Light Naphtha by IIP, Dehradun
- Development of Advanced Controls Package by EIL-R&D

5.8.3 ACTIVITIES RELATED TO ENERGY CONSERVATION IN REFINERIES

Energy Conservation Awards : Awards for Best Performing Refinery in respect of minimum specific energy consumption (in MBTU/BBL/NRGF) and for Best improvement in energy conservation over the past best performance for the year 1998-1999 are under finalisation.

Oil Conservation Awards : Carried out survey for furnace/boiler efficiency and insulation effectiveness in refineries during the Oil Conservation Fortnight (OCF 2000) and awards finalised for presentation during OCF 2001 in January 2001.

Monitoring of Energy Conservation (ENCON) related projects undertaken by refineries.

Compilation of performance parameters of refineries for upgradation submitted to MOP&NG in August 2000.

Quarterly & Annual Performance review of Fuel & Hydrocarbon Loss at the refineries.

Energy Audit of IOCL, Gujarat Refinery jointly with TERI and EIL commenced in November 2000.

5.8.4 ASSISTANCE TO MOP&NG / INDUSTRY

CHT is actively involved in the following activities :

- Fuel quality issues and the implications of changes in the specifications of petrol and diesel.
- As a member of the Technical Evaluation Committee (TEC), for evaluation of proposals received from SSIs for use / manufacture of speciality petroleum products.

- Monitoring the progress / status of various projects undertaken by the oil companies for improvement in distillate yields / product quality.
- Review of proposals from oil companies for entering into Foreign Technical Collaboration.
- Regularly holding Activity Committee Meetings on various critical areas (14 areas existing) of operation/maintenance/power & utilities with members from refineries and pipelines for information sharing and trouble - shooting through collective effort.

5.8.5 CHT PUBLICATIONS

With a view to keep abreast with the latest developments/trends that are taking place world-wide in the field of Petroleum Refining and for dissemination of information, CHT publishes a quarterly technical journal "Hydrocarbon Technology". CHT also circulates a quarterly "Technology Scan" which incorporates a consolidated list of articles, categorised under major subject heads.

5.9 OIL COORDINATION COMMITTEE

5.9.1 The Oil Coordination Committee (OCC) was set up on 14.7.1975 through a Government of India Resolution on the recommendation of the Interim Report of the Oil Prices Committee (OPC).



5.9.2 Secretary, Petroleum & Natural Gas is the Chairman of the OCC APEX Body and Additional Secretary, Joint Secretary (Refineries), Joint Secretary & Financial Advisor of Ministry of Petroleum and Natural Gas, Chief executives of Oil Companies and ED, Oil Industry Safety Directorate are its members. The day to day functions are handled by the OCC Secretariat under the

Executive Director (OCC) who is also a Member Secretary of the Committee.

5.9.3 The main functions of OCC are as under:-

- Monitoring the performance of Oil Industry to achieve optimality.
- Preparing estimates for supply/demand and import plans.
- Assisting the Ministry in the preparation of Oil Economy Budget(OEB).
- Coordination of supply of crude oil to the refineries.
- Operation and maintenance of pool accounts.
- Coordination of major marketing activities of the oil industry.
- Coordination with various Government departments/agencies to facilitate coordination with Railways on optimising tank wagon movement and optimise the movements of petroleum products etc.
- Assisting the Ministry in the management of crisis situation and special situation such as strikes, bandhs, floods, elections etc. for un-interrupted supplies of petroleum products.

5.9.4 OCC has set up a Computers and Communication Wide Area Network (OILCOMNET) for the entire Oil Industry, which supports e-mail, transmission of Hindi Messages, Fax Messages and file transfers. It caters to all the Computer & Communications requirements of the OCC and MOP&NG. All the Oil Companies, MOP&NG, EIL, CHT, PCRA etc. are connected to this network and can exchange their messages and data. The network is having a number of databases.



CONSERVATION OF PETROLEUM PRODUCTS

CHAPTER VI

6.1 The need for conservation of petroleum products is unquestionable in the light of the declining degree of India's self-reliance in oil. Despite hydrocarbons constituting primary source of energy in the country, our indigenous production has plateaued at an annual 32 MMT vis-a-vis our requirement at almost about 100 MMT in 1999-2000. Our oil import dependency is thus almost 70%.

6.2 IN HOUSE CONSERVATION EFFORTS

6.2.1 In Upstream sector

Upstream undertakings in the oil sector adopts various effective and result-oriented conservation methods including reduction of gas flaring by re-injection of gas to underground reservoir, installation of waste heat recovery system, use of dual fuel/natural gas engines to achieve substitution of diesel by low pressure associated natural gas, use of solar power cathodic protection systems and use of self loading types of skids for mounting rig equipment etc.

6.2.2 In Refineries

6.2.2.1 Conservation of Hydrocarbons

The oil refineries implement energy conservation projects such as revamping and replacing low efficiency furnaces and boilers, various methods for improved energy efficiency such as enhanced heat transfer system, use of state-of-the-art equipment, pinch technology, gas-turbine based co-generation systems, low heat recovery, stack monitoring systems to control flare losses, periodic energy audits, advanced process controls apart from operational improvements and better house keeping practices.

6.2.2.2 Lubricants up-gradation

Refineries produce and sell high-grade lubricants under a phased action plan and constantly upgrade lubricants in line with the international developments meeting EURO Standards.

6.2.3 In transit

Though ocean losses are inevitable while moving the petroleum products by import tankers and coastal tankers over sea routes and at ports of



PCRA Tableau at Republic Day Parade.

unloading, a number of steps taken to keep the loss down to the lowest level by the Ministry have led to a progressive reduction.

6.3 PETROLEUM PRODUCTS CONSERVATION EFFORTS

Petroleum Conservation Research Association (PCRA), a society registered with Registrar of Societies on 16.08.1978, co-ordinates the oil conservation efforts. Sectoral programmes undertaken by PCRA cover adoption of efficient engines and driving habits conducive to increased fuel efficiency supplemented by training programmes in Transport Sector; carrying out energy audits and fuel oil diagnostic studies in industries and promotion of fuel-efficient practices in Industrial Sector; standardisation of fuel-efficient irrigation pump-sets and rectification of existing pump-sets in Agricultural Sector and development of fuel efficient domestic appliances & housewives' clinics in Domestic Sector.

6.4 OIL CONSERVATION FORTNIGHT

The Ministry of Petroleum and Natural Gas in association with Petroleum Conservation Research Association (PCRA) and all Public Sector Oil companies under its ambit, observed the Oil Conservation Fortnight from January 15 to 31, 2001, throughout the country, during which over 3,44,000 activities were organised.

6.5 HIGHLIGHTS OF PCRA's ACTIVITIES

(i) Energy Studies

During 1999-2000, 186 energy audit studies and 325 fuel oil utilisation studies were undertaken. 143 energy audit studies and 272 fuel oil utilisation studies have been completed between April and December 2000. The number of small-scale industries helped to achieve fuel oil conservation



PCRA TV Quiz - Sixth Sense in progress.

during 1999-2000 and April-December 2000 was 352 and 324 respectively. 1,769 follow-up studies were conducted in the industries surveyed by PCRA during 1999-2000.

(ii) Model Depot Projects

During 1999-2000, PCRA completed 202 model depot development studies in various states across the country. The number of model depot projects completed during April-December 2000 was 119.

(iii) Driver training programmes

The number of driver training programmes completed during 1999-2000 and April-December 2000 was 469 and 262 respectively.

(iv) Demonstration clinics/Workshops/Exhibitions

The number of Save Fuel Clinics/Workshops and Exhibitions completed during 1999-2000 was 1,210 and 42 respectively. The corresponding figures for the period April-December 2000 was 761 and 46 respectively.

(v) Consumer Meets

PCRA organised 17 consumer meets during April-December 2000 to bring together energy consumers, equipment manufacturers and energy consultants to solve the energy conservation problems and create awareness.

(vi) Promotional Schemes

- (a) Three garages were upgraded during 1999-2000 and 12 between April and December 2000.
- (b) Testing facility for transition from non-ISI foot valve manufacture to production of energy efficient ISI marked foot valves is being provided.

(vii) Major R&D Projects Completed

- a) Completed, designed and developed fuel efficiency monitor for fuel fired furnaces/boilers and developed lube dispensing equipment for use in textile industry in Industrial Sector.
- b) Designed & developed dashboard mounted specific fuel consumption meter for automobiles In Transport Sector.
- c) Developed offset burner type kerosene pressure

stove having 65% thermal efficiency in Domestic Sector.

(viii) On going R&D Projects

Undertook development of fuel injection system for passenger car engines and development of energy efficient processes for recovery/recycling of waste lube oils in Transport Sector.

(ix) Additives/Devices evaluated

PCRA also undertakes evaluation of additives/ devices in the accredited labs to assess their potential for providing cost effective fuel economy and emission reduction. Two diesel fuel additives viz. XRG Plus and Iftex Clean System D/TFA 4682 and one Gasoline Fuel Additive namely Iftex Clean System G/TFA 4652 D were approved for commercialization and 15 gasoline fuel additives and eight diesel fuel additives were recommended for field trials.



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

CHAPTER VII

7.1 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 and the Ministry of Welfare are being implemented in the Ministry of Petroleum & Natural Gas and the Public Sector Undertakings under its administrative control. The SC/ST Cell of this Ministry monitors the implementation of reservation policy 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 SC/ST, OBCs and Physically Handicapped (P/H) 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 SC/ST, OBC and P/H employees of PSUs received through Members of Parliament and the Commission for SCs and STs are taken wherever necessary.

The status of appointment of SC/ST/OBC/Physically Handicapped is monitored by the Ministry through Quarterly Performance Review Meetings

of the PSUs separately on the basis of reports received from them.

7.2 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 allocations in their Annual Plan for the year 2000-2001 for various activities related to the welfare and economic development of Scheduled Castes, Scheduled Tribes and people of weaker sections residing in the neighbourhood of project locations through Special Component-Plan and Tribal Sub-Plan which are as follows:-

- (i) Construction of school/college buildings, scholarship, adult education, distribution of teaching material, 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 society.
- (iii) Provision of community health facilities, free medical services, medicines through medical camp and family planning camps etc.
- (iv) Provision of drinking water facility to nearby villages through ring wells/tube wells etc.
- (v) Financial assistance to SC/ST women through co-operative societies for providing facilities of handlooms, weaving etc. so as to enable them to have self employment.

- (vi) Financial assistance to Physically Handicapped persons for their rehabilitation.
- (vii) Vocational training/guidance to enable the SC/ST persons to become self-reliant under the scheme "Earn while you learn". Training programmes are arranged in various trades, like basket weaving, coir-rope making, sewing, poultry training, fishing, tailoring, typing, motor-driving as well as supply of necessary tools, machines etc.
- (viii) Economic development/self employment by organising entrepreneurship development training programme.
- (ix) Welfare programmes such as distribution of seeds and fertilizers free of cost to SC/ST farmers, distribution of smokeless Chulhas and solar cookers to SC/ST women and construction of approach roads and adoption of villages.
- (x) Social forestry schemes like distribution of fruit bearing trees, saplings and other plants etc.



Community Development Project undertaken by IndianOil in a village near Mathura Refinery.

The expenditure incurred by Public Sector Undertakings on the above activities under “Special Component-Plan” and Tribal Sub-Plan” upto 31.12.2000 is as under:-

(a)	S. No.	Name of PSU	Expenditure incurred (1.4.2000 upto 31.12.2000)		Rs. in lakh Total
			SCP	TSP	
	1.	ONGC	42.85	21.15	64.00
	2.	IOCL	40.26	24.32	64.58
	3.	HPCL	37.28	60.84	98.12
	4.	BPCL	11.89	2.45	14.34
	5.	GAIL	300.53	37.31	337.84
	6.	EIL	2.64	0.96	3.60
	7.	OIL	-	-	-
	8.	CPCL	10.15	8.00	18.15
	9.	KRL	11.33	-	11.33
	10.	IBP Co.	2.65	0.76	3.41
	11.	BRPL	11.70	13.80	25.50
	12.	Biecco Lawrie	-	-	-
	13.	NRL	1.65	2.18	3.83

Chapter VIII



CONTROL OF POLLUTION

CHAPTER - VIII

8.1 Refining industry has been classified as one of the major industries in the country. The compliance with prescribed standards in respect of liquid effluents and gaseous emissions is, therefore, a statutory requirement. All the refineries in the country are fully equipped with adequate pollution control facilities to meet the prescribed environmental standards and pollution abatement measures are accorded the topmost priority by the refinery management. The existing facilities are reviewed and upgraded as and when required and in the case of new projects / process units, actions are taken at the design stage itself to build necessary safeguards and facilities for improving the overall performance and compliance with the environmental standards.

8.2 The effluents generated in the refineries can be classified under 3 categories viz. i) liquid effluents ii) gaseous emissions and iii) oily sludge. The compliance with respect to the statutory stipulations with regard to these as well as the actions taken by the refineries for environmental management are summarised as under :

8.2.1 Liquid Effluents

The water used in the refining process gets contaminated with oil and other pollutants and has to be treated before discharging from the refineries. The Government has prescribed Minimal National Standards (MINAS) for the discharge of effluents from refineries with respect to critical parameters viz., oil and grease, phenols, sulphides, Biochemical Oxygen Demand (BOD), Total Suspended Solids (TSS). The standard also specifies the quantum limits for discharge of these pollutants in terms of crude throughput.

All the refineries in the country are equipped with full fledged Effluent Treatment Plants comprising physical, chemical and biological treatment facilities for removal/control of pollutants from waste water. The treated waste water fully meets the prescribed stringent MINAS standards in all the refineries.

Effluent Reuse

Keeping in view the growing shortage of fresh water, all refineries have accorded importance for maximising the reuse of treated effluent within their plants and thereby conserving fresh water. With this objective, refineries have implemented various schemes to reuse part of their treated effluent within their plants in the cooling towers, fire water network, coke cutting operations, service water etc. It is worthwhile to mention that treated effluent from Mathura refinery and treated domestic effluent from Gujarat refinery township are being gainfully used by the local farmers.

8.2.2 Gaseous Emissions

Controlling gaseous emissions, particularly with respect to sulphur-di-oxide (SO_2), is one of the major tasks of the refineries. The Government has prescribed standards for SO_2 emissions from the three major processing units in the refineries in terms of SO_2 emission per tonne of feed processed as well as for the boilers in the Captive Power Plants. The stipulation for boilers is in terms of minimum stack height requirements to minimise the ground level concentration of SO_2 . Further, an overall limit for SO_2 emission from the refineries is also stipulated by the State Pollution Control Boards / Ministry of Environment & Forests.

All the refineries in the country fully comply with the applicable process units' SO_2 emission standards as well as total SO_2 emission limits. The measures adopted by the refineries for controlling SO_2 emissions include :

- Use of low sulphur fuel oil
- Desulphurisation of refinery fuel gas in Sulphur Recovery Unit/Use of Natural Gas
- Advanced Process Control Systems
- Adoption of energy conservation measures for reducing fuel consumption which in turn reduces gaseous emissions
- Taller stacks for better dispersion of flue gases etc.

8.2.3 Solid Waste Management

Oily sludge is the main hazardous solid waste generated in the refineries. Treatment / disposal of oily sludge generated during the refining operations is of major concern to the refineries. Refineries have adopted various methods like installation of improved mixers for reducing formation of sludge in the crude storage tanks and use of hot gas oil circulation / use of chemicals for the recovery of oil from the tank bottom sludge. Melting pits are used by the refineries to further extract the oil from the sludge before its disposal. The treated sludge after gas oil treatment / melting pits is either stored in lined pits or disposed through land fill in low lying areas inside the refinery. Some of the refineries like Mathura, Barauni and BPCL have successfully tried Bio-remediation Method for disposal of oily sludge. In some of the refineries like BPCL, HPCL-Mumbai and CPCL, the oily sludge is sold to micro-crystalline wax manufacturers approved by the Technical Evaluation Committee of MOP&SNG.

8.3 Monitoring Facilities

All the refineries have full-fledged environment cells to monitor the quality of effluents and emissions. Continuous ambient air monitoring stations / High

Volume Samplers have been provided in and around the refineries to monitor the level of SO_2 and it has been observed that the emissions are well within the stipulated limits.

Mathura refinery located in the Taj Trapezium area, has considerably reduced the SO_2 emissions over the years and is putting up a Once-through Hydrocracker Plant to increase the yield of middle distillates and also to reduce the SO_2 emissions from the refinery.

8.4 Accreditation with ISO-14001 Environmental Management System

IndianOil's Mathura refinery was the first refinery in Asia and one of the few in the world to achieve the distinction of ISO-14001 certification in July 1996. Since then, all the other IndianOil refineries viz., Guwahati, Barauni, Gujarat, Haldia, Digboi & Panipat also obtained ISO-14001 certification. Refineries of BPCL, KRL have also been certified with this International Environmental Management System. As regards the rest of the refineries in the country, actions have been initiated for getting this certification.

8.5 Petrol Quality

In pursuance of the need for reduction of



Ecological Park - Barauni Refinery.

environmental pollution due to emission from petrol vehicles, lead content in petrol was reduced from 0.56 g/l of Pb max. to 0.15 g/l of Pb max. in the four metros in June 1994 and throughout the country from December 1996. Unleaded petrol of 0.013 g/l of Pb max. was also introduced in the four metros and Taj trapezium from April 1995. Supply of unleaded petrol was gradually extended to state capitals, major cities & union territories from June 1998. Supply of only unleaded petrol started in National Capital Territory (NCT) from September 1998, National Capital Region (NCR) from January 1999, in Mumbai from October 1999 and throughout the country from February 2000.

With effect from 1.2.2000, the entire country is being supplied with only unleaded petrol. This has been achieved through installation of Catalytic Reforming Unit and MTBE plants in some refineries.

Extra & Ultra low Sulphur Petrol

In addition to reduction of lead content in petrol, sulphur content in petrol has also been reduced on environmental considerations. The sulphur content of unleaded petrol has been reduced from 0.2 % mass to 0.15 % mass (max.) in March 1997 to 0.10 % mass from 1.4.2000. Further, ultra low sulphur petrol of 0.05 % mass max. has been introduced in NCR from 1.4.2000, in Mumbai from 1.10.2000 and in Calcutta & Chennai by early 2001.

Benzene content reduction in Petrol

Earlier, there was no benzene content specification in petrol in India. In order to eliminate carcinogen benzene emission from petrol vehicles, benzene content limit in petrol has been introduced as 3 % vol. max. for Metros and 5 % vol. max. for rest of the country from 1.4.2000. Ultra low sulphur (0.05 % mass max.) and low benzene (1 % vol. max.) petrol has been introduced in NCT and Mumbai in the last quarter of 2000. Supply of 1.0 % vol. max. benzene petrol throughout NCR is planned from 1.4.2001.

8.6 Diesel Quality

Supply of Extra and Ultra low Sulphur Diesel

The sulphur content in High Speed Diesel (HSD)

is a critical attribute governing the quality of HSD as it contributes to the particulate emission from diesel engine exhaust. With a view to improve quality of HSD, particularly with respect to reduction of sulphur content, a major programme was drawn up under which nine Diesel Hydro desulphurisation (DHDS) units have been commissioned in various refineries.

The sulphur content was first reduced from 1.0 % to 0.5 % mass max. in the four metros and Taj trapezium from 1.4.1996. The sulphur content in HSD supplied in the Taj trapezium zone was further brought down to 0.25 % w.e.f. 1.9.1996. The sulphur content in the entire diesel supplied in the four metros viz., Delhi, Mumbai, Kolkata & Chennai was also brought down to 0.25 % mass max. w.e.f. 1.4.1998 and throughout the country from 1.1.2000.

Further, supply of Ultra Low Sulphur Diesel (ULSD) containing sulphur of 0.05 % mass max. has been introduced at select retail outlets in NCR for newly registered non-commercial vehicles from 1.4.2000 and in Mumbai municipal limit from 1.10.2000. The entire quantity of HSD for all vehicles in NCT will be supplied with ULSD from 1.3.2001.

Improvement in HSD Cetane number, Distillation, Density

To improve the diesel vehicle emission performance, the cetane number, distillation recovery and density specifications of HSD have been revised. The cetane number of HSD was increased from 42 to 45 in 1995 as per BIS specification and further increased to 48 from 31.12.1998 as per the Ministry of Environment & Forests Gazette Notification of 2.4.1996 except for refineries processing Assam crude (45 min.). The distillation recovery specification of 90 % vol. minimum recovery at 366 °C has been revised to 85 % vol. recovery at 350 °C max. and 95 % vol. at 370 °C max. respectively. The density specification was also revised from 820-880 to 820-860 as per BIS specification for 2000 AD.

संसदीय राजभाषा समिति की प्रथम उपसमिति द्वारा
पेट्रोलियम और प्राकृतिक गैस मंत्रालय
का निरीक्षण दिनांक - 24.10.2000



GENERAL

CHAPTER IX

9.1 PROGRESSIVE USE OF HINDI

9.1.1 The Ministry of Petroleum and Natural Gas is implementing the provisions of the Official Language Act, 1963 and Rules framed thereunder. It is also responsible for the implementation of the Official Language Policy in the various offices of the Public Sector Undertakings under its administrative control.

9.1.2 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 work in Hindi. The Establishment Section is also required to do all the work in Hindi in respect of group 'C' and 'D' employees, 11 types of work 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 the following categories of communications in Hindi only:

- (i) All communications to State Government & Union Territory Administrations in Region 'A' and Region 'B' and all offices, Undertakings etc. of Central Government situated in these Regions or any person in these Regions.
- (ii) Replies to all communications received in Hindi.
- (iii) Reply to and application, appeal or representation written or signed by an employee in Hindi.

9.1.3 The Ministry has prepared a time-bound programme to impart in-service training to all the employees who do not possess working knowledge of Hindi. Under this programme, two officers and four employees were nominated for Probodh class under the Hindi Teaching Scheme

during 2000-2001. A time bound programme for imparting Hindi stenography/Hindi typing training to the Stenographers and Lower Division Clerks (LDCs) of the Ministry has also been prepared, under which four Stenographers and six LDCs were nominated for training.

9.1.4 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 in Hindi on that day. The PSUs under the Ministry have also been advised to similarly observe 'Hindi Divas' every month in all their offices.

9.1.5 The 'Hindi Fortnight' was celebrated in the Ministry from 14th to 28th September, 2000 and a number of competitions viz., Hindi essay competition, Hindi noting-drafting competition and competition in good hand writing in Devnagri, Hindi typing and stenography were organised. 13 participants were given cash prizes.

9.1.6 The Parliamentary Committee on Official Language inspected the position of the progressive use of Hindi in the Ministry. Besides, the Committee also inspected 30 offices of PSUs, under the administrative control of the Ministry, scattered throughout the country. The incharge and officers of Official Language actively participated in these inspections. All the PSUs were aware of the findings of the Committee and orders were issued for removing the shortcomings.

9.1.7 Most of the computers have been provided with the Hindi software during the year.

9.1.8 Orders were issued to PSUs to celebrate the Golden Jubilee Year of Official Language as per the guidelines of Department of Official Language. The PSUs have chalked out their programme which will be held throughout the year.

9.1.9 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 (Administration).

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 Undertakings as also the progress of implementation of the Annual Programme as circulated by the Department of Official Language.

9.1.10 So far, 196 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 Purposes of the Union) Rules, 1976. The Public Sector Undertakings have been advised to conduct survey in their offices with a view to ascertaining the number and percentage of the employees working there who have working knowledge of Hindi.

9.1.11 The Annual Programme for the year 2000-2001 received from the Department of Official Language was circulated to all officers of the Ministry & Chief Executives of PSUs/Offices. The programme was discussed in detail in the meeting of the OLIC of the Ministry. Various Sections in the Ministry and all PSUs were instructed to ensure its implementation.

9.1.12 Books, magazines and newspapers in Hindi are available in the Library of the Ministry. Help books such as administrative and technical terminology in Hindi, English-Hindi dictionaries etc. have been provided to the Sections and Desks.

9.1.13 With a view to assessing the position of compliance of Official Language Rules and the use of Hindi in the various offices of the PSUs in different parts of the country, an Inspection Team of the Ministry has been constituted under the Chairmanship of a Joint Secretary who is also the Chairman of OLIC of the Ministry. The Committee has inspected 11 offices during 2000-2001.

9.1.14 Letters in respect of statutory and administrative compulsions regarding use of Hindi were issued individually to higher officers from Hon'ble

Secretary (P&NG) and copies were sent to all other officers of the Ministry. Similarly Prime Minister's guidelines, as the Chairman of Kendriya Hindi Samiti, were brought to the notice of all the officers of the Ministry and the PSUs under the administrative control of the Ministry and they were requested to ensure the implementation of these guidelines.

9.1.15 For advising the Ministry on matters relating to the progressive use of Hindi for official work and allied issues falling within the framework of the Official Language Policy laid down by the Government of India, the Hindi Salahkar Samiti is being reconstituted under the Chairmanship of the Minister for Petroleum and Natural Gas.

9.2 ORGANISATIONS AND METHODS

With a view to ensuring smooth and systematic functioning of the Ministry and organisations, various methods and programmes are carried out every year.

Achievements during 2000-2001 so far have been as follows:

1. Annual Action Plan 2000-2001 for the Ministry was finalised and circulated.
2. Induction material of Ministry was updated.
3. Special drive was launched for recording, reviewing and weeding out of old records during 3.7.2000 to 14.7.2000.
4. Level of disposal/channel of submission of cases was reviewed and complied.
5. Action in respect of the following items of work has been initiated and the information is being processed:
 - (a) Compilation/consolidation of orders/instructions issued by different divisions of the Ministry.
 - (b) Bringing out Manuals of Acts/Rules/Regulations issued by this Ministry for easy accessibility to various oil sector companies.

6. In August 2000, work among Director/Deputy Secretary level officers was redistributed with a view to streamlining their work and achieve greater efficiency.
7. In September 2000, a separate desk viz., Corporate Affairs Desk was created, out of the existing manpower, to handle work relating to corporate affairs of PSUs under the administrative control of the Ministry.
8. O&M Inspection schedule of various Desks/ Sections was drawn and the inspecting officers were designated for the inspection work.
9. Pendency position of the work in each Desk/ Section of Ministry was analysed every month and submitted to the Secretary. Analysis of the O&M matters and other important issues were discussed in fortnightly staff meetings held under the Chairmanship of the Secretary. These meetings are organised and their Minutes are prepared by the IWSU.

9.3 OUTSTANDING AUDIT OBJECTIONS

Audit had shown a total number of 25 points as outstanding. Ministry had already furnished replies to the Audit. However, final reply from Audit, on the reply given by the Ministry, is still awaited.

9.4 GRIEVANCES REDRESSAL

The Public Grievance Cell is working in the Ministry for attending to the grievances of the members of the public in respect of any grievance against the Ministry or Public Sector Oil Companies. In order to give proper attention to the public grievances, Grievance Officers have been nominated in all the Public Sector Oil Companies who shall attend to the public grievances. Disposal of public grievances is monitored regularly. A separate grievance cell for redressal of the grievances of members of the staff of the Ministry is also functioning under the charge of Director (Administration). The jurisdiction of the Directorate of the Public Grievances set up in the

Cabinet Secretariat has already been extended to the Ministry of Petroleum and Natural Gas.

As on 16.01.2000, the Public Grievances Cell of this Ministry received a total of 480 grievances, out of which, 419 have been disposed of.

The Director of Public Grievances in the Ministry is empowered to call for files/papers or the documents connected with the grievances pending for more than 3 months in the Ministry and with Oil Sector Public Undertakings and to take a decision thereon with the approval of Secretary, Ministry of Petroleum and Natural Gas or Head of the Organisation. He can also communicate the final decision to the aggrieved party. The computerised monitoring of public grievance redressal through online transmission facility provided by the National Informatics Centre (NIC) for reporting the same to the Prime Minister's Office (PMO) and the Cabinet Secretariat is also being done by the Ministry.

9.5 FACILITATION COUNTER

During the year, Information Facilitation Counter has been engaged in projecting transparency in the working of the Government of India in the Ministry of Petroleum and Natural Gas. The guiding force behind this is the Citizens' Charter to which this Ministry is committed in letter and spirit.

The type of information provided to the public has been ranging from supply of Basic Petroleum Statistics to information on various locations in the country rostered under various Marketing Plans for retail outlets, LPG distributorships, Kerosene agencies and composition of the 59 Dealer Selection Boards to select suitable candidates for such dealerships/distributorships. Dealer Selection Guidelines in (Hindi and English) are provided to the members of public to enlighten them about the eligibility criteria.

Further, due publicity was given in regard to the Control Orders viz., The Solvent, Raffinate and Slop (Acquisition, Sale, Storage and Prevention of Use in Automobiles) Order, 2000, issued by the Government of India, Ministry of Petroleum and

Natural Gas in June 2000 to check adulteration of automobile fuels viz., Motor Spirit and High Speed Diesel Oil (HSDO) by adulterants like Naphtha, solvents, raffinate and slop.

Besides the above, information on phased dismantling of Administered Pricing Mechanism, National Exploration Licensing Policy (NELP) and various blocks available for bidding etc. is provided to the visiting public. During this year, about 4000 members of the public have benefitted from this counter.

Guidance is also provided to the visiting public on how to avail of the information through the Ministry's website, "petroleum.nic.in" which was formally launched in January 2000. The visitors are also being advised to access PMO's Website "pmindia.nic.in" and look into Prime Minister's Initiatives which, among other things, gives complete information on "Report of the Group on India Hydrocarbon Vision 2025".

9.6 DISMANTLING OF APM

Based on the recommendations of the 'R' Group and the Expert Technical Group (ETG), the Government, in November 1997, approved the time table for phased dismantling of APM over a period of four years. The transition commenced on 1.4.1998.

Status of the implementation of the programme up to January 2001 is given below :

ACTIONS COMPLETED

Upstream Sector

Effective 1.4.1998, cost plus formula for crude oil produced by national oil companies has been withdrawn. The crude oil producers are being paid a pre-determined percentage of FOB price of imported crude oil which was 75% in 1998-1999 and would increase to 82.5% in 2001-2002. Since the FOB prices of crude oil prevailing in the international markets during 1998-1999 were very low, strict application of the above percentage

would have resulted in ONGC and OIL getting a price for their crude oil lower than what they were getting under APM. Accordingly, it was decided that the rates under APM i.e. the basic price of Rs. 1,991/MT (total price including royalty and cess was Rs. 3,469/MT) would serve as the floor benchmark price with adjustments to be made later on. Similarly, after November 1999, due to steep increase in the international price of crude oil, Government on an ad-hoc basis, decided to keep the compensation for ONGC/OIL crude oil at Rs. 5,570/MT inclusive of royalty and cess.

Downstream Sector (Refining)

Effective 1.4.1998, retention pricing concept for the refineries has been abolished. Refinery gate prices for controlled products are being fixed based on import parity.

Refining sector has been delicensed in July 1998.

Private and Joint Sector refineries have been permitted in July 1998 to import crude oil for actual use.

Downstream Sector (Marketing)

Effective 1.4.1998, prices of only Petrol, Diesel, Kerosene for public distribution, domestic LPG and Aviation Turbine Fuel (ATF) are controlled. Prices of all other petroleum products have been decontrolled and are fixed by oil companies on market considerations.

Downstream Sector (Phasing of subsidies, price adjustments and other items)

Price of Kerosene for public distribution has been increased as envisaged in March 2000 and September 2000.

Domestic LPG prices have been increased in February 1999, March 2000 and September 2000.

Effective 1.4.1998, cost plus formula for shipping of crude oil has been done away with.

Downstream Sector (Rationalisation of tariffs)

Customs duty on crude oil has been reduced from 27% to 10% and customs duty on products has been reduced from a maximum rate of 32% to a maximum rate of 20%.

Exim policy

Import and export of Furnace Oil has been decanalised in July 1998. Naphtha exports have been decanalised in July 1998. Further, export of Petrol, Diesel and ATF have been decanalised in October 1999. It is also proposed to pre-pone the decanalisation of crude oil imports by PSU refineries.

ACTIONS NOT COMPLETED AS PER THE SCHEDULE

Freight under-recoveries to the extent of 20% have been passed on in case of HSD in January 1999. Under-recovery of excise duty, delivery charges, dealers/distributors commission upto 30.9.2000 have been fully passed on.

Exports of LPG and Kerosene have not been decanalised.

ACTIONS TO BE COMPLETED DURING 2000-2001

In principle, it has been decided to deregulate ATF. Issues that need to be resolved are :

- (a) Sales tax on ATF supplies to international airlines which is being charged by states but is not paid by airlines.
- (b) Inventory carrying cost for Minimum Stock Level (MSL) is to be borne by Defence authorities; commercial arrangements between the Defence Department and oil companies need to be worked out.
- (c) Increase in prices is likely to take place at some Aviation Fueling Stations (AFS) with low throughput and at distant places. A view

is also required to be taken regarding freight subsidies for far-flung AFSs.

Subsidy on Domestic LPG is to be brought down to 15% of import parity as against the current level of around 46%.

ACTIONS TO BE COMPLETED BEFORE DISMANTLING OF APM

As per Approved Programme

Rationalisation of customs duties on crude oil and products is to be completed as per Government decision of November 1997 wherein the customs duty needs to be fixed at 0-5% on crude oil and 15% on transportation fuels in the ensuing budget.

Price of Kerosene for public distribution is to be adjusted so as to have subsidy of 33.3% of import parity.

Regulatory mechanism is to be put in place.

Scheme for administering subsidies outside oil companies is to be worked out before transfer of subsidy on Kerosene for public distribution, domestic LPG and freight for supplies to far-flung areas to the fiscal budget.

Accumulated pool deficit is to be liquidated or to be transferred to budget on the date of dismantling.

Other Actions

Rationalisation of state taxes to provide level playing field amongst domestic refineries.

Statutory mechanism for :

- a) Regulating access to pipelines and tariffs.
- b) Ensuring reasonableness of consumer prices.
- c) Ensuring security of supplies in the country.

APPENDIX-I

WORK ALLOCATED TO MINISTRY OF PETROLEUM AND NATURAL GAS

1. Exploration for, and exploitation of petroleum resources, including natural gas.
2. Production, supply, distribution, marketing and pricing of petroleum, including natural gas 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 organisations 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 Co., 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 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.

APPENDIX -II

LIST OF PUBLIC SECTOR UNDERTAKINGS AND OTHER ORGANISATIONS UNDER THE ADMINISTRATIVE CONTROL OF THE MINISTRY OF PETROLEUM AND NATURAL GAS

I Oil Companies in which Government of India has a shareholding.

Name of the Companies	Govt. of India Holding
1. Oil & Natural Gas Corporation Limited	84.1%
2. Indian Oil Corporation Limited	82.03%
3. Hindustan Petroleum Corporation Limited	51.01%
4. Bharat Petroleum Corporation Limited	66.2%
5. Gas Authority of India Limited	67.35%
6. Engineers India Limited	90.39%
7. Oil India Limited	98.13%
8. Chennai Petroleum Corporation Limited	51.81%
9. Kochi Refineries Limited	55.04%
10. IBP Co. Limited	59.58%
11. Bongaigaon Refinery and Petrochemicals Limited	74.46%
12. Biecco Lawrie & Company Limited	57%

II. Subsidiaries and other Companies

1. O.N.G.C. Videsh Limited	- wholly owned by ONGC
2. Indian Oil Blending Limited	- wholly owned by IOCL
3. Balmer Lawrie & Company Limited	- subsidiary of IBP (61.8%)
4. Certification Engineers International Limited	- wholly owned by EIL
5. EIL Asia Pacific Sdn Bhd	
6. Numaligarh Refinery Limited.	- promoted by BPCL (32%), IBP(19%) & Govt. of Assam(10%).

III. Other Organisations

1. Oil Industry Development Board
2. Oil Coordination Committee
3. Petroleum Conservation Research Association
4. Oil Industry Safety Directorate
5. Centre for High Technology
6. Petroleum India International
7. Directorate General of Hydrocarbons

APPENDIX -III

PRODUCTION OF CRUDE OIL AND NATURAL GAS

	1980-81	1990-91	1995-96	1996-97	1997-98	1998-99	1999-00	2000* (Apr.-Dec.)
1. CRUDE OIL PRODUCTION++(000'Tonnes)								
(a) Onshore:								
Gujarat	3808	6398	6362	6158	5950	5828	5665	4351
Assam/Nagaland	1712	5076	5044	4796	5116	5080	4972	3928
Arunachal Pradesh	2	43	28	36	25	38	44	24
Tamil Nadu	Nil	302	374	330	324	364	377	320
Andhra Pradesh	Nil	11	44	52	66	85	146	177
Total(a)	5522	11830	11852	11372	11481	11395	11204	8800
of which								
AOC	48	@	@	@	@	@	@	@
OIL	1243	2649	2882	2870	3094	3295	3283	2466
ONGC	4231	9181	8970	8502	8387	8100	7921	6334
(b) Offshore:								
ONGC	4985	21191	22665	20183	19863	18285	16727	12638
(c) Private/JVCs								
	Nil	Nil	650	1346	2514	3042	4018	3087
GRANDTOTAL(a+b+c)	10507	33021	35167	32901	33858	32722	31949	24525
2. NATURAL GAS PRODUCTION								
(Million Cubic Metres)								
(a) Onshore:								
Gujarat	842	1696	2878	2932	3115	3166	3096	2181
Assam/Nagaland	843	2011	1880	1941	2017	2055	2083	1672
Arunachal Pradesh	Nil	29	32	23	24	24	23	18
Tripura	Nil	70	131	154	196	306	353	266
Tamil Nadu	Nil	64	117	92	95	107	138	137
Andhra Pradesh	Nil	46	679	799	1022	1218	1363	1173
Rajasthan	Nil	Nil	12	10	149	164	151	116
Total(a)	1685	3916	5729	5951	6618	7040	7207	5563
of which								
AOC	38	@	@	@	@	@	@	@
OIL	710	1518	1433	1467	1670	1713	1729	1413
ONGC	937	2398	4296	4484	4948	5327	5478	4150
(b) Offshore:								
ONGC	673	14082	16579	16794	18102	17514	17774	13949
(c) Private/JVCs								
	Nil	Nil	331	510	1681	2874	3465	2634
GRANDTOTAL(a+b+c)	2358	17998	22639	23255	26401	27428	28446	22146

@ : AOC was merged with OIL w.e.f. 14.10.81

++ : Includes condensates

* : Provisional

Source: PSUs, JVCs and Private Companies.

REFINERY CRUDE THROUGHPUT

('000 Tonnes)

Refinery	Refinery Crude Throughput							2000 * (Apr.-Dec.)
	1980-81	1990-91	1995-96	1996-97	1997-98	1998-99	1999-00	
(a) PUBLIC/JOINT SECTOR	25333	51772	58702	59958	61313	64469	74052	57554
IOC, GUWAHATI	639	783	839	848	856	836	914	483
IOC, BARAUNI	504	2416	2322	1895	2181	2204	3411	2313
IOC, GUJARAT	6974	9334	10167	10352	10694	10935	11109	9183
IOC, HALDIA	2308	2835	3416	3451	4706	4714	4105	2824
IOC, MATHURA	-	7808	8332	8113	8565	8909	8125	5129
IOC, DIGBOI	-	566	559	477	502	553	603	520
IOC, PANIPAT (3)	-	-	-	-	-	2208	4153	4292
BPCL, MUMBAI	4901	6957	7460	7640	7996	8878	8907	6321
HPCL, MUMBAI	3113	5766	5965	6534	6378	5203	6007	4184
HPCL, VISAKH	1319	3464	5037	4847	2467	3861	4555	4841
KRL, KOCHI	2912	5006	7421	7293	7729	7770	7830	5615
CPCL, CHENNAI	2611	5698	5599	6621	6965	6101	6377	4537
CPCL, NARIMANAM	-	-	370	345	556	644	636	430
BRPL, ASSAM	52	1139	1215	1542	1718	1653	1905	1170
NRL, ASSAM (4)	-	-	-	-	-	-	215	865
MRPL, MANGALORE (2)	-	-	39	2912	3853	4069	5200	4847
(b) PRIVATE SECTOR	503	-	39	2912	3853	4069	11912	19376
AOD, DIGBOI (1)	503	-	-	-	-	-	-	-
RPL, JAMNAGAR (5)	-	-	-	-	-	-	11912	19376
TOTAL (a+b)	25836	51772	58741	62870	65166	68538	85964	76930

*': Provisional

(1): AOC refinery was taken over by the Govt. in Oct. 1981 & merged with IOCL

(2): Commenced production from 25.3.1996

(3): Commenced production from May 1998

(4): Commenced production from April 1999

(5): Commenced production from July 1999.

Source: PSUs, JVCs and Private Companies.

PRODUCTION OF PETROLEUM PRODUCTS

('000 Tonnes)

PRODUCTS	1980-81	1990-91	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01 * [Apr.-Dec.]
(a) From Crude Oil								
1. Light Distillates	4101	10023	12433	12883	13032	13776	18314	18952
of which								
LPG	366	1221	1539	1598	1666	1724	2487	3074
Mogas	1519	3552	4462	4704	4849	5573	6232	5998
Naphtha	2115	4859	5975	6123	6103	6081	8170	7560
Others	101	391	457	458	414	398	1425	2320
2. Middle Distillates	12115	26344	29941	32423	33933	36168	44995	39093
of which								
Kerosene	2396	5471	5267	6236	6701	5341	5735	6446
ATF/RTF/Jet A-1	1001	1801	2127	2119	2147	2289	2292	1843
HSD	7371	17185	20661	22202	23354	26716	34793	29162
LDO	1108	1509	1351	1286	1246	1336	1624	1088
Others	239	378	535	580	485	486	551	554
3. Heavy Ends	7907	12195	12707	13698	14343	14600	16102	13353
of which								
Furnace Oil	4041	4879	5351	5980	6771	6407	6559	4716
LSHS/HHS/RFO	2079	4550	4228	4318	4309	4623	4793	3725
Lube Oils	426	561	633	619	593	586	728	487
Bitumen	1082	1603	2032	2283	2158	2419	2485	1951
Petroleum Coke	86	229	256	246	282	286	465	1824
Paraffin Wax	-	49	43	31	27	40	47	40
Other Waxes	-	46	63	56	45	63	70	47
Others	193	278	101	165	158	176	955	563
Total (1+2+3)	24123	48562	55081	59004	61308	64544	79411	71398
(b) From Natural Gas								
LPG	-	929	1715	1780	1787	2207	1989	1591
*: Provisional		-: Nil						

Source: PSUs, JVCs and Private Companies.

IMPORTS/EXPORTS OF CRUDE OIL AND PETROLEUM PRODUCTS

(Qty.: 000 Tonnes)

(Value : Rs. Crores)

ITEM	1996-97		1997-98		1998-99		1999-2000		2000(Apr-Dec)*	
	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value
GROSS IMPORTS @										
A. Crude Oil	33906	18538.19	34494	15897.15	39808	14876.46	44989	30695.33	57158	52550.38
B. Pol. Products										
I. Light Distillates	1490	1491.83	1422	1162.59	1947	1414.08	1618	1810.39	734	1087.73
1. LPG	1035	1116.86	1087	902.57	1525	1130.35	1377	1558.95	500	777.29
2. Others	455	374.97	335	260.02	422	283.73	241	251.44	234	310.44
II. Middle Distillates	18037	13745.76	17942	11149.97	16308	8203.91	10900	8889.62	2003	2617.64
1. ATF	150	119.69	55	34.23	0	0.00	1	3.60	Neg.	0.62
2. SKO	4279	3538.86	3812	2528.77	5823	3244.11	5491	4844.59	2003	2617.02
3. HSD	13608	10087.21	14075	8586.97	10485	4959.80	5408	4041.43	-	-
III. Heavy Ends	738	395.90	166	119.36	525	218.53	549	419.01	400	350.57
1. Furnace Oil	694	277.38	141	55.31	514	182.85	483	313.06	370	289.44
2. Lubes	44	118.52	25	64.05	11	35.68	66	105.95	27	54.26
3. Waxes	0	0.00	0	0.00	0	0.00	0	0.00	3	6.87
TOTAL (B)	20265	15633.49	19530	12431.92	18780	9836.52	13067	11119.02	3137	4055.94
GRAND TOTAL (A+B)	54171	34171.68	54024	28329.07	58588	24712.98	58056	41814.35	60295	56606.32
EXPORTS @@										
A. Crude Oil	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
B. Pol. Products										
I. Light Distillates	2643	1737.07	2098	1276.81	779	417.64	310	311.13	314	353.40
1. Naphtha	2184	1443.83	1407	874.30	643	323.62	241	251.15	254	275.86
2. LPG	22	23.93	21	27.17	23	25.36	31	32.67	26	39.01
3. Others	437	269.31	670	375.34	113	68.66	38	27.31	34	38.53
II. Middle Distillates	437	307.38	491	442.16	531	411.22	587	408.09	439	470.65
1. HSD/LDO	216	148.57	237	212.99	260	197.64	278	192.36	199	201.32
2. Others	221	158.81	254	229.17	271	213.58	309	215.73	240	269.33
III. Heavy Ends	82	40.33	361	103.87	91	26.85	29	15.35	16	14.57
1. FO/LSHS	82	40.09	360	103.85	91	26.85	29	15.22	16	14.38
2. Others	Neg.	0.24	1	0.02	0	0.00	Neg.	0.13	Neg.	0.19
TOTAL (B)	3162	2084.78	2950	1822.84	1401	855.71	926	734.57	769	838.62
GRANDTOTAL (A+B)	3162	2084.78	2950	1822.84	1401	855.71	926	734.57	769	838.62
NET IMPORTS										
A. Crude Oil	33906	18538.19	34494	15897.15	39808	14876.46	44989	30695.33	57158	52550.38
B. Pol. Products	17103	13548.71	16580	10609.08	17379	8980.81	12141	10384.45	2368	3217.32
GRANDTOTAL	51009	32086.90	51074	26506.23	57187	23857.27	57130	41079.78	59526	55767.70

@ : Includes NOC imports but excludes import by JVC/private parties upto 1999-2000, thereafter imports by JVC/private parties are included.

@@ : Includes supplies of POL products to Nepal.

*: Provisional.

Neg: Negligible.

Source: PSUs, JVCs and Private companies



The Oil PSUs jointly contributed Rs. 40 crore to the Prime Minister's Relief Fund for the relief of Gujarat earthquake victims.



Shri Ram Naik, Hon'ble Minister for Petroleum & Natural Gas, in presence of Shri Ananth Kumar, Hon'ble Minister for Tourism & Culture, Shri Santosh K. Gangwar and