

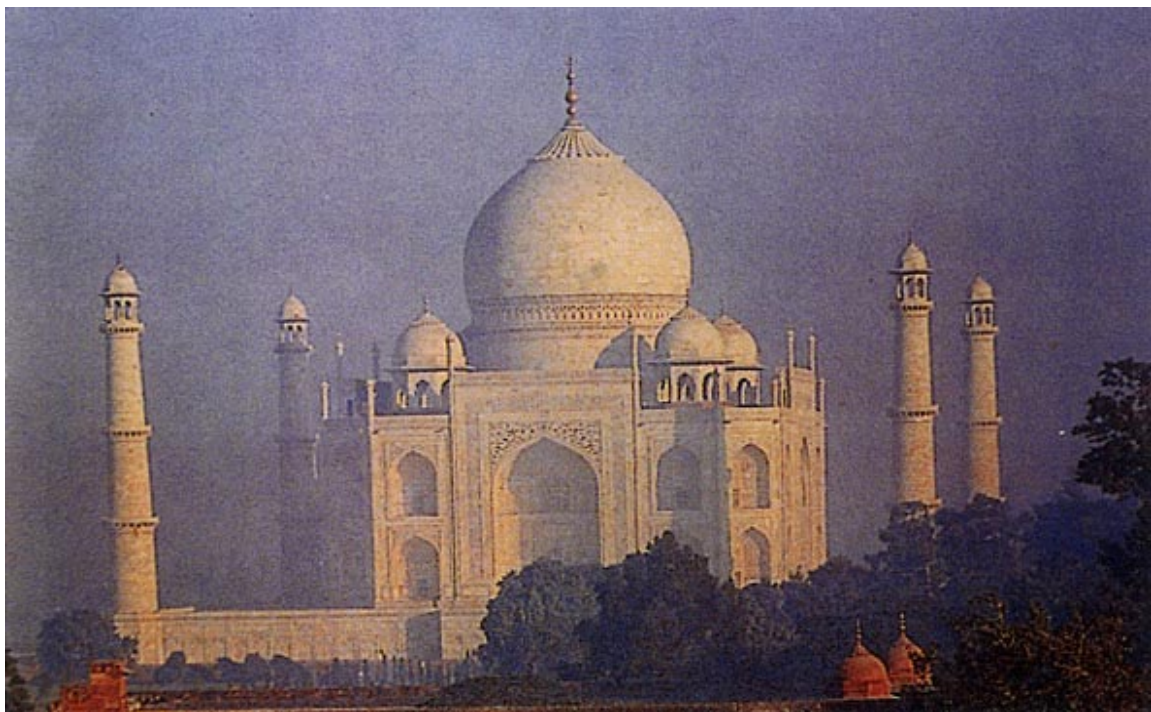
ANNUAL REPORT 1999-2000



Government of India
Ministry of Petroleum
&
Natural Gas



Maintaining fuel supply line to Kargil - IOC tankers convoy on hills



Taj Mahal, which is protected by substituting the fuel of industrial furnaces in Agra and around by CNG supplied by GAIL

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INTRODUCTION

CHAPTER I

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

1.2 Shri Ram Naik assumed the charge as Minister of Petroleum & Natural Gas on 13.10.1999.

1.2.1 Shri E. Ponnuswamy assumed the charge as Minister of State in the Ministry of Petroleum & Natural Gas on 13.10.1999.

1.2.2 Shri Santosh Kumar Gangwar assumed the charge as Minister of State in the Ministry of Petroleum & Natural Gas on 22.11.1999.

1.3 Shri S. Narayan assumed the charge of Secretary, Petroleum & Natural Gas, on 20.10.1999. Prior to this, Shri T.S. Vijayaraghavan worked as Secretary, Petroleum & Natural Gas from 20.08.1998 to 20.10.1999.

1.4 Shri C.L. Bashal, Joint Secretary, continued to hold the charge as Director of Public Grievances in the Ministry.

PRINCIPAL ACHIEVEMENTS

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

1.6 CRUDE PRODUCTION

Crude oil production in the country during 1998-99 was 32.722 Million Metric Tonnes(MMT) against a target of 34.01 MMT. The production target for the year 1999-2000 is 33.04 MMT.

1.7 Several measures were taken by the Government to intensify exploration and enhance hydrocarbon reserves. These included development of new fields, additional development of existing fields, implementation of Enhanced 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.

1.8 Under the New Exploration Licensing Policy (NELP), 48 blocks were offered. By the bid closing date of 18.8.1999, a total of 45 bids for 27 blocks were received from both foreign and Indian companies including public sector undertakings. Out of these, 25 blocks have been awarded. Bids for 2 blocks were rejected, as they did not satisfy the technical requirements.

1.9 COAL BED METHANE

The policy for exploration and exploitation of Coal Bed Methane (CBM) was approved by Government in July, 1997. CBM operation in this country is being undertaken for the first time and will take some time before potential of CBM at commercial level is known. The terms and conditions for harnessing CBM require consultation with the State Governments. While West Bengal Government has given their consent, Government of Bihar, Madhya Pradesh and Gujarat have not consented so far. The policy will be implemented after consultations with State Governments are completed.

1.10 IMPORTS AND EXPORTS

The import of crude oil between April - November, 1999 was 31.535 MMT valued at Rs.19611 crore and of other petroleum products

9.514 MMT valued at Rs.7195 crore. Exports upto November, 1999 were of 0.531 MMT valued at Rs. 372 crore.

1.11 REFINING

With the commissioning of new grass root refineries at Numaligarh in Assam and Jamnagar in Gujarat and expansion of the existing refineries, the refining capacity in the country has increased to 109 Million Metric Tonnes Per Annum (MMTPA) as on January 1, 2000 from 69.14 MMTPA as on April 1, 1999, a near self-sufficiency in the refining sector.

1.12 TOWARDS BETTER ENVIRONMENT

To reduce vehicular emissions and to protect the environment, all refineries in the country have commenced production of low sulphur (0.25%) diesel from 1.10.1999 and retail outlets are selling only low sulphur diesel to the consumers from January 2000 and unleaded petrol from February 2000.

1.13 SPECIAL SCHEME FOR DEFENCE PERSONNEL KILLED IN KARGIL ACTION

A Special Scheme of relief and recompense has been formulated for the widows/dependents of Defence personnel killed in action in Kargil, under which 500 retail outlets/LPG distributorships complete in all respects will be allotted. These allotments are being made on the recommendations of the Ministry of Defence.

1.14 LPG SUPPLY TO RURAL AREAS

A special scheme has been approved in July 1999 for release of new LPG connections in the rural sector against surrender of corresponding kerosene quota through (i) Opening of extension counters in the rural areas falling within 15 kms radius of the normal trading area of the existing distributors operating in the urban areas and (ii) Award of interim LPG distributorships to the State Civil Supplies Corporation of the concerned State/some such Govt. bodies till a regular distributor is appointed.

1.15 LPG WAITING LIST

It is planned to release over 1 crore new LPG connections during the calendar year 2000 to liquidate the entire waiting list as of 1.12.1999 by December 2000.

1.16 FACILITATION COUNTER AND WEBSITE

The Information Facilitation Counter is in operation. In the year 1999 over 3 thousand parties availed of this facility.

In addition to the above, Website for the Ministry of Petroleum and Natural Gas was formally launched by the Minister of Petroleum and Natural Gas on January 27, 2000. So far, around 11,525 visitors have availed of website information. The e-mail address of this Counter is fc.png@sb.nic.in. Messages have started pouring in through the Inter-net also.

1.17 PLAN OUTLAY

The Revised Plan outlay of the Ministry of Petroleum & Natural Gas for the year 1999-2000 is Rs.12469.43 crore and Budget Estimate for the year 2000-2001 Rs. 13461.13 crore. These outlays will be met from the Internal and Extra Budgetary Resources of the Public Sector Undertakings.

1.18 EARNING OF PUBLIC SECTOR UNDERTAKINGS

The profit before tax and the profit after tax made by the Public Sector Undertakings, under the administrative control of the Ministry of Petroleum and Natural Gas, during the year 1998-99 were about Rs.11330 crore and Rs.8710 crore respectively. The profit before tax and the profit after tax, anticipated during 1999-2000, are about Rs.11841 crore and Rs.9495 crore. The profit before tax and after tax, estimated to be generated by this sector during 2000-2001 will be about Rs. 12966 crore and Rs. 10223 crore respectively.

1.19 CONSERVATION OF PETROLEUM PRODUCTS

Government has initiated measures to conserve petroleum products. These include accent on fuel efficiency, training programmes in the transport sector, modernisation of boilers, replacement of furnaces and equipment, standardisation of irrigation pumpsets, rectification of existing pumpsets, and development of fuel efficient stoves and appliances. These activities are the concern of the Petroleum Conservation Research Association (PCRA) and of oil companies.

EXPLORATION AND PRODUCTION

CHAPTER II

2.1 CRUDE OIL PRODUCTION

2.1.1 ONGC and OIL the two National oil companies and a few private and joint venture (JV) companies are engaged in the exploration and production of oil and natural gas in the country. Crude oil production during 1998-99 was 32.722 Million Metric Tonne (MMT) against the target of 34.01 MMT. ONGC and OIL had achieved its Memorandum of Understanding (MoU) targets of crude oil production. The private/JV operated fields had some shortfall in production. The crude oil production target during the year 1999-2000 has been set at 33.04 MMT.

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

- i) Development of new fields and additional development of the existing fields.
- ii) Implementation of Enhanced Oil Recovery (EOR) Schemes and extension of some EOR Schemes from pilot scale to full scale field application.
- iii) Implementation of specialized technologies like extended reach drilling, horizontal and drain hole drilling.
- iv) Obtaining the services of international experts wherever considered necessary.
- v) Maintenance of reservoir health through work-over operations, pressure maintenance methods.
- vi) 3D seismic survey of the old fields for better reservoir delineation.
- vii) Optimisation and redistribution of water injection.

viii) Infill 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.

2.2 STRATEGY OF IXTH PLAN

During the IXth Plan the main thrust will be on the following areas:-

- (i) Optimisation of production of crude oil and natural gas from domestic basins and existing fields specially the Bombay 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 New Exploration Licensing Policy (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 sector Public Sector Undertakings (PSUs) to avail of overseas opportunities for acquiring exploration acreages either on their own or through strategic alliances/Joint Venture. ONGC-Videsh Ltd., a wholly owned subsidiary of ONGC, is active in exploration and development activities of oil and gas in Vietnam, Middle East and CIS countries. The objective of OVL is to acquire attractive overseas exploration acreages and producing properties to increase equity oil abroad. ONGC has a gas project in Vietnam where it has 45% participating interest in the consortium comprising of OVL, BP of U.K. and STAT OIL of Norway. The gas reserves in the Blocks have been estimated to be around 2 trillion cubic feet. OVL has recently finalised various agreements in connection with its Vietnam project, and shortly a decision on the investment plans for development of gas discovery would need to be taken. OVL has also been pursuing opportunities in Iraq, Iran, Russia (Udmurt, North Caspian Sea and Astrakhan) and evaluating other opportunities.

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

IOC has also submitted a proposal to the Ministry for acquiring 30% participating interest in Balal Oil Field for Development and Production in Iran.

2.4 NEW EXPLORATION LICENSING POLICY (NELP)

Government of India, in January, 1999, had invited bids under the New Exploration Licensing policy (NELP) with attractive fiscal terms and incentives. Under this policy, the upstream public sector companies viz. ONGC and OIL are to be provided level playing field by giving them the same fiscal and contract terms as are available to private companies. A total of 48 blocks (10 onland blocks, 26 shallow water blocks and 12 deep water blocks-beyond 400 m iso-bath) were offered. By the bid closing date of 18.8.1999, a total of 45 bids for 27 blocks (4 onland blocks, 16 shallow water blocks and 7 deepwater blocks - beyond 400 m iso-bath) were received from both foreign and Indian companies including public sector undertakings. Out of these, 25 blocks (2 onland blocks, 16 shallow water blocks and 7 deep water blocks-beyond 400 m iso-bath) have been awarded. Bids for 2 blocks were rejected.

2.5 COAL BED METHANE (CBM)

The policy for exploration and

exploitation of CBM was approved by Government in July, 1997. CBM operation in this country is being undertaken for the first time and will take some time before potential of CBM at commercial level is known. The terms and conditions for harnessing of CBM require consultation with the State Governments. While West Bengal Government has given their consent, Government of Bihar, Madhya Pradesh and Gujarat have not consented so far. The policy will be implemented after consultations with State Governments are completed. ONGC has undertaken R&D projects in West Bengal and Bihar for CBM operations. Ministry of Coal is also undertaking R&D project in West Bengal with UNDP funding.

2.6 OIL AND NATURAL GAS CORPORATION LIMITED (ONGC)

Oil and Natural Gas Corporation Limited (ONGC) was incorporated under the Companies Act, 1956 on June 23, 1993. The same was incorporated pursuant to the



Sagar Sandhani Seismic Vessel of ONGC

decision of the Govt. to convert Oil and Natural Gas Commission into a public limited company. An act of Parliament titled "Oil & Natural Gas Commission (Transfer of Undertaking and Repeal) Act, 1993" was passed on 4th Sept., 1993 providing that the undertaking of the Commission shall be transferred to and vested in the Corporation w.e.f. an appointed day to be notified by the Government through a separate notification. Accordingly, w.e.f. Feb.1, 1994, the undertaking of the erstwhile Oil and Natural Gas Commission including all the assets, liabilities, rights, obligations, employees etc. stood transferred to and vested in the Oil and Natural Gas Corporation Limited. It is engaged in the exploration and exploitation of oil and natural gas. ONGC Videsh Limited is a wholly owned subsidiary of the Corporation. The authorised and paid-up capital of ONGC as on 31.03.1999 were Rs.15,000 crore and Rs.1425.92 crore respectively.

2.6.1 New Hydrocarbon Finds

During 1999-2000 (upto Dec'99), focussed exploratory efforts resulted in two new hydrocarbon finds, namely, Akholjuni (oil) in Cambay Basin and Safrai (oil) in Assam Shelf.

Significant exploratory leads have also been obtained in North Kadi, South Kadi, Sobhasan, Gandhar & Jambusar in Cambay Basin; Kesanapalli, Kesanapalli West, Kuthalam, G-1 & Lakshmaneswaram in Krishna Godavari Basin; Periyapattinam, Kuttanallur & Kali in Cauvery Basin; Nambar & Geleki in Upper Assam and B-28A & D-31 in Bombay Offshore Basin.



Hazira Processing Complex at Hazira of ONGC

2.6.2 Physical Performance during 1999-2000

Parameter	1998-99 Actual	1999-2000 Target (BE)	1999-2000 Actual Upto Dec.'99	1999-2000 Anticipated (RE)
Seismic Survey				
Onland - 2D GLK	4369	5292	1829	4064
- 3D GLK	15418	11975	7041	12475
Offshore - 2D+3D LK	94852	96750	64663	97400
Drilling				
Exploratory Wells	129	151	92	178
Development Wells	145	177	114	156
Exploratory Metreage	287919	403570	253072	433530
Development Metreage	299506	362880	228150	276400
Production				
Crude Oil (MMT)	26.385	25.800	18.801	25.257
Natural Gas Sales (MMM3)	18413.17	18157.00	14057.321	18157.00
Value Added Products (Thousand Tonnes)	3496.158	3116.00	2783.064	3116

2.6.3 Financial Performance during 1999-2000

(Rs. Crore)				
Parameter	1998-99 Actual	1999-2000 Target (BE)	1999-2000 Actual Upto Dec.'99	1999-2000 Anticipated (RE)
Plan Outlay	4468	4800.00	3096.00	5395.00
Total Income @	15951.36	15119.89	15061	17962.89
Net Profit	2754.50	2298.32	2769	3334.97

The corporation paid a dividend of Rs.784.26 crore for the year 1998-99 compared with Rs.356.48 crore for the previous year.

2.6.4 Other Achievements

- ❑ Under deepwater exploration programme, the exploratory well G-1-AA in Krishna Godavari Offshore, drilled at a water depth of 267 m produced oil and gas.
- ❑ A new gas field B-55 in Western Offshore has been put on production.
- ❑ Booster Compressor Platforms (BCP-A & BCP-B) project in Basin field has been completed 81/2 months ahead of schedule.
- ❑ Santhal Main and Balol Main In-situ Combustion Projects are in advanced stage of completion and are expected to be completed by March'2000.
- ❑ Out of total 25 milestones for major projects under MOU 1999-2000, 17 milestones have been achieved against 16 due upto Dec'99.
- ❑ Naptha production started at

Uran after suitable process modification.

- ❑ Under direct marketing of gas, contracts have been signed with 13 consumers in WRBC and 9 in SRBC. Gas supply has been commenced to 11 and 1 consumer in WRBC and SRBC respectively.
- ❑ Y2K compliance of all business critical systems was achieved by Nov'99.
- ❑ Inventory has been brought down to Rs. 1241 crore, lowest in the decade.
- ❑ ISO certification awarded to Diesel Shop, Fabrication Shop, BOP Repair & TM Shop of Central Workshop, Baroda and Institute of Engineering and Ocean Technology (IEOT), Panvel.
- ❑ Adjudged as the Best Upstream Sector Company for oil conservation activities.

2.6.5 Progress of Projects

i) Gandhar Development Phase-II

The project with an anticipated cost of Rs. 1442

crore is almost complete and production has commenced excepting the commissioning.

ii) In-situ Combustion : South Balol Ph-II & North Santhal Ph-II

These EOR projects with an anticipated cost of Rs. 450 crore are in final stages of implementation with some remaining modification work which is scheduled to be completed by March'2000.

iii) B-55 Development

Completed jacket and deck installation and started production on 23.11.99. The anticipated cost of the project is Rs. 411 Crore.

iv) Booster Compressor in Bassein field

This project, for increasing gas compression facilities for enhanced supply, has been completed in May'99, 81/2 months ahead of schedule.

vi) Additional Co-generation plant at Uran

This project with an approved cost of Rs. 117 crore was initiated by placing LOI to M/ S BHEL on 23.7.98 and engineering work is in progress. The completion is scheduled in July, 2000.



A Drill-ship of ONGC

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. During 1998-99, as a first step, a matrix analysis was carried out to identify the countries with surplus oil and can be considered as having high potential for incremental oil production. ONGC-VL has identified

Iraq, Iran, Russia, Kazakhstan, Azerbaizan and Algeria to be the focus countries to bring larger quantity of equity oil. Other countries would be considered on a case to case basis.

The major activities of the Company for the year 1999 are as under :

- ❑ Development phase of Vietnam Offshore Project has commenced. Two MOU's for "Block 06.1 Gas and Condensate Sales" and "Govt. Guarantee and Approvals" have been signed. Gas production is likely to commence by January, 2002.
- ❑ A bid for acquisition of development field in Iraq was submitted in partnership with Reliance Industries Ltd. which is under evaluation by the Ministry of Oil, Iraq. Acquisition of an exploratory Block situated in southern Iraq is also being pursued.
- ❑ Proposals for participation in exploration and development projects in Russia are under evaluation.
- ❑ Opportunities have been offered by Kazakh side for participation in development of a discovered oil and gas field.
- ❑ The available discovered fields and exploration blocks for participation in Iran were shortlisted. A preliminary proposal for development of an offshore oil field in Iran was submitted in partnership with Reliance Industries Ltd.

ONGC-VL earned a profit of Rs. 738.42 lakhs during 1998-99, as compared to Rs. 218.87 lakhs in the previous year.

2.8 OIL INDIA LIMITED (OIL)

Oil India Pvt. Ltd. was incorporated

in 1959 as a Rupee company with two-thirds share of the Burmah Oil Company (BOC) of U.K. and one-third of Govt. of India. By subsequent agreement in 1962, Government of India and BOC transformed OIL to a Joint Venture Company with equal partnership. The Government of India acquired the entire share capital of the Company effective from October 14, 1981 and since then OIL has been functioning as a Public Sector Company. It is engaged in exploration, production and transportation of crude oil and natural gas. The authorised and paid-up capital of OIL as on 31.03.1999 were Rs.250 crore and Rs.142.67 crore respectively.

2.8.1 New Hydrocarbon Finds

During 1999-2000 (upto Dec'99), OIL's exploratory efforts led to discovery of crude oil in the Chabua structure near OIL's Dikom/Kathaloni structures in Assam. Reserves of crude oil was also established in the new fault block in the Tamulikhath structure. A deep well drilled in the new

prospect around Digboi oilfield in Pengri area and the exploratory well drilled in the South Kathaloni structure, both in Assam, have given indication of presence of hydrocarbons. Production testing is in progress.



Onshore Drilling in progress in South Bank of River Brahmaputra of OIL

2.8.2 Physical Performance

Parameter	1998-99 Achievement	Target 1999-2000	Achievement Upto 31/12/99 (99-00)	Ant. Achievement during 1999-2000
Seismic Survey				
2D SLKM (Departmental)	1146.17	1500	496.30	1500
3D SQKM	170.32	150	87.42	150
3D SQKM (Contractual)	—	150		
2D GLKM	150.5	1150		
Drilling				
Exploratory				
Metreage ('000M)	44.571	57.00	22.350	45.00
Well Nos.	12	14	7	12
Development				
Metreage ('000M)	52.405	65.00	39.995	55.00
Well Nos.	16	20	13	17
Crude Oil Prd. (MMT)	3.294	3.30	2.477	3.30
Natural Gas Sale (MMSCM)	1130.751	1175	868	1175
LPG Production ('000T)	54.61	52.50	38.189	52.00



Oil Collecting Station at Duliajan of OIL

2.8.3 Financial Performance

Parameter	(Rs./Crore)			
	1998-99 Achievement	Target 1999-2000	Achievement Upto 31/12/99 (99-00)	Ant. Achievement during 1999-2000
Plan Outlay	427.39	468.35	257	468.35
Total Income	1469.39	1391.03	1280	1650
Net Profit	291.60	229.19	196	215
Internal Resource	160.53	581.05	233	276

The company paid a dividend of Rs.78.47 crore for the year 1998-99 as against Rs.42.80 crore in the previous year.

2.8.4 Other Achievements

- ❑ OIL expects to bring down the gas flaring to the lowest ever level during the year.
- ❑ Drilling of first exploratory well in Ganga Valley Basin in U.P. to the depth of 4816 M was successfully completed, though there was no hydrocarbon discovery.
- ❑ For the first time, 2D seismic data was acquired by Oil India Limited across river Brahmaputra covering a length of about 34 kms. in collaboration with NGRI.



Inspection of OIL's Crude Oil Pipeline at a river crossing in Lower Assam

2.8.5 Progress of Projects

- (i) OIL has planned to develop Non-Associated Gas field in a phased manner for effective utilisation of gas resources in Upper Assam. Production from few of the wells have started after workover.
- (ii) To meet the estimated short supply of crude oil to Bongaigaon Refinery, reverse pumping of the crude oil from Barauni to Bongaigaon Refinery through OIL's existing 14" dia. Bongaigaon to Barauni trunk pipeline has been planned at an estimated cost of Rs. 21.73 Crore. Field activities have already started.
- (iii) For RAPL's Gas Cracker Project, in Assam, OIL has a commitment to make available 5.00 MMSCMD of gas for extraction of ethylene. OIL has received the final report on cost estimate by M/S EIL. OIL has floated NIT for detailed engineering and turnkey implementation, however, contract will be finalised after signing of the Gas Supply Agreement.

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. It has been conferred the 'Navratna' status by the Government. The Company owns and operates a network of over 4,000 kilometres of pipelines. This includes the prestigious HBJ Pipeline, a 2,702 kilometre long pipeline which runs from Hazira on the western coast of India through Vijaipur to Jagdishpur in North India having links to Delhi and over 1,300 kilometres of regional pipelines in different States, including Maharashtra, Gujarat, Rajasthan, Andhra Pradesh, Tamil Nadu, Pondicherry, Assam and Tripura. The authorised and paid-up capital of the company as on 31.03.1999 were Rs.1000 crore and Rs.845.65 crore, respectively.

2.9.2 The Company operates six natural gas processing plants having installed capacity to produce 9,61,000 tonnes of Liquefied Petroleum Gas per year.



The LPG plant at Usar, Maharashtra, GAIL today produces more than 0.6 million tonnes per annum (MMTPA) of LPG at its six plants

These plants are located at Vijaipur(2) in Madhya Pradesh, Vagodia in Gujarat, Usar in

Maharashtra, Lakwa in Assam and Pata (Auraiya) in Uttar Pradesh. It also operates a petrochemical complex at Pata.

2.9.3 PERFORMANCE AT A GLANCE

A. PHYSICAL

DESCRIPTION	UNIT	ACTUAL		PROVISIONAL 1999-2000 (Upto Dec.'99)
		1997-98	1998-99	
Gas Sales	MMSCMD	20,053	21,034	16,450
LPG/SBP/ others Production	('000 MT)	634.97	709.02	601.22
Petrochemical Production	('000 MT)	0.016	0.248	70.67

B. FINANCIAL PERFORMANCE

Rs. in crore

DESCRIPTION	ACTUAL		PROVISIONAL 1999-2000 (Upto Dec.'99)
	1997-98	1998-99	
Profit After Tax	1020	1060	659
Gross Internal	1269	1399	1019

C. DIVIDEND

GAIL has paid enhanced dividend of Rs.295.98 crore for the year 1998-99 against Rs.169.13 crore paid for the previous year.

2.9.4 MAJOR PROJECTS COMMISSIONED

1. UP Petrochemical Complex : (UPPC) at Pata in Uttar Pradesh was commissioned in March, 1999 at a cost of Rs.2404 crore with a design capacity of 3 lac tonnes of ethylene to produce 2.6 lac tonnes of High Density Poly Ethylene (HDPE) and Linear Low Density Poly Ethylene (LLDPE).

2. LPG Project at Pata (Auraiya) in Uttar Pradesh was commissioned in November, 1999 at a cost of Rs. 439 crore to process 12 MMSCMD of gas to produce 2,58,250 tonnes of LPG and 71,085 tonnes of Propane per year.

2.9.5 ONGOING PROJECTS

Liquefied Petroleum Gas Pipelines: The Company has undertaken the construction of a 1,250 kilometre long pipeline to transport liquefied petroleum gas

from Kandla and Jamnagar in Western India to Loni in Northern India. The pipeline is to have a capacity of 1.7 million tonnes of liquefied petroleum gas per year (subsequently to be increased to 2.5 Million Tonnes Per Annum (MMTPA)) and is scheduled for commissioning in early 2001.

LIGHT END FRACTIONATE OVER HEAD

LEF O/H Project at Vijaipur is being executed at an estimated cost of Rs.94 crore with a processing capacity of 2.12 MMSCMD of gas.

Gas Processing Complex at Gandhar is being set up at an estimated cost of Rs.361 crore with a capacity of gas processing of 5 MMSCMD to produce Pentane 17406 TPA and SBP 25543 TPA.

2.9.6 FUTURE PLANS

The Company is examining the feasibility of constructing two liquefied petroleum gas pipelines in Southern India one from Vizag to Secunderabad in Andhra Pradesh (600 Km) and other from Mangalore to Madurai (700 Km.. Approx.) in the States of Karnataka and Tamil Nadu.

Liquefied Natural Gas (LNG) Terminals: GAIL is a partner of Petronet LNG Ltd., a Joint Venture formed to import Liquefied Natural Gas at Dahej(Gujarat) and Kochi(Kerala). In addition, the



Fire station at the Uttar Pradesh Petrochemical Complex, Pata of GAIL

Company has also entered into a Joint Co-operation Agreement with Tata Electric Companies and Totalfina under which the Company is to have a one-third interest in the Liquefied Natural Gas terminal to be established at Trombay.

Expansion of the Pipeline Network: The Company is also considering a further expansion of the capacity of its pipelines to handle the additional requirement of gas through imports and increased production in the country.

In addition to the Company's natural gas transmission pipelines, liquefied petroleum gas manufacturing facilities and petrochemical complex, the Company has entered into joint ventures to supply and market natural gas to retail consumers. The Company has formed a joint venture with British Gas Plc. to promote the distribution and marketing of natural gas in greater Mumbai and has formed a joint venture with BPCL to promote the distribution and marketing of natural gas in Delhi.

REFINING

CHAPTER III

3.1 REFINING CAPACITY AND THROUGHPUT

3.1.1 The refining capacity of 69.14 Million Metric Tonnes Per Annum as on 1.4.1999 has increased to 109.04 Million Metric Tonnes Per Annum (MMPTA) as on January 1, 2000, making the country almost self-sufficient in the refining sector.

3.1.2 There are 17 refineries in the country, of which 7 are owned by Indian Oil Corporation Limited (IOCL), two each by Hindustan Petroleum Corporation Limited (HPCL) and Madras Refineries Limited (MRL), one each by Bharat Petroleum Corporation Limited (BPCL), Cochin Refineries Limited (CRL), Bongaigoan Refinery & Petrochemicals Limited (BRPL), Numaligarh Refineries Limited (NRL), Mangalore Refinery & Petrochemicals Limited (MRPL) and Reliance Petroleum Limited (RPL).

3.1.3 Keeping in view the need of enhancing the refining capacity to meet the growing demand of petroleum products, a number of grass root refineries as well as expansion of existing refineries have been commissioned and some are under various stages of implementation. As per the current outlook, the refining capacity is expected to go upto 129 Million Metric Tonnes Per Annum by the end of IX th Plan as against the estimated demand of products of 110 Million Metric Tonnes.

3.2 IMPORT OF CRUDE OIL AND PETROLEUM PRODUCTS DURING 1999-2000.

GROSS IMPORTS

Crude Oil : In the year 1998-99, about 39.808 MMT of crude oil was imported valued at Rs.14876 crore. Import of crude upto November 1999, was 31.535 MMT valued at Rs.19611 crore.

Petroleum Products : During 1998-99, 18.78 MMT of products was imported at a cost of Rs.9837 crore. During the current year upto November,1999 the import of petroleum products was 9.514 MMT valued at Rs.7195 crore.

3.2.1 EXPORTS

During 1998-99, the export of petroleum products(including supplies to Nepal) was 1.401 MMT for a value of Rs.856 crore. The export of petroleum products during April-November,1999 was 0.531 MMT valued at Rs.372 crore.

3.3 CRUDE OIL AND PRODUCT PRICING

3.3.1 The administered pricing mechanism (APM) which was in vogue in the petroleum sector since the mid 70's provided returns to the oil companies based on a predetermined percentage. While the APM ensured price stability, it did not encourage cost minimisation, efficient use of capital, customer friendly competitive environment etc. Subsidies/cross subsidies resulted in wide distortions in consumer prices resulting in inefficient usage of scarce products. Further, APM was less transparent and therefore investors were reluctant to commit large funds in petroleum sector. Infrequent revision in product prices in line with international developments resulted in accumulation of a large deficit in the Oil Pool Account in the last few years.

Hence, it was considered necessary to move towards a market driven price mechanism in a phased manner.

3.3.2 Phased Dismantling of APM

Based on the recommendation 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. The status of the progress up to the financial year 1999-2000 is given as under:

- a) The Cost-plus formula for indigenous crude oil production by the national oil companies (NOC) has been abolished and percentage of weighted average FOB price of actual imports are paid, subject to floor and ceiling rates.
- (b) Refining sector has been delicensed effective 8.6.1998.
- (c) The APM has been abolished for existing and new refineries. The refinery gate prices of controlled products i.e., Petrol, NGL, Diesel, Aviation Turbine Fuel, LPG and Kerosene are being fixed on import parity basis.
- (d) Prices of all other petroleum products have been decontrolled and are now fixed by the oil companies at market rates.
- (e) The consumer price of LPG (Domestic) at ex-storage point has been increased by Rs.14/ cylinder exclusive of duty, sales tax and other local levies effective midnight of 31st January/Ist February' 1999. A further 33% of the subsidy on LPG (Domestic) is also due for passing on in the prices during this financial year, on which action is yet to be taken.
- (f) The consumer prices of diesel are being fixed on the principle of import parity. During the period Nov.'97-Oct.'99, ex-storage point of HSD has been revised nine times. Six

revisions were decreases and three were increases. Since April, 1999 the ex-storage point prices of diesel have been revised on two occasions i.e. on 20.4.1999 and 6.10.1999.

- g) Cost plus formula for shipping of crude oil has been done away with.
- h) As a part of tariff restructuring exercise, the customs duty on crude oil has been reduced from 27% to 22% effective 2.6.1998. Further, crude/product duties have been reduced by 2% in the Union Budget for 1999-2000.
- i) Private and Joint Sector refineries have been permit

amount of Rs.385 crore of principal amount and an interest element of Rs.900 crore only remains to be serviced.

3.3.3 The process of deregulation and liberalisation will be continued during the transition period in further rationalisation in tariffs to provide effective tariff protection to the refineries, reduction in transport subsidies/subsidies for kerosene (PDS) and LPG (Domestic) in a phased manner and the liberalisation of the EXIM Policy to reflect the process of reforms.

3.4 NUMALIGARH REFINERY LIMITED (NRL)

3.4.1 Numaligarh Refinery is being set up as a grass-root Refinery of 3 MMTPA capacity at Numaligarh



Night View of Numaligarh Refinery



CDU/VDV of NRL

in the District of Golaghat (Assam) in fulfilment of "Assam Accord" of August 15, 1985, for providing the required thrust towards industrial and economic development of Assam. The project is being executed by a new company, namely, Numaligarh Refinery Limited (NRL) incorporated on April 22, 1993. Bharat Petroleum Corporation Limited, IBP Co. Limited and the Government of Assam have equity participation of 32%, 19% and 10% respectively. The balance 39% will be offered to public. The approved cost of the project together with a Marketing Terminal is Rs. 2724 crore.

3.4.2 The commissioning process of the refinery commenced in April 1999. Once fully commissioned, the refinery will produce annually 84 TMT of LPG, 510 TMT of Naphtha, 85 TMT of ATF, 1102 TMT of kerosene, 1095 TMT of diesel, 71 TMT of petroleum coke and 4 TMT of sulphur. The Marketing Terminal would also be ready for operation in synchronisation of the refinery commissioning.

3.5 COCHIN REFINERIES LIMITED (CRL)

3.5.1 The Refinery's initial installed capacity in September, 1966 was 2.5 MMTA. It was raised to 3.3 MMTA in 1973 to 4.5 MMTA in 1984 and to 7.5 MMTA in December, 1994. The secondary processing facilities

were also expanded to 1.4 MMTA. The authorised capital and paid-up capital of the company as on 31.3.1999 were Rs. 75 crore and Rs. 68.94 crore respectively.

3.5.2 PHYSICAL PERFORMANCE

During the year 1998-99, the Refinery processed 7.77 MMT of crude oil. The capacity utilisation was 103.6 and this was the eleventh consecutive year when the Refinery achieved capacity utilisation of over 100%. CRL also set a record in crude throughput, production and sales of Liquefied Petroleum Gas, Toluene, Aviation Turbine Fuel, Bitumen, etc. The anticipated crude oil throughput for 1999-2000 is 7.8 MMT. Crude oil processed from April-December, 1999 was 5.89 MMT.

3.5.3 FINANCIAL PERFORMANCE

Turnover and Profits

The Company achieved a turnover of Rs. 4,171 crore during the year 1998-99 as compared to Rs. 4,374 crore during 1997-98. The drop of Rs. 203 crore in turnover is due to depressed international oil prices



Lush green : Cochin Refineries waste water treatment plant with the refinery at the backdrop



New computerised truck loading facility in Cochin Refineries

during 1998-99. The Profit After Tax for the year rose to Rs.338.23 crore from Rs.220.41 crore of the previous year. The company declared a dividend of Rs. 24.82 crore compared with Rs. 22.06 crore for the previous year.

3.5.4 SAFETY & ENVIRONMENTAL PROTECTION

The company continued to be vigilant in making the Refinery a safe place for its employees and has invested substantially in automated safety and process control systems. It fulfills all the environmental standards laid down by Kerala State Pollution Control Board and Central Pollution Control Board with respect to effluents and gaseous emissions.

3.5.5 MOU TARGETS

CRL achieved an "EXCELLENT" rating under the MOU parameters for the eighth consecutive year.

3.5.6 PROJECT UNDER IMPLEMENTATION

(i) Diesel Hydro Desulphurisation Project

The Rs. 852 crore Diesel

Hydro Desulphurisation Project (DHDS) aims at reducing the Sulphur content in diesel to 0.25% from 1% by weight, is being executed through Lump Sum Turnkey (LSTK) package with Engineers India Limited as the Project Management Consultant. The project is targeted for completion by December 1999 and the product will be out by February 2000.

(ii) Stand Along Water Supply Project

The project is for setting up of an independent water supply scheme to meet CRL's water requirements. The project envisages drawing of 16.5-MGD water from Periyar river. The project estimated to cost Rs. 95 crore is expected to be completed in September, 2000.

(iii) Enhancement of LPG Recovery

The project envisages enhancing LPG recovery from the crude unit by 20,000 Tonnes Per Annum (TPA),

conversion of 1,84,000 TPA of Naphtha to HSD, increase in crude throughput by 40,000 TPA and saving of 6,300 TPA of Fuel Oil. The project costing about Rs. 64 crore is targeted for completion by October, 2000.

3.6 MADRAS REFINERIES LIMITED (MRL)

3.6.1 Madras Refineries Limited (MRL) was formed as a joint venture of the Government of India (GOI), Amoco India Inc. U.S.A. and National Iranian Oil Company (NIOC), Iran with the initial equity contribution in the ratio of 74:13:13. The company was incorporated on 30.12.1965 as a Public Limited Company.

3.6.2 MRL's refinery was originally designed for processing 2.5 MMTPA of imported crude from Iran supplied by NIOC. The refinery was commissioned in the year 1969. The capacity of the refinery was increased from 2.5 MMTPA to 2.8 MMTPA in 1980, to 5.6 MMTPA in 1984-85 at a cost of Rs.170 crore and further to 6.5 MMTPA in March, 1993. MRL's Cauvery Basin Refinery at Nagapattinam was commissioned in 1993, thus increasing the total refining capacity to 7.0 MMTPA. Amoco India Inc. disinvested its equity holding in favour of GOI in 1985. After MRL's successful premium equity issue in 1994, the Govt. of India continues to remain as a major shareholder of the Company. The authorised capital and paid up capital of the company as on March 31, 1999, were Rs. 200 crore and Rs. 147.10 crore respectively.

3.6.3 PERFORMANCE AT A GLANCE

Physical

During the year 1998-99, the total



A view of reformer, PSA of Hydrogen Unit and furnace of DHDS Unit of DHDS Project of MRL

crude processed was 6.75 MMT as against 7.52 MMT during the previous year.

Financial

The company earned a net profit of Rs. 205 crore during 1998-99 compared with Rs. 129 crore in the previous year, and declared a dividend of Rs. 51.48 crore for the year compared with Rs. 39.70 crore for 1997-98.

3.6.4 MAJOR PROJECTS COMPLETED DURING THE YEAR

The following projects have been completed:

1. ADDITIONAL WET SLOP TANK WITH ALLIED FACILITIES
2. STACK HEIGHT INCREASE OF HEATERS
3. INSITU STACK MONITORS
4. LUBE VACUUM COLUMN REVAMP
5. GREEN BELT DEVELOPMENT

3.6.5 PROJECT UNDER IMPLEMENTATION

Diesel Hydro Desulphurisation Project : The Hydro-desulphuri-

sation of Diesel (DHDS) project to reduce sulphur to 0.25% in diesel is being put up at a cost of about Rs.766 crore. The project has been mechanically completed. Commissioning activities are in progress.

3.6.6 FUTURE PROJECTS

i) 3.0 MMTPA Expansion at Manali

MRL has obtained the PIB approval from the Government of India for expanding its refining capacity at Manali by 3.0 MMTPA, at an estimated investment of Rs.2360.38 crore. The proposal is now before Cabinet Committee on Economic Affairs for final investment approval. Technology Selection for the various process units is in an advanced stage of completion. No Objection Certificate has been obtained from the Tamilnadu Pollution Control Board for the project. Detailed appraisal of the project has been completed by ICICI, IDBI and IFCI.

ii) Power Project

MRL has obtained the First Stage approval of the Govt. of India for the preparation of a Detailed Feasibility Report (DFR) and other allied activities for the Joint Venture Power Project based on refinery residue to be located near the Manali Refinery. The estimated project cost is Rs.1600 crore.

MRL has obtained the approval of Govt. of India for the selection of the Consortium of PSEG Global Inc., USA and Larson & Toubro as Joint venture partners for the project. This consortium and MRL will hold 26% equity stake each in the project and the distribution of balance 48% equity would be determined in consultation with the consortium. M/s Tamilnadu Industrial Development Corporation Limited (TIDCO) and M/s Tamilnadu Electricity Board (TNEB) have also expressed their interest in taking a equity stake in this project.



Golden Peacock Environment Management Award for the year 1998-99 awarded to MRL



The True Boiling Plant (TBP) Distillation Unit at MRL's R&D Centre

iii) Capacity Expansion at Cauvery Basin Refinery (CBR)

A project to expand the existing capacity of 0.5 MT per annum to 1.0 MT per annum at Cauvery Basin Refinery at Nagapattinam at an estimated cost of Rs.30 crore has been taken up during the current year 1999-2000.

iv) Jetty Project

In order to augment the required quantity of crude at Cauvery Basin Refinery at Nagapattinam, MRL is planning to set up a permanent Jetty facility at an estimated cost of Rs. 96 crore. Necessary Oceanographic studies/surveys like Bathymetric, Wave Motion, EIA, Sea Bed Survey, Marine Geotech studies, Pipeline route survey etc. have been carried out. The project is expected to be commissioned during the fourth quarter of 2000. The facilities are expected to

meet the Crude oil requirements of the Cauvery Basin Refinery Unit in the near future and also help the export of Petroleum products in the long term by other Petroleum Companies.

3.7 BONGAIGAON REFINERY & PETROCHEMICALS LTD. (BRPL)

3.7.1 Introduction

BRPL was incorporated on February 20, 1974, to install a Refinery of 1 MMTPA and a Petrochemical Complex consisting of Xylene, Dimethyl Terephthalate (DMT) and Polyester Staple Fibre (P.S.F) Units. The crude processing capacity of the Refinery was

enhanced to 2.35 MTPA in 1995-96.

The authorised equity capital of the company is Rs.200 crore. The paid up capital as on date is Rs.199.82 crore. Government of India has so far disinvested 25.54% of the issued capital.

While the POL products from the Refinery are marketed by Indian Oil Corporation, the Petrochemical products and petroleum coke are marketed by BRPL itself.

3.7.2 Physical Performance

The Performance highlight of the Refinery as well as Petrochemical units for the years 1998-99 and 1999-2000 has been as follows:

Item	1998-99	1999-2000	
		Actuals till Dec'99	1999-2000 (Anticipated)
a) Crude throughput (MMT)	1.65	1.34	1.90
b) Production of Major Petrochemical Products(MT)			
—Paraxylene	17,975	12,400	18,400
—Ortho xylene	1,038	1,200	2,500
—DMT	26,893	19,000	26,000
—PSF	14,824	14,000	20,300

The lower processing of crude vis-a-vis capacity of 2.35 MMTPA during the recent years is primarily due to lower crude availability from North East fields. The company has embarked upon a project alongwith M/s. Indian Oil Corporation Limited and Oil India Limited to transport imported crude oil from Haldia to Bongaigaon, Assam to maximise the plant capacity utilisation. Production of petrochemicals is lower due to depressed markets.

3.7.3 Financial Performance

BRPL earned a net profit of Rs. 34.26 crore for the year 1998-99 and declared a dividend of Rs. 10.28 crore compared with Rs. 67.98 crore and Rs. 20.4 crore for the previous year.

3.8 JOINT VENTURE PROJECTS

Public sector companies have been allowed to set up refineries in joint venture with 26% equity participation. The status of JV refineries, under implementation,

is as follows:

i) Bharat Oman Refinery Limited

The proposal of BPCL to set up 6.0 MMTPA refinery at Bina in Madhya Pradesh as a Joint Venture with Oman Oil Company at an estimated cost of Rs.5277 crore was approved by Government in December, 1995. Construction of the refinery is held up due to non-receipt of certain environmental clearances from the Government of Gujarat.

ii) Eastern India Refinery

The proposal to set up a 9

MMTPA grass root refinery at Abhayachandrapur, Orissa, at an estimated cost of Rs.8270 crore through Joint Venture Company between IOCL & Kuwait Petroleum Corporation was approved by government in July 1998. Project Management Consultant has been appointed. Land acquisition is expected to be completed shortly.

iii) Punjab Refinery Project

Punjab Refinery Project is a 9.0 MMTPA capacity being set up by HPCL at Phulokhari, District

Bhatinda, in the State of Punjab. The Project approved by the Government in November 1998, at an estimated cost of Rs.9806 crore is expected to be completed within 48 months after firming up of the Joint Venture Partner for the Project, and receipt of environmental approval for Crude Oil Terminal and Crude Oil Pipeline. Subsequent to withdrawal by M/s. Exxon from the Project, HPCL has been looking for suitable partners from the Industry to participate in the execution of the Project.

MARKETING AND DISTRIBUTION

CHAPTER IV

4.1 LPG MARKETING BY PUBLIC SECTOR OIL COMPANIES

4.1.1 Four Public Sector Oil Companies, namely, Indian Oil Corporation, Bharat Petroleum Corporation, Hindustan Petroleum Corporation and IBP Co. Ltd. are engaged in the marketing of LPG in the country. With the increased availability of LPG, the number of LPG customers enrolled by them has also been increasing. The number of LPG customers served by them as on 1.1.2000 was 436 lakh. The Government approved the release of 70 lakh new LPG connections and 40 lakh DBCs by the PSUs during the financial year 1999-2000. Against this, they have already released 55 lakh new LPG connections and 29 lakh DBCs during April-December, 1999.

4.1.2 The Government have also been according priority in release of LPG connections to the ecologically fragile hilly areas and Taj Trapezium to reduce deforestation in the hilly areas. All waiting list in the hilly areas (above 2000 ft.) of the entire States of Jammu and Kashmir, Himachal Pradesh, hilly areas of Uttar Pradesh, Union Territories and Delhi have been cleared. Substantial waiting list in the entire North East has also been cleared by the PSUs. The Government have also taken a decision to clear the entire waiting list of LPG in the metro-cities of Calcutta, Chennai, Mumbai and National Capital Region. It is planned to clear all waiting list as on 1st December, 1999 by December'2000 by releasing 1 crore new LPG connections during 2000.

With the increasing non-availability of traditional fuels and LPG being a convenient/safe cooking fuel, the Government has decided to

commence marketing of LPG in the rural areas.

Further, with a view to penetrate into the rural areas, MOP&NG has approved a special scheme in July'99 for release of new LPG connections in the rural sector against surrender of corresponding kerosene quota through -

- i) Opening of extension counters in the rural areas falling within 15 kms radius of the normal trading area of the existing distributors operating in the urban areas.
- ii) Award of interim LPG distributorships to the State Civil Supplies Corporation of the concerned State/some such Govt. bodies till a regular distributor is approved.

Under the SKO surrender scheme, the State Govt. of Andhra Pradesh has availed release of additional 10 lakh LPG connections during 1999-2000 to the people below the poverty line against surrender of corresponding kerosene quota.

The Government have also allocated an additional 8 lakh and 1 lakh LPG connections to the State of Maharashtra and Rajasthan against surrender of Kerosene.

4.2 PARALLEL MARKETING OF LPG AND SKO

In order to increase the availability of LPG and Kerosene, the Private Sector was allowed to participate at the schemes of parallel marketing of LPG and Kerosene in April'93 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 of 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 and Kerosene through their facilities. Up to 1.1.2000, 5615.4 TMT of Kerosene and 695.1 TMT of LPG have been imported by the Private Sector under the scheme.

4.3 BHARAT PETROLEUM CORPORATION LIMITED (BPCL)

4.3.1 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 share capital of the Corporation as on 31.3.1999 were Rs. 200 crore and Rs. 150 crore respectively. The Govt. of India holding in BPCL is 66.2%. It is one of the Navratna companies.

4.3.2 During the year 1998-99, BPCL Refinery achieved a throughput 8.94 MMT compared with 7.94 MMT in 1997-98. The throughput achieved upto December 1999 has been 5.69 MMT. The total sale of petroleum products during 1998-99 was 17.50 MMT as against 16.37 MMT in 1997-98. The sale volume achieved upto December 1999 has been 13.8 MMT.

The sales turnover in 1998-99 increased to Rs. 25,650 crore from Rs. 20,697 crore in the previous years and the profit after tax Rs. 701 crore from Rs. 533 crore. The



Refuelling by BPC at Mumbai Airport

Corporation declared a dividend of Rs. 187.5 crore equivalent to 125% of the paid-up capital for the year 1998-99 as against Rs. 75 crore for the previous year.

4.3.3 During 1998-99, the Company sold 17.5 MMT of petroleum products representing a growth of 6.9% which was higher

than the Industry growth rate. The market share was further strengthened from 20.50% in 1997-98 to 20.55% in 1998-99 enabling the Corporation to retain its second position in the Industry.

During April-December 1999, the Corporation commissioned 20 retail outlets, 2 kerosene dealerships



BPCL's attractive Lube Shoppe

and 90 LPG distributorships and released 12 lakh new LPG connections.

BPCL's retail outlets in the state capitals and major towns are provided with Unleaded Petrol (ULP) facilities. All the ROs in Delhi and Mumbai dispense ULP only. Similarly, Extra Low Sulphur HSD (0.25% Sulphur) has been introduced in all major towns as per the directives of the Ministry.

During the year 1998-99, the Corporation commissioned 6 LPG bottling plants and product tankage of 4.15 lakh kls at various locations in the country.

4.3.4 MAJOR PROJECTS COMMISSIONED

Diesel Hydro Desulphurisation Project

The objective of the project is to conserve and upgrade the environment by reducing the Sulphur level in HSD from existing 1% wt(max.) to 0.256% wt. (max.) with effect from 1.4.1999 in line with the directive by the Ministry of Petroleum & Natural Gas to all oil companies including BPCL.

The approved cost of the project is Rs. 622.18 crore with a foreign exchange component of Rs. 78 crore.

The DHDS Complex has been commissioned in July 1999. Supply of Low Sulphur HSD commenced w.e.f. 1.8.1999.

4.4.1 HINDUSTAN PETROLEUM CORPORATION LIMITED(HPCL)

HPCL is a Public Sector Undertaking (PSU) and is the second largest integrated oil company in India. It has two refineries producing a variety of petroleum products - fuels, lubricants and speciality products,

one in Mumbai (West Coast) having a capacity of 5.5. MMTPA and the other in Visakhapatnam (East Coast) with the capacity of 4.5 MMTPA (being augmented to 7.5 MMTPA). The Corporation also operates the only joint venture refinery in the country - the Mangalore Refinery & Petrochemicals Limited (with an augmented capacity of 9 MMTPA) in association with Aditya Birla Group of Companies and is progressing towards setting up its second joint venture refinery in the state of Punjab. HPCL owns and operates the largest Lube Refinery of 3,35,000 Metric Tonnes capacity in the country producing Lube Base Oils of international standards. The authorised and paid-up capital of the Corporation as on 31.3.1999 were Rs. 250 crore and Rs. 225.58 crore, respectively. The Government of India holding in HPCL is 51.06%. It is one of the Navratna companies.

4.4.2 During the year 1998-99, the two refineries of the Corporation achieved a combined

crude throughput of 9.07 MMT compared with 8.84 MMT in 1997-98. The throughput achieved upto December 1999 has been 7.68 MMT. The total sale of petroleum products during 1998-99 was 16.98 MMT compared with 15.46 MMT in 1997-98. Sales volume achieved upto December 1999 has been 12.99 MMT. The sales turnover increased to Rs. 25,994.6 crore in 1998-99 from Rs. 20,512.9 crore in 1997-98 and the net profit Rs. 901.26 crore from Rs. 701.16 crore. The Corporation declared a dividend of Rs. 248.71 crore for the year 1998-99 equivalent to 110% of the paid-up capital compared with Rs. 108.89 crore for the previous year. The sales turnover and the profit before tax of the Corporation during April-December 1999 have been Rs. 23,375 crore and Rs. 872.94 crore respectively.

4.4.3 During April-December, 1999 the Corporation commissioned 28 retail outlets, 3 kerosene dealerships and 25 LPG distributorships, and released 13.75 lakh LPG connections



A night view of HPC's retail outlet

4.4.4 PROJECTS

A) Major Projects Completed During the Year

4 New POL Depots/terminals with a tankage of 48100 KL and additional tankage of 262000 KL at 8 locations were completed at a total cost of Rs. 113 crore.

2 New LPG bottling plants with a total capacity of 24 TMTA were completed and capacity of one existing LPG bottling plants augmented by 18 TMTA at a total cost of Rs. 22 crore.

Lube blending plant at Silvassa with a capacity of 600 KL/month (Phase-I) has been commissioned in December 1999, within a record completion period of 4 months.

B) Major Projects Under Implementation

The expansion of Visakh Refinery from 4.5 MMTPA to 7.5 MMTPA at a cost of Rs. 963.91 crore is expected to be completed by January 2000.

Installation of CO Boiler at an estimated cost of Rs. 27.21 crore for Energy conservation and environmental management at Visakh Refinery is expected to be completed by February 2000.

Hydro-desulphurisation of Diesel for meeting the revised stringent specification of 0.25 wt.% sulphur content is being implemented at both Mumbai and Visakh Refineries at a total approved cost of Rs. 1552 crore. The projects are expected to be completed by December 1999.

Construction work is in progress for additional tankage and allied facilities at 7 locations with total tankage of 1.11 lakh KL at an estimated cost of Rs. 52 crore. The projects are scheduled to be completed in phases during last quarter of 1999-2000.

Construction work is in progress for five LPG bottling plants with a total capacity of 156 TMTA, resitment of one LPG bottling plant of 88 TMTA capacity and capacity augmentation at three existing LPG bottling plants by total of 46 TMTA. The projects are estimated to cost Rs. 112 crore and are scheduled to be completed during last quarter of 1999-2000.

Phase-II of Silvassa lube blending plant with capacity of 60 TMTA is expected to be completed by December 2000 at a total cost of Rs. 40 crore.

Visakh Vijayawada pipeline (VVPL) Extension to Secunderabad envisages extending the VVPL from Vijayawada to Secunderabad to cater to the important consumption zones of Andhra Pradesh and has been approved at a cost of Rs. 377.55 cr. with a completion schedule of 24 months.

4.5 INDIAN OIL CORPORATION LIMITED (IOCL)

4.5.1 IOC is the largest integrated oil company in the public sector in

India. It has seven operating 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 6453 km network of crude oil and product pipelines across the country, with installed capacity of 43.45 million tonnes per annum. The authorised and paid-up capital of the Corporation as on 31.3.1999 were Rs. 2500 Crore and Rs. 389.31 Crore respectively.

4.5.2 The refineries of IOC achieved a crude throughput of 30.36 million tonnes during 1998-99. Against the MOU target of 31.80 million tonnes for 1999-2000, the throughput achieved upto December 1999 has been 23.86 million tonnes. IOC's pipelines achieved a throughput of 34.05 million tonnes during 1998-99. The MOU target for 1999-2000 is 37.34 million tonnes and the achievement upto December 1999 has been 29.41 million tonnes.

4.5.3 The Corporation sold 46.05 MMT of petroleum products during



A view of the diesel hydrodesulphurisation unit commissioned at IOC's Gujarat refinery for production of extra low-sulphur diesel

1998-99, registering an increase of 2.64 MMT over the previous year. During April-December 1999, it has sold 36.58 MMT of petroleum products with a market participation of 54.57% at the end of December 1999.

4.5.4 The Corporation achieved a turnover of Rs. 69,430 Crore in 1998-99 as against Rs. 59,176 Crore in 1997-98. The profit before tax was Rs. 2,733 Crore for the year 1998-99 and the profit after tax was Rs. 2,214 Crore. The corresponding figures in the previous year were Rs. 1,964 Crore and Rs. 1,706 Crore respectively. The anticipated turnover and profit after tax of the company for the year 1999-2000 is Rs. 85,310 crore and Rs. 2764 crore respectively.

The Corporation declared a dividend of 130% amounting to Rs. 506 Crore for the year 1998-99.

4.5.5 Major Projects Completed during April-December 1999

1. New Delayed Coker Unit at Digboi Refinery.
2. Diesel Hydro-desulphurisation Units at Gujarat, Panipat, Mathura and Haldia Refineries.
3. Gujarat Refinery Expansion from 9.5 to 12.5 MMTPA.
4. Matching Secondary Processing Facilities at Mathura Refinery.
5. Augmentation of Kandla-Bhatinda pipeline from 6.0 to 7.5 MMTPA.
6. Augmentation of Salaya-Viramgam and Viramgam-Koyali sections of Salaya-Mathura pipeline from 17.2 and 5.0 to 21.0 and 6.5 MMTPA respectively.



The country's first 'Jubilee Outlet' Commissioned by IndianOil at Ongole in AP

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|--|---|
| <ol style="list-style-type: none"> 7. Branch pipeline to Budge Budge from Haldia-Mourigram-Rajbandh pipeline. 8. Strategic Crude Oil tanks at Chaksu station of Salaya-Mathura pipeline. 9. Pipeline Terminal at Chitraganj (Calcutta) with 40,292 KL tankage 10. New Depot at Manali with 3,000 KL tankage 11. Additional tankage of 37,030 KL at 4 locations 12. 4 LPG Bottling Plants (Gandhar, Bokaro, Patna and Thimmapur) with a combined capacity of 234 TMTA | <ol style="list-style-type: none"> 6. Solvent De-waxing/De-oiling Unit at Digboi. 7. Paraxylene/PTA Plant at Panipat. 8. Catalytic De-waxing Unit at Haldia. 9. Panipat Refinery Expansion to 12 MMTPA. 10. Residue Upgradation Project at Gujarat. 11. Augmentation of Haldia-Barauni Crude Oil Pipeline from 4.2 to 7.5 MMTPA. 12. Replacement of Barauni-Patna section of Barauni-Kanpur Pipeline. 13. Augmentation of Kandla-Bhatinda Pipeline to 8.8 MMTPA. 14. Vadinar-Kandla Product Pipeline (For Petronet India Ltd.). 15. Chennai-Trichy-Madurai Product Pipeline (for Petronet India Ltd.) 16. Marketing Terminal at Paradip (Eastern Indian Refinery). |
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Major Projects under Implementation

1. Eastern India Refinery Project.
2. Fluidised Catalytic Cracking Unit at Haldia.
3. Barauni Refinery Expansion to 6 MMTPA.
4. Hydro-treatment Facilities at Guwahati.
5. Hydro-treatment Facilities at Digboi.

17. LPG Bottling Plants at 21 locations.
18. Terminals/Depots/Tankage/ TOPs etc. at 13 locations.

New Projects Planned

Major projects planned to be taken up are listed below.

- ❑ Linear Alkyl Benzene project at Gujarat.
- ❑ LOB Production at Gujarat.
- ❑ Additional Diesel Hydro Desulphurisation project at Mathura.
- ❑ MS Quality Improvement Projects at all refineries.
- ❑ South India Refinery Project.
- ❑ Improvement of HSD quality & distillate yield at Haldia.
- ❑ Augmentation of Secondary Processing Facilities at Mathura.
- ❑ Augmentation of Salaya-Mathura Crude Oil Pipeline System and laying of Pipavav-Koyali Crude Oil Pipeline for supply of additional crude oil to Gujarat, Mathura & Panipat Refineries for their expansion.
- ❑ Extension of Mathura-Jalandhar Pipeline to Udhampur.
- ❑ Koyali-Navagam-Sidhpur Pipeline
- ❑ Koyali-Pipavav/Hazira Pipeline.
- ❑ Bottling Plants at 14 new locations
- ❑ Terminals at 25 locations

4.5.6 Business Development (April - December, 1999)

Indian Oil Corporation has initiated several measures for expansion, diversification and globalisation of

business. Some of the activities embarked upon are:

- Submission of bids under the New Exploration Licensing Policy (NELP) round in India.
- Memorandum of Strategic Alliance (MoSA) with ONGC for combined downstream & upstream operations in India and abroad.
- Appointment of Lube distributors abroad.
- MOU with IPCL for co-operation in refinery, petrochemicals and power.
- Setting up power projects at Panipat (Haryana) and Savli (Gujarat) in joint venture with MNCs.
- MOU signed with Elf Antar, France, for marketing of fuel additives and collaboration in R&D. Diesel fuel additives already introduced in the market.

4.6 INDIAN OIL BLENDING LIMITED (IOBL)

The Indian Oil Blending Limited is a 100% subsidiary of the Indian Oil Corporation engaged in the manufacturing of lubricants and greases. During 1998-99, IOBL earned a net profit of Rs. 1066 lakh as against Rs. 758 lakh in the previous year. A dividend of 25% was declared for the year 1998-99.

4.7 IBP CO. LIMITED (IBP)

IBP Co. Limited was incorporated in 1909 and became a subsidiary of IOC in 1970 and an independent Government company in 1972. Over the years, the company has diversified into other activities such as Industrial Explosives and

Cryocontainers. The Company is the largest manufacturer of Explosives in India and is the only manufacturer of Explosives within the country to have been accredited with the prestigious ISO-9002 certification. The Company has got three distinct Business Groups, namely, Business Group (Petroleum), Business Group (Chemicals) and Business Group(Engineering).

The authorised capital and the issued and subscribed capital of the company on 31.03.1999 were Rs.100 crore and Rs.22.15 crore respectively. The Government of India holding in the paid-up capital is 59.58%.

The physical performance of the company during 1998-99 in regard to sale of petroleum products was 58,96,284 KLS representing a growth of 6.74% over the previous year. The volume is anticipated to be 62,79,542 KLS in 1999-2000. The sale of lubricants and greases in 1998-99 was 31,423 KLS marking a growth of 16.00% over the previous year. It is anticipated to 34,892 KLS in 1999-2000.

The anticipated turnover of the company for the year 1999-2000 is Rs.6500 crore. The turnover in 1998-99 was Rs.5670 crore. The company expects a net profit of Rs.39.48 crore in 1999-2000 as against Rs.35.23 crore in 1998-99. It paid a dividend of Rs.9.52 crore for the year 1998-99 Rs./crore compared with Rs. 5.54 crore for the year 1997-98.

During the year 1998-99, the Company commissioned depots with Additional Tankage of 83396 KLS at various locations. During April-December, 1999, Additional Tankage commissioned is 28550 KLS.



A Jubilee Retail Outlet Recently Commissioned by IBP

The company had 1449 retail outlets, 375 kerosene dealerships and 6 LPG distributorships as on 30.09.1999.

The Company has firmed up its plan for entering into domestic Liquefied Petroleum Gas (LPG) business under the brand name "IBP Gas". The Company has since commissioned its maiden distributorship under the Public Distribution System (PDS) of the Government of India at Vandavasi in the State of Tamil Nadu on 25th June, 1999 and at Duttapukur in the State of West Bengal on 14th July, 1999.

OTHER UNDERTAKINGS/ ORGANISATIONS

CHAPTER V

5.1 ENGINEERS INDIA LIMITED (EIL)

5.1.1 Introduction

Engineers India Limited, the leading engineering and consultancy company in India has been serving the process industry including petroleum refineries, petrochemicals, oil & gas processing projects, pipelines, offshore platforms, fertilizers and 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 & plant start-up and 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 as on 31.03.1999 stood at Rs.50 crore and Rs.18.72 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 it has Regional Engineering Offices in Chennai and Vadodara, Overseas Engineering Office in Doha(Qatar); Branch Offices in Calcutta and Mumbai; Inspection/Procurement Offices at various locations all over India and also in London and Tokyo and Construction Offices at different project sites in India and abroad. The total number of employees of the company is 3800.

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 assignments in the fields of Refineries, Petrochemicals, Gas Processing and Metallurgy were secured by EIL during the year. The major Refinery jobs secured by EIL during the year include PMC Services Contracts for Solvent Dewaxing/Deoiling Projects, Hydrotreater Projects at Digboi and Guwahati, Barauni Refinery Expansion Project and Eastern India Refinery Project of Indian Oil Corporation. In addition, the company was awarded with preparation of detailed feasibility report for yield and Energy improvement in CDU/VDU-II of HPCL and detailed feasibility report and licensor selection for CDU/VDU Project of BPCL.

In the field of Petrochemicals, EIL has been awarded Engineering, Procurement, Construction Supervision and Project Management (EPCM) Contract for construction of Styrene Storage Tank of Gujarat Chemical Port Terminal Co. Ltd. (GCPTCL), Expansion of Gas Cracker Plant at MGCC beyond 400,000 TPA Ethylene through ARS route of IPCL and preparation of detailed feasibility report for Expansion of UP Petrochemical Complex of GAIL.

In the Gas Processing stream, EIL has been awarded LPG Project at Gandhar of GAIL, Revamping/Upgradation of Oil and Gas Receiving Distribution System of ONGC Ltd., DM Water Tank and Modification work at Hazira Gas Processing Complex of ONGC Ltd.

During the year, EIL has also taken up PMC work for Jetty/ Docklines and Terminal at JNPT of BPCL and preparation of detailed feasibility reports for Strategic storage of Imported Crude Oil of OCC.

In the Power sector, EIL has been able to make entry into the residue

based Power Plant market by bagging jobs for preparation of detailed feasibility reports for Refinery Residue based Power Plants of MRL, HPCL and IOCL.

In the field of metallurgy, EIL has bagged preparation of front end engineered package and bid evaluation for Polymetallic Nodules Project of HZL and updation of detailed feasibility report for Utkal Alumina Project of GAIL.

Besides these, EIL has also secured few major jobs in the Pipelines field. The major jobs include Loopline from Kakinada Junction to NFCL and Feeder Pipelines from Kesanapalli and Mori fields of ONGC to existing Pipeline Network Project of ONGC, expansion of VVPL and its expansion upto Secunderabad of HPCL, NTPC Jhannore Pipeline of GAIL, Installation of additional 2.7 MW GTC Train of GAIL, consultancy work for existing Pipeline Network in Noida Project of GAIL, Met Gas Pipeline Project from Dabhol to Kirat Mainline and Laterals.

During the year, EIL also secured two turnkey contracts for Pipeline and Platform Modification (PPM) Project and Clamp-on Related Modification and Pipeline-II (CRMP-II) Project of ONGC.

The Company secured a number of assignments in the areas of Environment engineering, Specialist Maintenance and Risk Analysis, advance control and optimisation and information technology.

Outside India, EIL was successful in getting a contract for engineering consultancy services for improvement of Refinery Heaters and Boiler Thermal Efficiency Project of Kuwait Petroleum Corporation(KNPC). The company was also awarded Hazop study for process units 06, 07, 63, 12 & 13

in Shuaiba refinery of KNPC, study for deficiency in Cathodic Protection System of Underground water lines in Refinery units of KNPC, study and technical evaluation of existing shut down system in Mina-Abdullah refinery of KNPC.

Other smaller assignments from Australia, Bahrain, Oman, Nigeria and U.S.A. were also secured.

5.1.4 Policy Initiatives taken by EIL during 1998-99

The major policy initiatives taken by EIL include the following:

Strategic Alliances

Alliances were formulated with several organisations for LNG Projects, Refinery residue based power plants, Deep Water technology and LSTK bids etc. on a case to case basis.

Turnkey Assignments

Bidding for turnkey projects was taken up. Two Turnkey projects- Pipeline and Platforms Modification (PPM) Project and Clamp-on Related Pipelines (CRMP) Project of ONGC Ltd. have been secured during 1999-2000.

Y2K Compliance

Strengthening of computer and communications infrastructure continued as one of the thrust areas. Software packages used in the organisation including the Finance & Accounts software packages were made Y2K compliant. Besides, a separate server was setup at HQ for Internet usage which has been connected to the LAN at HQ.

Technology Development

Three R&D Development Projects were identified in the MOU for completion in 1999-2000. A R&D project basket was identified in the MOU for commercial

application and of these three applications had been targeted for 1999-2000.

Information Technology Services

The Information Technology Services have been identified as a thrust area for developing business and undertaking assignments for clients outside the organisation. In this direction, jobs executed included design development and implementation of Online Materials Information system for IPCL, Plant Data Base for Panipat Refinery, Remodelling of Piping systems for Aker Engineering etc.

Human Resource Development

For updating the functional and technical skills of the employees, ninety training programmes were identified in the MOU for completion in 1999-2000.

The company achieved a turnover of Rs.391.7 crore during 1998-99 compared with Rs.311.2 crore in 1997-98 and earned a net profit of Rs.117.7 crore as against Rs.73.2 crore in the previous year. It declared a dividend of Rs.28 crore for year 1998-99 compared with Rs.7.5 crore for 1997-98.

5.2 LUBRIZOL INDIA LIMITED (LIL)

5.2.1 Lubrizol India Limited (LIL), a Public Sector Undertaking, was incorporated in 1966 in collaboration with the Lubrizol Corporation, U.S.A, under the Companies Act, in pursuance of an agreement between the Government of India and the Lubrizol Corporation, U.S.A in December 1965. The Government of India holds 60% of the subscribed equity capital of the Company and the Lubrizol Corporation, U.S.A., 40% thereof. The Company's manufacturing unit is situated at Village Turbhe, Thane-Belapur Industrial Complex,

adjacent to New Bombay . The Company has a second unit for manufacture of Extreme Pressure Additives at Aloja, Dist. Raigad. LIL develops, manufactures and markets additives systems for automotive and industrial lubricants and also develops other speciality chemicals, catering to the needs of the Petroleum Industry. The authorised, issued and subscribed share capital of the company is Rs. 1920 lakh.

The company achieved a sales volume of 40,281 MT and sales income of Rs.392.37 crore in 1998-99. The projections for 1999-2000 are 41,000 MT and Rs.409.45 crore, respectively.

The production of Chemical Additive Packages upto December 1999 has been 30,936 MT. The anticipated production for the year 1999-2000, is 41,000 MT.

The Company has earned Profit Before Tax (PBT) of Rs.61.9 crore in 1998-99. For the year 1999-2000, the projected PBT is Rs.55.8 crore.

The Company paid a dividend of 65% on the paid up share capital of Rs. 19.20 crore for the year 1998-99 as against 40% during the previous year. The contribution made by the company to the exchequer by way of duties and taxes during the year 1998-99 was Rs.132.48 crore as compared with Rs.130.38 crore during the previous year.

5.2.2 Restructuring of Lubrizol India Limited

Restructuring of Lubrizol India Ltd. was approved by the Government on 19th March, 1999. The exercise of valuation of the price of shares to complete the capital restructuring process of Lubrizol India Ltd. was completed in December, 1999.

5.3 INDIAN ADDITIVES LIMITED

Indian additives Limited (IAL) is a joint venture company promoted by Madras Refineries Limited (MRL) and Chevron Chemical Company (Chevron) in the year 1989. It has manufacturing facilities including a blending unit for lubricant additive packages. Chevron is the technical collaborator and has provided formulation technology and technical know-how for the project. In February, 1999, Government decided to reduce MRL's equity in the company from 60% to 50% and that of Chevron to increase from 40% to 50%. Consequently, IAL is now a non-Govt. company. IAL has an authorised capital of Rs.30 crore and paid-up capital of Rs.19.72 crore as on 31st March, 1999, held by MRL and Chevron in the ratio of 60:40.

During the year 1998-99, the company sold 16,103 MTs of additives as against 13,255 MTs in the previous year. The company has developed the latest generation multigrade oil for Indian Railways, which would save fuel and lubricants. It has also developed formulations for low smoke 2T oil to reduce the environmental pollution.

IAL earned a net profit of Rs.8.54 crore and declared a dividend of Rs. 1.48 crore for the year 1998-99.

5.4 BALMER LAWRIE & CO. LTD.

5.4.1 Balmer Lawrie & Co. Ltd. became a Government Company, when it became a subsidiary of IBP Co. Limited in August, 1972. The authorised capital and the paid-up capital of the company as on 31.3.1999 were Rs.30 crore and Rs.16.29 crore respectively.

5.4.2 The company is a diversified medium-sized company with

operations spread throughout India and overseas. The main activities of the Company broadly are classified into various groups, namely:-i) Industrial Packaging, ii) Greases and Lubes, iii) Containerisation, iv) Performance Chemicals, v) Travel, Tours & Cargo, vi) Tea Exports and International Trading, vii) Project Engineering and Consultancy and viii) Research and Development.

5.4.3 During the year 1999-2000, the company is expected to manufacture 28 lakh barrels/drum against 27.61 lakh in 1998-99. The company is expected to produce 38,000 tonnes of greases and lubricants during 1999-2000, same as in 1998-99. It also anticipates decrease in the number of marine freight containers for export from 1962 in 1998-99 to 600 in 1999-2000.

5.4.4 The total turnover of the company is anticipated to increase from Rs.657.81 crore in 1998-99 to Rs.700.00 crore in 1999-2000. While the company has achieved a profit after tax of Rs.16.83 crore during 1998-99, the anticipated profit after tax for the year 1999-2000 is Rs.9.30 crore. The company declared a dividend of Rs. 4.88 crore for the year 1998-99, as against Rs. 5.21 crore for the previous year.

5.5 BIECCO LAWRIE LIMITED

Biecco Lawrie Limited, now a Government of India Undertaking under the administrative control of the Ministry of Petroleum & Natural Gas, was established on December 23, 1919. The Company is a Calcutta based medium sized Engineering company having two factories at Calcutta. The Company has been conferred with the status of a Mini Ratna by the Government for its performance in the last few



Blending Kettle of Biecco Lawrie Ltd.

years. The authorised capital and the paid-up capital of the company as on 31.3.1999 were Rs.50 crore and Rs.42 crore respectively.

The physical performance of the Company upto December, 1999 in regard to sale of switchgear panels & switchgear spares and others was Rs.1907 lakh and that for electrical repair jobs was Rs.182 lakh.

The total sales turnover of the company for 1998-99 was Rs.71.82 crore against Rs.80.54 crore in 1997-98. This was mainly due to decrease in Electrical Repairs Jobs and Turnkey Electrification Project actually coupled with a low volume of sales in SKO and Paraffin Wax.

Considering the need to improve upon its performance level, the company has decided to concentrate in the areas of Research & Development, Quality Assurance, Computerisation and Systematisation, Intellectual Capital, Knowledge Based Organisation etc. to enhance

overall performance under a turn-around situation.

5.6 OIL INDIA SAFETY DIRECTORATE (OISD)

5.6.1 OISD assists Safety Council of the Ministry of Petroleum & 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 Govt. of India and the Director General of Factory Advice Service & Labour Institute as members.

Standardisation is one of the major activities of Oil Industry Safety Directorate. Standardisation is required to keep abreast of the latest design and operating practices in the areas of safety and fire fighting in the hydrocarbon processing industry in the developed countries, so as to develop standards and codes that

would be suitable for the conditions in India. The areas where standards/recommended practices/guidelines need to be developed are identified by analysing the incident data base developed at OISD. The standardisation work is then taken up by the Functional Committees nominated by the Steering Committee. As a continuous exercise, new areas for standardisation are identified. During the period under review, 7 numbers of Standards were printed.

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. 3 standards have been already revised and printed. During last Safety Council Meeting, the process to issue interim amendments to the OISD standards was approved. Accordingly, interim amendments to three standards were approved by the steering committee.

As on December 31, 1999, overall status of Standardisation is as follows:

Total standards/recommended practices/ guidelines identified	91
(A) Published & Distributed	72
(B) New Standards under various stages of preparation	19

5.6.2 Training Programmes/ Workshops

Various training programs and workshops organised by OISD during the period are as follows:

- Seventh Oil Industry Safety Workshop for refineries was

arranged at HPCL Mumbai Refinery in July, 1999.

- Fourth Oil Industry Safety Workshop for upstream operations was arranged at OIL, Duliajan in April' 1999.
- Training course on Environment Impact Assessment was conducted in August, 1999.
- Ninth Marketing Workshop for marketing personnel (Northern & Eastern Region) was arranged at Lucknow in August '1998.
- Fifth Oil Industry Safety Workshop for upstream operations was arranged at ONGC, Rajamundry in December, 1999.

5.6.3 Accident Data Base and Dissemination of Safety Information

This is a continuous activity of OISD wherein details regarding fires, accidents and near misses occurring in the installations of the entire industry are received on a quarterly basis and stored in a computerised Data Base. After analysis, the information showing statistical trends, areas of concern, major recommendations etc. is disseminated to industry through Steering Committee Meetings, Workshops and OISD Journal-Petrosafe. OISD has also started publishing monthly newsletter "OISD Newsletter" from November, 98 to disseminate information on various safety related activities.

A booklet giving details of major incidents in upstream and downstream oil sector, its analysis for the period April, 1996 to March, 1999 was prepared and distributed to industry members. It is hoped that the analysis of various incidents in the Crude Oil

Exploration & Production, Refining, Transportation and Marketing sectors, discussed in this booklet, shall help industry to study the field operating conditions and take corrective action so as to avoid recurrence of incidents.

5.6.4 Computerisation

A new Local Area Network (LAN) computer system with IBM Server, Scanner etc. was installed at OISD office. All the users i.e. officers and staff were provided with personal computers with access to both the servers i.e. CD ROM and IBM 320. Various safety related information like NEPA, OISD standards, accident data base etc. are kept on server for easy access for the users. The OISD standards has been brought in the form of CD ROM and updated regularly.

5.7 CENTRE FOR HIGH TECHNOLOGY (CHT)

5.7.1 Centre for High Technology (CHT), a Registered Society functioning under the Ministry of Petroleum & Natural Gas, Govt. 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. 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.
- 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.

5.7.2 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. The major R&D projects completed during 1999-2000, the projects which are in progress and those approved during 1999-2000 are as under :

Projects completed during 1999-2000

- Performance, Testing & Development of Burners

- Etherification of C5 olefins and FCC gasoline
- Heat Transfer Enhancement by Tube Inserts
- Development of Cooling Tower Technology

Projects under progress

- Research Facility in the Area of Advanced Control
- Diesel Fuel Quality Requirement for Meeting the Future Emission Standards
- Hydrocracker Pilot Plant/Laboratory Project
- Catalyst & Technology Development for Hydrotreatment of Diesel & Vacuum Gas Oil (VGO)
- Production of High Quality Micro-crystalline Wax (MCW) Using Short Path Distillation (SPD) Technology
- Assessment of Residual Life of Turbine Oil : Phase II
- Technology development of Hydrodynamics of Trickle Bed Reactors - Cold Flow Studies for Scale-up
- Maintenance of Multipurpose Dynamic Simulator
- Development of Flash Zone Entry Device for Vacuum Column
- Production of LPG and High Octane Gasoline from Naphtha/NGL
- Development of Catalytic process for Isomerisation of Waxy stocks into Lube Oil
- Development of Computational Fluid Dynamic Capabilities
- Sour Natural Gas and Industrial Gas Treating
- Development of Eco-friendly/Bio-degradable Lubricants/Base Fluids

5.7.3 Activities related to Energy Conservation in Refineries

- Energy Conservation Awards

- Oil Conservation Awards
- Bench Marking & Targeting of Energy Consumption
- Fuel & Loss targets for the refineries

5.7.4 Assistance to MOP & NG/ Industry

CHT has been actively involved in the following activities :

- Fuel quality issues and the implications of changes in the specifications of MS and HSD proposed by Bureau of Indian Standards/Ministry of Environment & Forests.
- Monitoring implementation of Diesel Hydrodesulphurisation (DHDS) projects at nine refineries
- As a member of the Technical Evaluation Committee (TEC), for evaluation of proposals received from Small Scale Industries (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

5.7.5 CHT Publications

CHT publishes a quarterly technical journal "Hydrocarbon Technology". It also circulates a quarterly "Technology Scan" which incorporates a consolidated list of articles, categorised under major subject heads, with journal reference and a brief abstract based on scanning of some of the important journals published in the field of Petroleum Refining. These publications have a wide circulation and are well

acknowledged for their technical content.

5.8 PETROLEUM INDIA INTERNATIONAL

5.8.1 A Decade Of Technical Services To Oil Companies Worldwide

Petroleum India International (PII) is a consortium of ten public sector companies operating in the Petroleum and Petrochemicals sectors. PII was established in 1986 with the common objective of mobilizing the individual capabilities of its member companies into a joint endeavor for providing technical, managerial and other human resources to all companies abroad. The Consortium Members Of PII are:

- Bharat Petroleum Corporation Limited
- Bongaigaon Refinery & Petrochemicals Limited
- Cochin Refineries Limited
- Engineers India Limited
- Hindustan Petroleum Corporation Limited
- IBP Co. Limited
- Indian Oil Corporation Limited
- Indian Petrochemicals Corporation Limited
- Madras Refineries Limited
- Oil & Natural Gas Corporation Limited

5.8.2 In the past twelve years, PII has already provided its services to well known companies abroad a few of them are:

- Nigerian National Petroleum Corporation (NNPC), Nigeria.
- Kuwait National Petroleum Company (KNPC) Kuwait.
- Technip ESIA at Khaleej Joint Venture (TPJV), France.
- Abu Dhabi National Oil Company (ADNOC), UAE

- Jeddah Oil Refinery Company (JORC), Saudi Arabia.
- Kellogg Plant Services inc. Kuwait.
- Empresa Nacional Petroleos De Mocambique (Petroc), Mozambique.
- Toyo Engineering, Japan
- LG Engineering - Thailand.
- Petronas Research & Scientific Services SDN BHD, Malaysia
- China Petroleum Engg. Construction Corp. (at Kuwait)
- Advanced Technical Services (ATS), Doha Qatar
- National Engg. & Technical Co., Nigeria

5.8.3 PII generated an income of Rs.23.58 crore during 1998-99 and earned a net profit of Rs.8.45 crore. The anticipation for the year is Rs.33.85 crore and Rs.10.61 crore respectively.

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 Addl. Secretary, Jt. Secretary (Refineries), Jt. Secretary & Financial Adviser of Ministry of Petroleum & 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 uninterrupted 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.

5.10 OIL INDUSTRY DEVELOPMENT BOARD

5.10.1 Functions of the Board

The Oil Industry Development Board (OIDB) was set up 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 extended by way of loans and grants for activities such as prospecting, refining, processing, transportation, storage, handling and marketing of mineral oil, production and marketing of oil products and production of fertilizers and chemicals.

5.10.2 Resources of the Board

The funds required for various activities envisaged under the Act are made available to the Board by the Central Government, after due appropriation by Parliament from the proceeds of cess levied and collected on the indigenous crude oil. The rate of cess currently is Rs.900/- per tonne on crude oil produced in the country as compared to Rs.60 per tonne when it was introduced for the first time in 1974. Since inception and up to March 1999, the Central Government has collected a sum of Rs.33439 crore approximately as cess. Out of this, OIDB has received an amount of Rs.902 crore till date. No amount has been made available to the OIDB from 1992-93 onwards. The fund of the Board is supplemented by the internal resources generation by way of interest receipts on loans etc. As on 31st March 1999, an amount of Rs.5273 crore has accrued to the Oil Industry Development Fund. During 1998-99, internal resources contributed Rs.544.82 crore to the total resource availability. The Board

has been exempted from the liability to pay tax on its income.

5.10.3 Assistance to Oil Industry

The Board renders assistance by way of grant of loans for Projects, disbursements of grants for Research & development programmes, refinancing of loans and funding expenditure of scientific advisory committees, study groups, task forces, etc. In order to encourage, significant initiatives in the area of oil exploration, the OIBD's financial assistance for exploration work in high risk areas carries an interest rate of 5% p.a. and the funds provided for exploration in low risk areas attract an interest rate of 10% p.a. However, in the event of commercial discovery being made, interest @12% p.a. for the loan is charged. Funds made available for projects in areas other than exploration also carry an interest rate of 12% p.a. The working capital loans are made available, in exceptional circumstances, at an interest rate of 16% p.a.

5.10.4 Deployment of funds

The Oil Industry is capital intensive and has a long gestation period. It provides useful inputs for the development of agriculture and industry. Natural Gas has also emerged as an important source of fuel and feedstock in various industrial sectors such as fertilizers, petrochemicals, power generation, sponge iron etc. At present, per capita consumption of petroleum products in our country is much less compared to the industrialised countries. OIBD has accorded highest priority to the programmes connected with exploration, production, refining and storage of crude oil/natural gas. On cumulative basis upto December, 1999, the Board has given financial assistance of

Rs. 11323 crore to the oil industry, Rs. 11015 crore as loans and Rs.308 crore as grants.

A major portion of the loan assistance has gone towards meeting capital outlay on Plan projects approved by the Ministry of Petroleum and Natural Gas in consultation with the Planning Commission and the Ministry of Finance. The loan outstanding from oil companies to OIBD, as on 31.3.1999 was Rs.4866.00 crore. Loans and grants given during the year 1998-99 were Rs.1107.15 crore and Rs.51.24 crore respectively.

5.10.5 Disbursement of Loans during the year 1999-2000(upto 31st December, 1999)

(Rs. in crore)			
Sl. No.	Organisation	Allocation of Funds (1999-2000)	Funds released Upto 31.12.99
1.	BRPL	15.00	0.00
2.	Balmer Lawrie & Co.	50.00	13.00
3.	Biecco Lawrie Limited	9.55	0.50
4.	CRL	350.00	283.36
5.	GAIL	251.00	251.00
6.	IBP Co.	98.81	37.71
7.	MRL	435.00	100.00
8.	NRL	6.25	6.25
10.	Indraprathatha Gas Ltd.	15.00	0.00
11.	Tripura Natural Gas Co.	0.50	0.00
Total		1531.11	691.82

5.10.6 As regards disbursement of grants, against the allocation of Rs. 150.42 crore for the year 1999-2000, the Board has released Rs. 28.06 crore upto December, 1999.

5.11 DIRECTORATE GENERAL OF HYDROCARBONS (DGH)

The Directorate General of Hydrocarbons (DGH) was established by Government Resolution in 1993 under the administrative control of Ministry of Petroleum & Natural Gas. Objective 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 some of the main activities undertaken by DGH during 1999-2000 are as under:-

5.11.1 Opening up of new areas for future exploration

In its continued efforts to open up areas for future exploration, 2D seismic data of another 1485 Line Kilometres in Andaman offshore was acquired and processed by DGH during March-April'99. The interpretation of the data was done jointly with M/s Western Geophysical during May and June, 1999. The preliminary interpretation of data has brought out six gas hydrate leads/prospects out of which two locations have been shortlisted for drilling in water depth of 1300-1500 metros.

5.11.2 Contract Monitoring

Government of India had awarded 30 discovered fields and 35 blocks for exploration and development to Private and joint sector. Out of these 21 exploration blocks and 18 fields are currently under operation. DGH monitors the execution and management of these Production Sharing Contracts on behalf of Government of India through Management Committees set up for each contract.

5.11.3 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. 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.

CONSERVATIONS OF PETROLEUM PRODUCTS

CHAPTER VI

6.1 Consumption of petroleum products in India has been growing steadily at a rate of 8-10% per annum. Our degree of self reliance in this sector is only around 30% today. Therefore, high priority is given to the conservation of petroleum products.

6.2 IN HOUSE CONSERVATION EFFORTS

6.2.1 Conservation in Upstream Sector

Methods adopted by ONGC & OIL in the upstream sector include reduction of gas flaring from 11% to 6% of total production from 1994-95 to 1998-99, reinjection of gas into the reservoir and installation of waste heat recovery systems as well as utilization of non-conventional energy sources and monitoring of all conservation efforts by ONGC and OIL.

6.2.2 Conservation of Hydrocarbons in Refineries

The oil refineries revamp and replace the low efficiency furnaces and boilers, install heat exchangers, economizers and co-generation equipment etc., apart from improved house keeping.

6.2.3 Lubricants Upgradation Plan

The refineries have implemented phased action plan to realize the great potential to conserve through quality upgradation of automotive lubricants by production and sale of high grade lubricants of about 2.5lakh tones per year in place of the erstwhile lower grades.

6.2.4 Ocean Losses

As a result of various measures taken, ocean losses during transportation has declined over the years.

6.3 END USERS OF PETROLEUM PRODUCTS AND CONSERVATION EFFORTS

Steps being taken are set out

below:

(i) Transport Sector

Adoption of engine design and driving habits conducive to increased fuel efficiency supplemented by training programmes

(ii) Industrial Sector

Replacement of old and inefficient heat apparatus and promotion of fuel-efficient practices.

(iii) Agricultural Sector

Standardization of fuel-efficient irrigation pump-sets and rectification of existing pump-sets.

(iv) Household Sector

Development of fuel efficient appliances & organizing training programs with NGOs operating in Household Sector.

6.4 MULTIMEDIA MASS AWARENESS CAMPAIGN

Mass awareness campaigns have been conducted by the PCRA through the media associating the oil companies.

6.5 OIL CONSERVATION FORTNIGHT

The Ministry of Petroleum & Natural Gas, in association with the Petroleum Conservation Research Association (PCRA) and all Public Sector Oil companies under its ambit, observed the Oil Conservation Fortnight from January 17 to 31, 2000, throughout the country, during which over 268,000 activities were organized.

6.6 PETROLEUM CONSERVATION RESEARCH ASSOCIATION

6.6.1 The Petroleum Conservation Research Association (PCRA) was set up in 1976. It sponsors R&D centres for the development of fuel-efficient equipment/devices and organises multi-media

campaigns for creating mass enthusiasm for conservation. A Conservation Cell was established in the Ministry in July, 1989 to reinforce PCRA's efforts.

6.6.2 The highlights of PCRA's activities undertaken during the year are as follows:

(i) Energy Studies

168 energy audit studies and 314 fuel oil utilization studies were undertaken during 1998-99. 41 energy audit studies and 241 fuel oil utilization studies have been already completed between April 1999 and December 1999. 349 small-scale industries were helped to achieve fuel oil conservation during 1998-99 and 1697 follow-up studies were conducted in the industries surveyed by PCRA.

(ii) Model Depot Projects

During 1998-99, PCRA completed 184 model depot development studies in various States across the country.

(iii) Driver training programmes

324 driver training programmes have been completed during April-December 1999.

(iv) Demonstration clinics/ Workshops/Exhibitions

830 save fuel clinics/ workshops and 31 exhibitions have been completed between April 1999 and December 1999.

(v) Consumer Meets

PCRA organized 18 consumer meets during April-December 1999 to bring together energy consumers, equipment manufacturers and energy

consultants to solve the energy conservation problems and create awareness.

(vi) Promotional Schemes

- a) 21 Model garages were set up during 1998-99 and 18 between April and December 1999.
- b) Testing facility for transition from non-ISI foot valve manufacture to production of energy efficient ISI marked foot valves is being provided.

(vii) Educational Films/TV Spots/Radio Jingles

Educational films and TV spots on themes of conservation are screened on Doordarshan and broadcast on All India Radio in all the regional languages.

(viii) Outdoor Publicity Media

PCRA's conservation messages were spread out throughout the country by using various publicity media.

(ix) Press campaign & Distribution of printed literature

PCRA's advertisements are released in small/ medium / leading publications in every part of the country. The target groups comprised of top executives of industries, farmers, drivers, automobile owners, truck/bus drivers, housewives, school/college students etc.

(x) Major R&D Projects Completed During The Year (1998-99)

Industrial Sector

- a) Design and development of fuel efficiency monitor for fuel fired furnaces/ boilers.
- b) Development of kerosene

vapor recovery system for textile pigment printing dying section.

- c) Development of lube dispensing equipment for use in textile industry.
- d) Development of software programme for lube management in textile industry.

Transport Sector

- a) Feasibility study and the development of a prototype electric hybrid car.
- b) Design / development of dashboard mounted specific fuel consumption meter for automobiles.

Domestic Sector

- a) Development of offset burner type kerosene pressure stove having 65%+ thermal efficiency.
- b) Development of LPG canteen/ commercial burner having 64%+ thermal efficiency .

(xi) On going R&D Projects Transport Sector

- a) Development of fuel injection system for passenger car engines.
- b) Development of energy efficient processes for recovery/recycling of waste lube oils.

(xii) Additives/ Devices evaluated

PCRA also undertakes evaluation of additives/devices in the accredited labs to assess their potential for giving cost effective fuel economy and emission reduction. 3 diesel fuel additives were approved for commercialization and 15 of gasoline fuel additives and 8. of 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 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 Ministry of Welfare are being implemented in the Ministry and all Public Sector Undertakings under the administrative control of the Ministry. The SC/ST Cell of the Ministry monitors the implementation of reservation policy. The PSUs have also constituted Implementation Cells under the supervision of their Liaison Officers to safeguard the interests of SC/ST, OBC and Physically Handicapped 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 is taken wherever necessary.

The progress of appointment of SC / ST / OBC / Physically Handicapped is monitored by the Ministry during the regular 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 1999-2000 for various activities

related to the welfare and Economic development of Scheduled Castes and Scheduled Tribes and weaker sections residing in the neighbourhood of projects location through Special Component Plans and Tribal Sub-Plans which are as follows:-

- (i) Construction of School/ College Buildings, Scholarship, Adult Education, distribution of teaching material, establishing library and other aids to SC/ST students etc.
- (ii) Construction of Community Latrines on the lines of Sulabh Shauchalayas 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 camps 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. to enable them to achieve self employment.
- (vi) Financial assistance to Physically handicapped persons for rehabilitation.
- (vii) Vocational training/guidance to enable the SC/ST persons to become self-reliant under the scheme "Earn while you learn". Trainings 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 programme such as distribution of seeds and fertilizers free of cost to needy SC/ST farmers and distribution of smoke-less Chulhas and solar cookers to SC/ST women and also construction of approach roads and adoption of villages and

(x) Social forestry schemes like distribution of fruit bearing

tree, saplings and other plants etc.

The expenditure incurred by Public Sector Undertakings on the above activities under "Special Component Plan" and Tribal Sub-Plan" upto 31.12.1999 is as under:-

(Rs. in lakh)

S. No.	Name of PSU	SCP	TSP	Total
1.	ONGC	40.00	18.00	58.00
2.	IOCL	Combined figure		60.33
3.	OIL	Combined figure		57.94

4.	BRPL	4.53	6.27	10.88
5.	HPCL	Combined figure		92.12
6.	CRL	Combined figure		14.12
7.	MRL	11.00	—	11.00
8.	LIL	2.50	2.90	5.40
9.	BPCL	Combined figure		39.65
10.	EIL	5.11	10.36	15.47
11.	Biecco Lawrie Ltd.	Combined figure		0.15
12.	NRL	Combined figure		7.13
13.	Balmer Lawrie	6.32	—	6.32

GAIL has allocated Rs.413.89 lakh and IBP has allocated Rs. 20 lakh for SCP and TSP.

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 top most 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 have 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.

8.2.2 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 the 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.

8.2.3 Gaseous Emissions

Controlling of gaseous emissions, particularly with respect to sulphur-di-oxide (SO₂), is one of the major tasks of the refineries. The Government have prescribed standards for SO₂ emissions from the three major processing units in the refineries in terms of SO₂ emission per tonne of feed processed as well 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 SO₂. Further to the above, an overall limit for SO₂ emission from the refineries are 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' SO₂ emissions standards as well as total SO₂ emissions limits. The measures adopted by the refineries for controlling SO₂ emissions include:

- Use of low sulphur fuel oil
- Desulphurisation of refinery fuel gas in Sulphur Recovery Unit
- 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.

8.2.4 Management of Oily Sludge

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. In some of the refineries like BPCL, HPCL-Mumbai and MRL, the oily sludge is sold to micro-crystalline wax manufacturers approved by the Technical Evaluation Committee of MOP&NG.

8.3 MONITORING FACILITIES

All the refineries have full-fledged environmental 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 SO₂ and it has been observed that the emissions are well within the stipulated limits.

8.4 ACCREDITATION WITH ISO-14001 ENVIRONMENTAL MANAGEMENT SYSTEM

IOC-Mathura refinery was the first refinery in Asia and one of the few in the world to achieve the distinction of ISO-14001 accreditation in July, 1996. Since then, all the other IOC refineries, namely, Guwahati, Barauni, Gujarat, Haldia & Digboi and BPCL, Mumbai have also got accredited with this International Environmental Management System. As regards rest of the refineries in the country, actions have been initiated by these refineries for getting this accreditation.

8.5 FUEL QUALITY IMPROVEMENT

8.5.1 Introduction of Unleaded Petrol

In pursuance of the need for reduction of environmental pollution due to emission from petrol vehicles, unleaded petrol was made available in the four metros of Delhi, Mumbai, Calcutta, Chennai, the radial routes emanating from these metros and in the city of Agra from April, 1995.

With effect from 1.9.1998, the

supply of leaded petrol to the National Capital Territory (NCT) has been totally dispensed with and only unleaded petrol is being supplied and used. Similarly, with effect from 1.1.1999, only unleaded petrol is being supplied to the entire National Capital Region (NCR). With effect from 1.2.2000, the entire country would be supplied with unleaded petrol and the use of leaded petrol in the country would be completely dispensed with.

8.5.2 Supply of extra-low sulphur HSD

The sulphur content in High Speed Diesel (HSD) is a critical attribute governing the quality of HSD as it contributes to the particulate emissions from diesel engine exhausts. With a view to improve the quality of HSD, particularly with respect to sulphur content, the Government had drawn up a major programme for reducing the sulphur content in the HSD.

In line with the programme, Oil Companies started supplying HSD with reduced sulphur content of 0.5 % maximum from 1.4.1996 in the four metros and the Taj-trapezium zone. The sulphur content in HSD supplied in the Taj-trapezium zone was further brought down to 0.25 % w.e.f. 1.9.1996.

Extra-low sulphur diesel of 0.25 % was introduced in "Delhi Inner" with effect from 15.8.97 and in all the four metros, viz., Delhi, Mumbai, Calcutta & Chennai from 1.4.1998.

With effect from 1.1.2000, the entire country will be supplied with extra-low sulphur HSD.

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 Purposes 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. Eleven 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:

- (1) All communications to State Governments & Union Territory Administrations in Region 'A' and 'B' and all offices, Undertakings etc. of Central Government situated in these Regions or any person in these Regions.
- (2) Replies to all communications received in Hindi.
- (3) Reply to any 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, 2 officers and 4 employees were nominated for Probodh class under the Hindi Teaching Scheme during 1999-2000. 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 4 Stenographers and 6 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, 1999 and a number of competitions viz., Hindi essay competition, Hindi noting-drafting competition and competition in dictating in Devnagari, Hindi typing and stenography were organised. 13 participants were given cash prizes.

9.1.6 In order to undertake the Official Language Implementation work effectively, an Official Language Implementation Committee (OLIC) is functioning in the Ministry under the chairmanship of Joint Secretary (Admn.). All the Public Sector Undertakings under the Ministry are members of the Committee. This Committee reviews the overall progress of implementation of the Official Language Policy in the Ministry and the Public Undertakings as also the progress of implementation of the Annual Programme as circulated by the Department of Official Language.

9.1.7 Quarterly progress reports on the progressive use of Hindi are sent to the Department of Official Language and the quarterly progress reports received from the PSUs are reviewed in the OLIC meetings of the Ministry.

9.1.8 The Annual Programme for the year 1999-2000 (Since 1st April, 1999 to 31st March, 2000) which was 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.

9.1.9 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.

9.1.10 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 Joint Secretary (Admn.), who is also the Chairman of OLIC of the Ministry. The Committee has inspected 3 offices during 1999-2000.

9.1.11 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 of

Petroleum & Natural Gas.

9.1.12 Orders were issued to Public Sector Oil Companies to celebrate the Golden Jubilee Year of Official Language as per the guidelines of the Department of Official Language. The PSUs have chalked out their programmes which will be held throughout the year. On February 4 & 5, 2000, a two days Seminar was successfully organised by Hindustan Petroleum Corp. Ltd. in Pune at the Ministry level. Some more such programme are under consideration.

9.2 ORGANISATION & METHODS

9.2.1 To ensure smooth and systematic functioning of the Ministry various organisation and methods programmes are carried out every year.

9.2.2 Achievements during 1999-2000:

1. Annual Action Plan 1999-2000 for the Ministry was finalised and Action Taken Report upto December, 1999 sent to the Cabinet Secretariat.
2. The Ministry has fixed maximum time limits for disposal of 53 items of work. Action to identify more such items is in progress.
3. Induction material of Ministry was updated and printed
4. Guidelines/check list was devised for processing the proposal for grant of honorarium to employees of Ministry.
5. Special drive was launched for recording, reviewing and weeding of old records during 19.7.1999 to 30.7.1999.
6. Study to evaluate the public

grievance redressal machinery of IOC, HPC and BPC was initiated. Basic data from the companies has been collected and is being processed.

7. Action in respect of the following items of work has been initiated and the information is being processed:
 - (a) Review of level of disposal/channel of submission of cases.
 - (b) Compilation/consolidation of orders/instructions issued by different Divisions of the Ministry.
 - (c) Bringing out Manual of Acts/Rules/Regulations issued by this Ministry for easy accessibility to various oil sector companies.

9.2.3 Pendency position of the work in each Desk/Section of Ministry was analysed every month and submitted to Secretary(P&NG). Analysis of the O&M matters and other important issues were discussed in fortnightly staff meeting held under the Chairmanship of Secretary(P&NG) and organised by IWSU.

9.3 PROFITABILITY IN OIL SECTOR

The profit before tax and the profit after tax made by the Public Sector Undertakings, under the administrative control of the Ministry of Petroleum and Natural Gas, during the year 1998-99 were about Rs.11330 crore and Rs.8710 crore respectively. The profit before tax and the profit after tax, anticipated during 1999-2000, are about Rs.11841 crore and Rs.9495 crore. The profit before tax and after tax to be generated by this sector during 2000-2001 are estimated at Rs. 12966 crore and Rs. 10223 crore respectively.

9.4 OUTSTANDING AUDIT OBJECTIONS

In the half-yearly statement of outstanding paras upto 31/03/99, Audit has shown a total number of 25 paragraphs as outstanding. Ministry had already furnished replies to Audit. However, final reply from Audit, on the reply given by the Ministry, is awaited.

9.5 GRIEVANCES REDRESSAL

A Public Grievances Cell, under the charge of Joint Secretary (Admn.) who has been nominated as Director of Public Grievances, is working in the Ministry for attending to the grievances of the members of public in respect of the performance of the Ministry and its Oil Sector Public Undertakings. The Director of Public Grievances is assisted by the Deputy Secretary (Marketing-I). A separate Grievances Cell for redressal of the grievances of members of staff of the Ministry under the charge of Director (Admn.), is also working in the Ministry. The jurisdiction of the Directorate of the Public Grievances set up in the Cabinet Secretariat has since been extended to the Ministry of Petroleum & Natural Gas.

As on 23.02.2000, the Public Grievances Cell of this Ministry, has received a total of 458 grievances, out of which 225 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 & 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 on-line transmission facility provided by the NIC for reporting the same to the Prime Ministry's Office and the Cabinet Secretariat, is also being done by the Ministry.

9.6 FACILITATION COUNTER

With a view to projecting transparency in the working of the Government of India, Ministry of Petroleum and Natural Gas was one of the first few Government Ministries/Departments to operationalise the "Information Facilitation Counter" on the 30th June, 1997. This Counter hosts information on all aspects of Oil Industry. The Citizens' Charter drafted by experts of the Oil Industry under the aegis of this Ministry aims at educating the common man about the consumers' entitlements to public services, including the standards of performance, quality of products, mode of access to information,

simplified procedures for making complaints, the system of time-bound redressal of grievances etc. Besides, information on opportunities for investment in the Oil and Gas Sector is contained in a separate issue. Further, guidelines on selection of dealers/distributors for Retail Outlets/Gas Distributorship/Kerosene Agencies are also freely given to the visiting public. Government of India Resolution on phased dismantling of Administered Pricing Mechanism has been in great demand.

The Information Facilitation Counter is manned by experienced personnel. During the year 1999, more than 3000 parties have availed of this facility either by personally visiting this Counter or through telephone queries.

In addition to the above, Website for the Ministry of Petroleum and Natural Gas initially experimented on the 5th October, 1999 was formally launched by the Hon'ble Minister of Petroleum and Natural Gas on the 27th January, 2000. The site has been completely updated by modifying the status of each petroleum sector. The Hindi version of the Site is under preparation.

So far, around 11,525 visitors have availed of website information. The e-mail address of this Counter is fc.png@sb.nic.in. Messages have started pouring in through the Inter-net also.

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 Company, together with its subsidiaries, except such projects as are specifically allotted to any other Ministry/Department.
10. The Oil fields (Regulation and Development) Act,1948 (53 of 1948).
11. The Oil and Natural Gas Commission Act,1959 (43 of 1959).
12. The Petroleum 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

1. Oil & Natural Gas Corporation Limited.
2. Oil India Limited.
3. Indian Oil Corporation Limited.
4. Bharat Petroleum Corporation Limited.
5. Hindustan Petroleum Corporation Limited.
6. Cochin Refineries Limited.
7. Madras Refineries Limited.
8. IBP Company Limited.
9. Engineers India Limited.
10. Lubrizol India Limited.
11. Bongaigaon Refinery and Petro-chemicals Limited.
12. Biecco Lawrie & Company Limited.
13. Gas Authority of India Limited.
14. Numaligarh Refinery Limited.
15. Balmer Lawrie & Company Limited.
16. O.N.G.C. Videsh Limited.
17. Indian Additives Ltd.(Subsidiary of MRL)
18. Indian Oil Blending Limited (Subsidiary of IOC)
19. Oil Industry Development Board.
20. Oil Coordination Committee.
21. Petroleum Conservation Research Association
22. Oil Industry Safety Directorate.
23. Centre for High Technology.
24. Petroleum India International.
25. Directorate General of Hydrocarbons.

APPENDIX-III

I. PRODUCTION OF CRUDE OIL AND NATURAL GAS

	1980-81	1990-91	1995-96	1996-97	1997-98	1998-99	1999* (Apr-Dec)
1. CRUDE OIL PRODUCTION ++ ('000' Tonnes)							
(a) Onshore :							
Gujarat	3808	6398	6362	6158	5951	5828	4255
Assam/Nagaland	1712	5076	5044	4796	5114	5079	3749
Arunachal Pradesh	2	43	28	36	27	38	32
Tamil Nadu	-	313**	374	330	324	365	283
Andhra Pradesh	-	@@	44	52	66	85	106
TOTAL (a)	5522	11830	11852	11372	11482	11395	8425
of which							
AOC	48	@	@	@	@	@	@
OIL	1243	2649	2882	2870	3094	3294	2477
ONGC	4231	9181	8970	8502	8388	8101	5948
(b) Offshore :							
ONGC	4985	21191	22665	20183	19863	18286	12890
(c) Private/JVCs	-	-	650	1346	2514	3042	3015
GRAND TOTAL (a+b+c)	10507	33021	35167	32901	33859	32723	24330
2. NATURAL GAS PRODUCTION (Million Cubic Metres)							
(a) Onshore :							
Gujrat	842	1696	2878	2932	3115	3166	2354
Assam/Nagaland	843	2011	1880	1941	2018	2055	1563
Arunachal Pradesh	-	29	32	23	24	24	17
Tripura	-	70	131	154	196	307	268
Tamil Nadu	-	64	117	92	95	107	98
Andhra Pradesh	-	46	679	799	1022	1218	1027
Rajasthan	-	-	12	10	148	163	109
TOTAL (a)	1685	3916	5729	5951	6618	7040	5436
of which							
AOC	38	@	@	@	@	@	@
OIL	710	1518	1433	1467	1670	1713	1288
ONGC	937	2398	4296	4484	4948	5237	4148
(b) Offshore :							
ONGC	673	14082	16579	16794	18102	17514	13271
(c) Private/JVCs	-	-	331	510	1681	2874	2641
GRAND TOTAL (a+b+c)	2358	17998	22639	23255	26401	27428	21348

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

* : Provisional

- : Nil

@@ : Included in Tamil Nadu.

** : Includes Andhra Pradesh also.

++ : Includes condensates

II. REFINERY CRUDE THROUGHPUT ('000' Tonnes)

Refinery	1980-81	1990-91	1995-96	1996-97	1997-98	1998-99*	1999* (Apr-Dec)
(A) PUBLIC SECTOR	25333	51772	58702	59958	61313	64469	50667
IOC, Guwahati	639	783	839	848	856	836	668
IOC, Barauni	504	2416	2322	1895	2181	2204	2575
IOC, Gujarat	6974	9334	10167	10352	10694	10935	7856
IOC, Haldia	2308	2835	3416	3451	4706	4714	3059
IOC, Mathura	0	7808	8332	8113	8565	8909	6490
IOC, Digboi	0	566	559	477	502	553	432
IOC, Panipat @@	0	0	0	0	0	2208	2783
BPCL, Mumbai	4901	6957	7460	7640	7996	8878	6479
HPCL, Mumbai	3113	5766	5965	6534	6378	5203	4463
HPCL, Visakh	1319	3464	5037	4847	2467	3861	3129
CRL, Cochin	2912	5006	7421	7293	7729	7770	5891
MRL, Chennai	2611	5698	5599	6621	6965	6101	4903
MRL, Narimanam	0	0	370	345	556	644	491
BRPL, Assam	52	1139	1215	1542	1718	1653	1345
NRL, Numaligarh #	0	0	0	0	0	0	103
(B) PRIVATE SECTOR/JVC	503	0	39	2912	3853	4069	10420
AOC, Digboi (I)	503	0	0	0	0	0	0
MRPL, Mangalore @	0	0	39	2912	3853	4069	3961
RPL, Jamnagar **	0	0	0	0	0	0	6459
TOTAL CRUDE THROUGHPUT(A+B)	25836	51772	58741	62870	65166	68538	61087

* : Provisional

(i) : AOC, Digboi refinery was taken over by the Govt.in Oct. 1981 & merged with IOC.

@ : Commenced Production from 25.3.1996.

@@ : Commenced Production from May, 1998

: Commenced Production from April, 1999.

** : Commenced Production from July, 1999

III. PRODUCTION OF PETROLEUM PRODUCTS ('000' Tonnes)

Products	1980-81	1990-91	1995-96	1996-97	1997-98	1998-99*	1999* (Apr-Dec)
(a) From Crude Oil							
I. Light distillates	4101	10023	12433	12883	13032	13776	12431
of which							
LPG	366	1221	1539	1598	1666	1724	1569
Mogas	1519	3552	4462	4704	4849	5573	4381
Naphtha	2115	4859	5975	6123	6103	6081	5764
Others	101	391	457	458	414	398	717
II. Middle Distillates	12115	26344	29941	32423	33933	36168	31554
of which							
Kerosene	2396	5471	5267	6236	6701	5341	3859
ATF/RTF/Jet A-1	1001	1801	2117	2119	2147	2289	1625
HSD	7371	17185	20661	22202	23354	26716	24508
LDO	1108	1509	1351	1286	1246	1336	1152
Others	239	378	535	580	485	486	410
III. Heavy Ends	7907	12195	12707	13698	14343	14600	11638
of which							
Furnace Oil	4041	4879	5351	5980	6771	6407	5026
LSFS/HHS/RFO	2079	4550	4228	4318	4309	4623	3522
Lube Oils	426	561	633	619	593	586	515
Bitumen	1082	1603	2032	2283	2158	2419	1739
Petroleum Coke	86	229	256	246	282	286	235
Paraffin Wax	@	49	43	31	27	40	34
Other Waxes	@	46	63	56	45	63	51
Others	193	278	101	165	158	176	516
Total(I+II+III)	24123	48562	55081	59004	61308	64544	55623
(b) From Natural Gas							
LPG	-	929	1714	1780	1788	1844	1467

@ : Included in others.

* : Provisional.

IV. CONSUMPTION OF PETROLEUM PRODUCTS ('000' Tonnes)

Products	1980-81	1990-91	1995-96	1996-97	1997-98	1998-99*	1999* (Apr-Dec)
1. Light Distillates	4388	9801	13144	14384	15742	17509	14741
of which							
LPG	405	2415	3849	4184	4581	5027	4221
Mogas	1522	3545	4679	4955	5182	5511	4386
Naphtha	2325	3446	3669	4015	4716	6237	5730
NGL			475	682	768	312	72
Others	136	395	472	548	495	422	332
2. Middle Distillates	17056	33106	45459	48544	49716	51406	40689
of which							
Kerosene	4228	8423	9317	9646	9878	10583	8028
ATF	1125	1677	2082	2158	2108	2097	1608
HSD	10345	21139	32254	35019	36071	36887	29537
LDO	1122	1506	1311	1223	1235	1260	1126
Others	236	361	495	498	424	579	390
3. Heavy Ends	9452	12128	13915	14296	14380	14651	11599
of which							
Furnace Oil	5406	4462	6496	6534	6651	6482	5281
LSHS/HHS	2067	4524	4189	4313	4323	4529	3498
Lubes / Greases	593	892	711	705	835	929	641
Bitumen	1064	1581	2005	2273	2178	2239	1778
Petroleum Coke	137	290	319	276	227	293	238
Paraffin Wax		70	76	58	28	31	46
Other Waxes		47	57	57	45	74	54
Others	185	262	62	80	93	74	63
Total (1+2+3) (Excluding RBF)	30896	55035	72518	77224	79838	83566	67029
4. Imports by private parties	0	0	2152	1944	4452	5796	n.a.
Grand Total (1+2+3+4)	30896	55035	74670	79168	84290	89362	n.a.

* : Provisional.

V. IMPORTS/EXPORTS OF CRUDE OIL AND PETROLEUM PRODUCTS

(Qty : '000' Tonnes, Value : Rs. Crores)

ITEM	1990-91		1995-96		1996-97		1997-98		1998-99*	
	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value
GROSS IMPORTS @										
A. Crude Oil	20699	6118.42	27342	11517.00	33906	18538.19	34494	15897.15	39808	14876.46
B. Pol. Products										
I. Light Distillates	334	164.26	1117	816.65	1490	1491.83	1422	1162.59	1947	1414.08
1. LPG	329	160.26	678	530.54	1035	1116.86	1087	902.57	1525	1130.35
2. Others	5	4.00	439	286.11	455	374.97	335	260.02	422	283.73
II. Middle Distillates	8047	4253.60	17950	11155.79	18037	13745.76	17942	11149.97	16308	8203.91
1. ATF	27	7.98	97	69.45	150	119.69	55	34.23	0	0.00
2. SKO	3340	1963.37	5001	3325.56	4279	3538.86	3812	2528.77	5823	3244.11
3. HSD	4680	2282.25	12852	7760.78	13608	10087.21	14075	8586.97	10485	4959.80
III. Heavy Ends	279	242.35	1268	605.41	738	395.90	166	119.36	525	218.53
1. Furnace Oil	0	0.00	1209	474.55	694	277.38	141	55.31	514	182.85
2. Lubes	256	207.91	58	130.18	44	118.52	25	64.05	11	35.68
3. Waxes	23	34.44	Neg	0.68	0	0.00	0	0.00	0	0.00
TOTAL(B)	8660	4660.21	20335	12577.85	20265	15633.49	19530	12431.92	18780	9836.52
GRAND TOTAL(A+B)	29359	10778.63	47677	24094.85	54171	34171.68	54024	28329.07	58588	24712.98
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	2124	847.90	3017	1555.42	2643	1737.07	2098	1276.81	779	417.64
1. Naphtha	1520	621.87	2461	1294.26	2184	1443.83	1407	874.30	643	323.62
2. LPG (Included in Others)		17	17.34	22	23.93	21	27.17	23	25.36	25.36
3. Others	604	226.03	539	243.82	437	269.31	670	375.34	113	68.66
II. Middle Distillates	161	65.96	396	265.50	437	307.38	491	442.16	531	411.22
1. HSD/LDO	82	31.54	209	138.30	216	148.57	237	212.99	260	197.64
2. Others	79	34.42	187	127.20	221	158.81	254	229.17	271	213.58
III. Heavy Ends	363	90.06	22	11.01	82	40.33	361	103.87	91	26.85
1. FO/LSHS	357	88.50	22	10.71	82	40.09	360	103.85	91	26.85
2. Others	6	1.56	Neg.	0.30	Neg.	0.24	1	0.02	0	0.00
TOTAL (B)	2648	1003.92	3435	1831.93	3162	2084.78	2950	1822.84	1401	855.71
GRAND TOTAL(A+B)	2648	1003.92	3435	1831.93	3162	2084.78	2950	1822.84	1401	855.71
NET IMPORTS										
A. Crude Oil	20699	6118.42	27342	11517.00	33906	18538.19	34494	15897.15	39808	14876.46
B. Pol. Products	6012	3656.29	16900	10745.92	17103	13548.71	16580	10609.08	17379	8980.81
GRAND TOTAL	26711	9774.71	44242	22262.92	51009	32086.90	51074	26506.23	57187	23857.27

@ : Includes NOC imports but excludes import by private parties.

* : Provisional.

@@ : Includes supplies of POL products to Nepal upto September 1999.

Neg : Negligible.



Shri Ram Naik, Hon'ble Minister of Petroleum & Natural Gas addressing the distinguished guests during the valedictory function of Oil Conservation Fortnight 2000

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