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**Members of the Board  
(During the period under Report)**

**CHAIRMAN**

1. Shri S.C.Tripathi,  
Secretary,  
Ministry of Petroleum & Natural Gas.  
(upto 31.12.2005 )
2. Shri M.S.Srinivasan,  
Secretary,  
Ministry of Petroleum & Natural Gas  
(w.e.f. 01.01.2006 & onwards)

**MEMBERS**

3. Shri Pratyush Sinha,  
Secretary,  
Deptt. Of Chemicals & Petro-Chemicals  
(upto 04.09.2005)
4. Smt. Satwant Reddy,  
Secretary,  
Deptt. Of Chemicals & Petro-Chemicals  
(W.e.f. 05.09.2005)
5. Shri Anurag Goel,  
Additional Secretary (Expenditure),  
Department of Expenditure,  
Ministry of Finance  
(Upto 18.03.2006)
6. Shri P.K.Sinha,  
Joint Secretary & Financial Adviser,  
Ministry of Petroleum & Natural Gas
7. Shri Sunjoy Joshi,  
Joint Secretary,  
Ministry of Petroleum & Natural Gas

8. Shri V.K. Sibal,  
Director General,  
Directorate General of Hydrocarbons,
9. Shri Subir Raha,  
Chairman & Managing Director,  
Oil & Natural Gas Corporation,
10. Shri P. Banerjee,  
Chairman & Managing Director,  
GAIL (India) Ltd,
11. Shri S. Behuria,  
Chairman & Managing Director,  
Indian Oil Corporation Limited,
12. Shri M.B. Lal,  
Chairman & Managing Director,  
Hindustan Petroleum Corporation Limited,
13. Shri Ashok Sinha,  
Chairman & Managing Director,  
Bharat Petroleum Corporation Limited
14. Shri B.M. Bansal,  
Director (R&D)  
Indian Oil Corporation Limited  
(Upto
15. Dr. Avinash Chandra,  
Ex- DG, DGH  
(W.e.f. 12.01.2006)

**MEMBER SECRETARY**

16. Shri B.Sam Bob,  
Secretary,  
Oil Industry Development Board

**OFFICERS/BANKERS/AUDITORS OF THE BOARD  
(DURING THE PERIOD UNDER REPORT)**

Secretary FA&CAO	Shri B.Sam Bob, IAS Shri T.S.Balasubramanian
Bankers	i) State Bank of India ii) Oriental Bank of Commerce iii) Corporation Bank iv) Indian Overseas Bank
Auditors	Principal Director of Commercial Audit & Ex-officio Member,Audit Board –II, Mumbai
Office of the Board	Oil Industry Development Board 301, World Trade Centre Babar Road, New Delhi-110001.
Telephone Nos.	23413540 23414692 23413298
Fax	23414882
E-mail	<b>oidb@hotmail.com</b>

## **1. Introduction**

The Oil Industry (Development) Act, 1974 was enacted following successive and steep increase in the international prices of crude oil and petroleum products since early 1973, when the need of progressive self-reliance in petroleum and petroleum based industrial raw materials assumed great importance. The following objects were included in the statement of Objects and Reasons for the OIL INDUSTRY (DEVELOPMENT) BILL, 1974:

- (i) The programs for securing self-reliance in petroleum & petroleum based raw materials should be rapidly stepped up.
- (ii) Necessary resources for execution of such programs must be assured.
- (iii) For these purposes cess be levied on crude oil and natural gas to create an Oil Industry (Development) Fund.
- (iv) The fund would be used exclusively to provide financial assistance to the organizations engaged in development programs of oil industry.

Preamble to the Oil Industry (Development) Act clarifies that the purpose of the Act is to provide for the establishment of a Board for development of oil industry and for that purpose to levy duty of excise on crude oil and natural gas and for matters connected therewith.

## **2. Organizational Set-up and Functions of the Board**

The Oil Industry Development Board was established on 13<sup>th</sup> January, 1975 under the Oil Industry (Development) Act, 1974 to provide financial assistance for development of Oil Industry. Its organizational set up consists of:

- a) Chairman
- b) Members
- c) Secretariat

The Oil Industry Development Board is under the administrative control of Ministry of Petroleum & Natural Gas. The functions of the Board have been defined in Section 6 of OI Act.

The measures for which Board may render assistance for the promotion of Oil Industry include:

- a) Prospecting for and exploration of mineral oil within or outside India;
- b) The establishment of facilities for production, handling, storage and transportation of crude oil;

- c) Refining and marketing of petroleum and petroleum products;
- d) The manufacture and marketing of petrochemicals and fertilizers;
- e) Scientific, technological and economic research which could be directly or indirectly useful to oil industry;
- f) Experimental or pilot studies in any field of oil industry;
- g) Training of oil industry personnel in India or aboard.

Any oil industrial concern or other person who is engaged in any activity, which is directly or indirectly connected with the oil industry in the country, is eligible for financial or other assistance from the Board. Term loans are granted for meeting capital expenditure on approved projects considered necessary for the planned development of oil industry.

The Board is also duty bound to carry out such directions as may be issued to it from time to time by the Central Government for the efficient administration of the Act.

### **3. Resources of the Board**

The Oil Industry (Development) Act, 1974 provides for collection of cess as a duty of excise on indigenous crude oil and natural gas. The cess has been levied on crude oil, from time to time, at the following rates:

Rs.60 per tonne	w.e.f. 23 <sup>rd</sup> July, 1974
Rs.100 per tonne	w.e.f. 13 <sup>th</sup> July, 1981
Rs.300 per tonne	w.e.f. 15 <sup>th</sup> February, 1983
Rs.600 per tonne	w.e.f. 1 <sup>st</sup> March, 1987
Rs.900 per tonne	w.e.f. 1 <sup>st</sup> February, 1989
Rs.1800 per tonne	w.e.f. 1 <sup>st</sup> March, 2002*
Rs.2500 per tonne	w.e.f. 1 <sup>st</sup> March, 2006

\* The Central Government has, in the public interest, exempted the duty of excise on crude oil production from the fields under the Production Sharing Contracts to the extent of Rs.900 per tonne as against the rate of duty of excise of Rs.1800 per tonne specified vide Notification of the Government of India in the Ministry of Petroleum & Natural Gas No. S.O. 259 (E) dated 28.02.02.

Out of such proceeds, the funds, as Central Government thinks fit, are made available to the Board after due appropriation by the Parliament for utilization towards various activities envisaged under the Act. Since inception and up to 31<sup>st</sup> March 2006, the Central Government has collected more than Rs. 61000 crore approximately as cess (Annexure-I). Out of this, OIIB has received an amount of Rs.902 crore till date, which constitute 1.45% approximately of total cess collection. The OIIB also generates its internal resources by way of interest

income on loans given to various oil sector companies and short-term investment of surplus funds in Fixed Deposit Receipts. The cess receipts along with internal receipts has contributed to Oil Industry (Development) Fund to accumulate to Rs.8269 crore approximately as on 31<sup>st</sup> March, 2006.

#### **4. Assistance to Oil Industry**

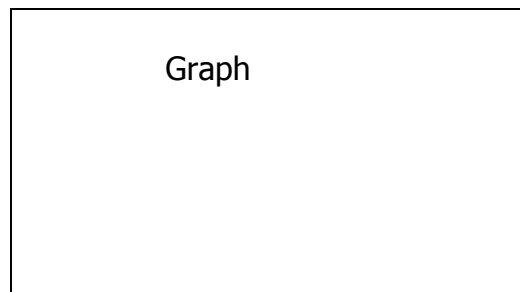
The OIDB has been entrusted with the responsibility to render, in such manner, to such an extent and on such terms and conditions, as it may deem fit, financial and other assistance for the promotion of all such measures as are, in its opinion, conducive to the development of oil industry. The Board renders financial assistance by way of:

- (i) Advancing loans to oil industrial concerns;
- (ii) Disbursement of loans and grants for the implementation of research and development programs conducive to the development of oil industry;
- (iii) Subscribing to the stocks and shares of Oil Industrial concerns.

The Board also funds the expenditure of Scientific Advisory Committees, Study Groups and Task Force etc.

#### **5. Deployment of funds**

The OIDB has accorded highest priority to the programs connected with exploration, production, refining, research and development etc. OIDB has so far provided financial assistance of Rs19154 crore in the form of loan assistance to oil companies and grant-in-aid of Rs 843 crore to various institutions/companies since its inception and up to 31<sup>st</sup> March 2006 for implementation of various programs conducive to the development of oil industry. In addition, the OIDB has invested its funds in the equity share of M/s Biecco Lawrie Ltd (BLL) -Rs.17.58 crore & Numaligarh Refinery Limited (NRL)-Rs.90.80 crore. A major portion of the loan assistance has been given to oil companies for meeting capital outlay of plan projects. The sector wise disbursement as on 31<sup>st</sup> March 2006 is as under:



## **Investment of surplus funds**

In the course of its functioning, cash surpluses arise in OIIB due to gap between availability of fund and their drawl by Oil Companies/grantee institutions. As per OIIB rules, the Board may decide about the manner and place of deposit of funds, provided that the deposit shall be made in any of the following bank or their wholly owned subsidiary as may be decided by the Board namely:

- A. State Bank of India
- B. Nationalized Banks

The Board in its 59<sup>th</sup> meeting held on 19.03.2004 constituted an in-house Investment Committee headed by Secretary, OIIB to recommend investment of surplus funds in nationalized banks of category 'A' only. The investments are made by OIIB on the recommendations of the Investment Committee in accordance with OIIB's approved procedure and DPE Guidelines.

As per the approved procedure, bids are invited from category 'A' nationalized banks on the basis of details provided by ONGC. The funds are given to the highest bidder (within bank's exposure limit) subject to the availability of funds, its further deployment and future funds requirements for loans and grants. In case of equality in interest rates offered by banks, the funds are deployed in proportion of the net worth of the concerned banks. The recommendations of the Investment Committee are submitted to Secretary, OIIB for approval. The details of investment made are submitted to OIIB Board in its each meeting.

## **6. Terms & Conditions of OIIB loans**

The OIIB Board determines the terms and conditions governing the loans from time to time on the basis of current market scenario for determining the rates of interest on OIIB loans.

The OIIB Board has constituted a Standing Committee for periodic review of interest rates on OIIB loans for different tenors after taking into account the interest rates prevailing in the market and give its recommendations to the Board. The Committee meets once in every quarter to review the interest rates on OIIB loans. During the year 2005-2006 up to September, 2005, the Committee adopted the policy for benchmarking interest rates on OIIB loans, by taking weighted average of Government borrowings during the previous financial year as notified in the budget document plus the margin basis points based on quarterly average of margins of previous quarter on the basis of AAA bond margin available in INCORP of Reuters. Subsequently the Committee observed that because of fluctuation in the G-Sec rates, the OIIB interest rates on the

above formulation might be less than the corresponding G-Sec rates for longer tenures like 10 years. Accordingly, the Committee recommended that the interest on OIDB loans for the quarter October 2005 to December 2005 and onwards would be the rates as per existing formula for different tenures or the quarterly G-Sec rates of the previous quarter which ever is higher.

According to the above formulations as recommended by the Standing Committee and approved by the OID Board, the OIDB term loans carried the following interest rates during the year 2005-06:

(%) per annum

Effective period of interest rates	Period of loan			
	1 year	3 years	5 years	10 years
April ,05 to June,05	6.79	6.96	7.12	7.13
July,05 to Sept,05	6.73	6.86	6.93	6.88
Oct,05 to Dec,05	6.67	6.71	6.84	7.20
Jan ,06 to March,06	7.03	6.92	6.93	7.26

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

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

## **Prepayment Fee**

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

## **7. New Initiatives**

### **i) Strategic Crude Oil Storages (Indian Strategic Petroleum Reserve Limited (ISPRL))**

The Cabinet, on 07.01.2004, took a decision to build a Strategic Crude Oil Reserve of 5 Million Metric Tone (MMT) at three locations through a Special

Purpose Vehicle (SPV) to be owned 100% by one of the Oil PSUs. Three sites namely Vishakhapatnam (1.0 MMT), Mangalore (1.5 MMT) and Padur (2.5 MMT) were finalized for constructing the Strategic Storage Facilities at a capital cost of Rs.2397 crore and a Crude Oil Cost of about Rs.8870 crore with an estimated operational and maintenance cost of about Rs.90 crore per annum. The facilities will take about 54 months for construction and the cost of crude will be incurred from 6<sup>th</sup> to 8<sup>th</sup> year. The capital cost of the construction will be met from the existing funds available with OIBD. M/s Engineers India Limited (EIL) has been appointed as Project Management Consultant. While the DFR for Crude Oil Storages at Vishakhapatam and Mangalore have been finalized, it is under preparation for crude oil storage at Padur.

The SPV (ISPRL) which was earlier a subsidiary of Indian Oil Corporation Limited has become a fully owned subsidiary of OIBD w.e.f. 09.05.2006.

On the directives of Ministry of Petroleum & Natural Gas, OIBD and Korea National Oil Corporation (KNOC) signed a Memorandum of Understanding (MoU) on behalf of Republic of India and Republic of Korea respectively on 25.11.2005 in New Delhi. The main points of MoU are as under:

- Assemble a joint working group designated by authorized institutions to discuss substantial cooperation in OIBD's Strategic Underground Crude Oil Storage Facility Projects.
- Identify the areas of concern.
- OIBD shall, upon KNOC's request, facilitate due consideration of KNOC's involvement in OIBD's projects of unlined underground crude oil storage rock caverns.

The authorized and paid up capital of ISPRL have been enhanced from the present Rs.1 crore to Rs.1,000 crore and Rs.100 crore respectively.

**ii) Laying of Pipeline to Srinagar both for Petroleum Product & LPG and also on Oil Pipeline Project to Manipur and increasing the stock holding capacity of Petroleum Products in Manipur.**

The Government of India felt that the transportation of Petro-products through pipelines would be safer, reliable and secured as compared to other modes of transportation. This need was also felt due to heavy rains/landslide/snowfalls and eventual road blockades leading to supply cut-offs for months, especially during winter when the temperature falls as low as (-) 8<sup>0</sup> C. The objective is to establish a system of transportation like that of pipeline so as to ensure year-round supply system. The possibilities of alignment of pipeline along the available / proposed railway route are also to be examined apart from National Highways. The MOP&NG directed Engineers India Limited

(EIL) to prepare Feasibility Report on the two projects. It was also decided to seek comments for the proposed pipelines from National Security Council, Ministry of Finance etc.

A Committee comprising Secretary, OI DB, Director (Pipeline), IOC and a nominee from MOPNG was constituted by the Board to examine the scope of work of the consultant(s) and the fees to be paid to them for preparation of DFRs for the above two projects. The first meeting of the Constituted Committee was held on 01.02.2006. The Committee, after deliberations, inter-alia recommended that a fee of Rs.68 lakh (including service tax) may be paid to EIL for preparation of DFR for the Jammu-Srinagar Pipeline as per agreed scope of work.

In respect of pipeline to Manipur, the Committee, advised EIL to collect information on throughputs, availability of storage etc. from oil companies operating in Manipur, Mizoram and Nagaland for further discussion on the subject matter. The Committee is supposed to firm up its recommendations after getting requisite information from EIL. The OI DB Board has also approved the recommendations of the Committee for release Rs.67.90 lakh to EIL (including service tax) for preparation of DFR for laying pipeline from Jammu to Srinagar. The Board further directed EIL to take comments of the Ministry of Home Affairs regarding the cost of security also during the construction period into consideration while preparing the DFR.

As regards, DFR for laying pipeline to Manipur, EIL has issued requests to all the oil companies operating in the Eastern Region to provide details of their existing storage and proposed expansion plans. The Sub- Committee will give its recommendations after receipt of information by EIL, where after these recommendations will be submitted to OI DB Board for consideration.

#### **(iv) Implementation of Pilot Scheme on strengthening the distribution of PDS Kerosene under OI DB financial assistance**

Government have approved an Innovative Pilot Project of the Ministry of Petroleum & Natural Gas for radically revamping the PDS Kerosene Distribution Network with the primary objective of ensuring that this heavily subsidized product is actually made available in the required quantities to the intended beneficiaries i.e. the families below poverty line and secondly to eliminate the diversion of PDS SKO for adulteration.

The Pilot project is, in the first instance, to be implemented in 10% of the blocks of the country. Thereafter, the working of the scheme would be independently assessed and, based on the experience gained; Government will consider scaling up the scheme to cover the entire country.

The salient features of the scheme are: -

- Oil Marketing Companies (OMCs) will establish at least one Kerosene (SKO) dealership in each of the country's development blocks (at present, less than half the blocks are covered and there is disproportionate, often multiple concentration, in urban blocks).
- In consultation with the District Administration and the wholesale dealer, about 5-10 sub-wholesale points will be located in each block.
- There will be a dedicated fleet of tanker-trucks (TTs) for transportation of PDS kerosene to ensure widespread public information and transparency, as these TTs will prominently display the special logo that is devised for the dedicated fleet. It will be clearly written on the outside of the TT that it is transporting kerosene meant for the Public Distribution System.
- To bring storage dispensing services at SKO dealerships at par with the modern facilities provided at petrol and diesel outlets by OMCs at their own expense, the Ministry's Oil Industry Development Board (OIDB) will fund OMCs to ensure the installation of the following facilities at each of the dealerships covered under the pilot project:
  - Storage tanks with a minimum capacity of 20 KLs
  - Electronically metered dispensing pumps
  - An adequate number of barrels, appropriately decorated with the special logo, for the delivery of SKO to sub-wholesale points
  - One or more barrel sheds
  - Existing wholesale dealers not having these facilities would also be provided the above facilities.

Supplies to sub-wholesale points will be made under the direct supervision and responsibility of the OMCs. In consultation with State Governments, Panchayats and Gram Sabhas will be empowered to generally supervise the availability of PDS SKO and at subsidized prices, and a reporting mechanism will be put in place for Panchayats/ Gram Sabhas to report any deficiencies to the State Administration and the OMCs concerned.

The capital expenditure on the scheme is anticipated at about Rs.696 crore besides, recurring expenditure of Rs.250 crore per annum. As per the directions of the MOP&NG, the entire capital expenditure of Rs.696 crore is to be met out of OIDB funds. Initially, 10% of the above expenditure i.e. Rs.69.6 crore will be incurred on the scheme on a Pilot basis in 10% of blocks.

#### **iv) Setting up of Rajiv Gandhi Institute of Petroleum Technology**

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

The proposed institute to be known as the Rajiv Gandhi Institute of Petroleum Technology, will be promoted and financed by Oil Industry Development Board (OIDB) and the public sector oil companies ONGC, GAIL, IOCL, BPCL and HPCL under patronage of Ministry of Petroleum & Natural Gas. BPCL is the nodal agency for steering the establishment of the institute in Peeparpur, Distt. Sultan Pur (U.P.). M/s. Educational Consultants India Ltd. (Ed. CIL), Government of India Enterprise under the Ministry of Human Resource Development, has been entrusted with the responsibility to prepare a detailed project report for its establishment.

It is proposed that RGIPT shall initially be set-up under the aegis of RGIPT Society to be registered under the Societies Registration Act, 1860 in the State of U.P. and that, in due course of time, it shall be declared as an "institute of national importance" and incorporated as a legal entity empowered to grant degrees and other academic distinctions in its own right through an Act of Parliament.

It is estimated that the Capital Cost for the initial development phase (Financial Years 2007-08 to 2018-19) shall be Rs.521 crores excluding the cost of land of Rs.45 crore. The capital expenditure for Phase-I amounting to Rs.105 crore and the cost of land amounting to Rs.45 crore is proposed to be borne by OIDB. Endowment fund of Rs.250 crore would be contributed by the six promoting Oil PSUs namely ONGC, OIL, GAIL, IOCL, BPCL and HPCL in the ratio to be fixed on the basis of the last financial year profit after tax. The funds for phase II & III activities are proposed to be met from budgetary support of Government of India through the budget of MOP&NG or Ministry Of HRD as may be mutually decided by the two ministries.

#### **v) Study on the North-South Energy corridor centered at Akhtau Port in Khazakhstan.**

Khazakhstan has roughly two trillion cubic meters (TCM) of proven commercial gas reserves. Its development strategy for its gas industry aims to

put Kazakhstan as one of the three main producers and exporters of natural gas and liquefied gas. South-Asia is among the target regions for export of Kazakhstan gas. Keeping in view the growing demands of Energy resources in India, Kazakhstan has been considered as a potential source of imported pipeline gas.

On the directions of Ministry of Petroleum & Natural Gas, Government of India, M/s Observer Research Foundation (ORF) was asked to carry out a study to examine the possibility for extending the existing North-South Transportation Corridor centered at Akhtau Port into an "Energy Corridor" stretching from Kazakhstan from Iran and thence to South-East Asia via India with Akhtau Port as its centre. The initial thinking on the Energy Corridor was that it would carry Khazakh Gas via Iran and link into the proposed Iran-India Pipeline or to a coastal location/port in Iran from where it could be transported to India as LNG. The following terms were given for the pre-feasibility study:

- ✓ Possible routes for the pipeline and Energy Corridor.
- ✓ Keep technical and economical issue for a potential project.
- ✓ Viability of the proposed project.

The study has been funded by OADB. M/s ORF has completed the study and submitted the final report to Ministry.

#### **vi) Strategic Underground storage for Natural Gas**

Ministry of Petroleum & Natural Gas has proposed to have a strategic storage system for natural gas as practiced world over with a view to ensuring continuity of supplies to downstream industries in case of possible short-term supply disruptions. The Government of India has decided that strategic storage of natural gas would be built by OADB. To begin with, the Ministry has proposed for a gas storage of 1 billion cubic meter (BCM) that would imply a supply source of 33 MMSCMD for a period of one month.

For this purpose, the OADB Board has constituted two Committees with the brief terms of references as given below:

#### **a) Committee for preparation of PFR/DFR for setting up of strategic natural gas storage facilities.**

##### **Terms of Reference**

- ✓ To oversee and monitor the preparation of PFR & DFR.

- ✓ To decide on site selection, type of storage and requirements of infrastructural facilities and distribution networks, etc based on the recommendations on EIL.
- ✓ To obtain and approve the costs of EIL for PFR and DFR.
- ✓ To approve any other expenses required to be incurred for finalization of PFR/DFR.
- ✓ To review and approve the PFR.
- ✓ To review and submit DFR to the MOPNG.

**b) Committee for details of Depleted Oil & Gas fields for setting up of Strategic Natural Gas Storage Facilities.**

**Terms of reference**

- ✓ To provide details/technical data of the depleted/(likely to be depleted) oil and gas fields.
- ✓ EIL is requested to call the meetings of the Committees, as required so that the work is completed in time bound manner.

The Committee for Preparation of PFR/DFR recommended a proposal of M/s Engineers India Limited at a cost of Rs.2.85 crore for preparation of Pre-feasibility Report for storage of 3 Billion Standard Cubic Meter (BCM) of Natural Gas by developing a strategic reserve. The scope of work consists of preparation of PFR by way of study of various alternative of storages. It will cover the desk study, data collection and its interpretation, reconnaissance of possible locations, evaluation and ranking of sites based on the requirement of the Government, methodology for DFR, preliminary cost estimates and the schedule for the project. The study is in progress.

**vii) OIDB Office building at Noida to house its office and its regular grantee institutions**

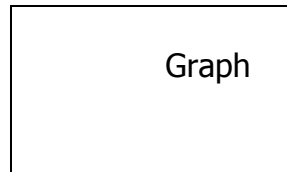
The OID Board with the approval of Ministry of Petroleum & Natural Gas has decided that OIDB and its regular grantee institutions viz. Centre for High Technology (CHT), Directorate General of Hydrocarbons (DGH), Oil Industry Safety Directorate (OISD) and Petroleum Pricing and Analysis Cell (PPAC) should be housed in a single accommodation so that huge expenditure being incurred on rent, repair maintenance, electricity and other common expenses can be minimized. In the above context, OIDB approached NOIDA and DDA for allotment of a suitable land for construction of an independent building to house OIDB and its grantee institutions. In response to OIDB's request, NOIDA has allotted a plot measuring 4 acres in Sector 73 at NOIDA. Rupees. 8.36 crore towards the cost of land along with one-year advance lease rent has already been paid by OIDB. The land has also been registered in the name of OIDB.

Action has been initiated for appointment of Architect and contractor for construction of building and also OADB's Engineers for supervising the construction job of the building.

## 8. Assistance during the current financial year

The organization-wise details of funds made available to the oil companies for their Plan/Non-Plan projects implemented during the year 2005-06 are given below: -

		(Rs. in crore)
Sl.No	Name of the company	Loans released
1.	Hindustan Petroleum Corporation Limited (HPCL)	450.00
2.	Bharat Petroleum Corporation Limited (BPCL)	250.00
3.	Numaligarh Refinery Limited (NRL)	60.00
<b>Total</b>		<b>760.00</b>



### 8.1 Hindustan Petroleum Corporation Limited : Loan of Rs.450 crore

An amount of Rs.450 crore was made available by OIDB to M/s Hindustan Petroleum Corporation Limited during the financial year 2005-06 for utilization towards the following plan projects:

#### (i) Mumbai Refinery Green Fuels and Emission Control Project –Rs. 250 crore

HPCL has undertaken the above mega project at an approved cost of Rs.1850 crore (Revised) to meet the MS /HSD of Euro-III grade in Metro/Mega cities and Bharat stage-II grade in the rest of the country. The project also envisages enhancing refining capacity from current level of 5.5 MMTPA to 7.9 MMTPA. Refinery has already installed and commissioned DHDs 2<sup>nd</sup> reactor in May, 2005 which facilitated to upgrade their HSD production to EURO-III grade. The major facilities proposed under this project to upgrade the MS to EURO-III grade and enhance crude refining capacity are NHT/CCR, Isomerization unit, FCC Gasoline Hydrotreater unit with associated auxiliaries and revamp of existing CDU-1/VDUs and FCC Units. The project is expected to be completed mechanically by December 2006. The OIDB advanced a concessional loan of Rs.250 crore at an interest rate of 6.42- 6.46% p.a. during the financial year 2005-06 as per the recommendations of OIDB's Standing Committee.

**(ii) Visakh Refinery clean Fuels Project – Rs. 200 crore**

Similarly Visakh Refinery of HPCL has undertaken Clean Fuels Project at an approved cost of Rs.2147.80 crores (Revised) to meet the MS/HSD of Euro-III grade in Metro/Mega cities and Bharat Stage-II grade in rest of the country. Under this project, it is also envisaged to increase the refining capacity to 8.33 MMTPA from current level of 7.5 MMTPA. The major facilities proposed under this project are NHT/CCR/NIU/FCC NHT in MS block, Fuel Gas De-sulphurization project and revamp of existing FCCU-II & DHDS units. The project is expected to be completed mechanically by December 2006. The OIIB advanced a concessional loan of Rs 200 crore at an interest rate of 6.42- 6.46% p.a. during the financial year 2005-06 as per the recommendations of OIIB's Standing Committee.

**8.2 Bharat Petroleum Corporation Limited : Loan of Rs.250 crore**

Bharat Petroleum Corporation Limited is an integrated Oil Company engaged in refining of crude oil and marketing of petroleum products and petrochemical feed stocks. It has also diversified into the upstream sector for exploration of oil and gas in India and abroad. An amount of Rs.250 crore was made available to the company as loan for the following projects:

**(i) Refinery modernization Project (RMP)- Rs. 50 crore**

RMP has been implemented at Mumbai Refinery with an objective to upgrade the Refinery facilities for producing environment friendly products in line with the future specifications and also for reducing source emissions (SO<sub>2</sub>) from the refinery. The project has been successfully completed during the year 2005-06. These new facilities have been designed for improved light and middle distillate yield and energy efficiency of the main processes and also enhancing the crude oil processing capacity to 12 MMTPA from an existing level of about 8.9 MMTPA. An amount of Rs.50 crore was made available by OIIB to BPCL during the current financial year for the said project.

**(ii) Lube Oil Base Stock (LOBS) facilities at Mumbai Refinery – Rs.50 crore**

The project envisaged setting up of facilities to produce 180 TMT/PA of high performance Lube Oil Base Stocks (LOBS) at Mumbai Refinery. The plant will have capability to produce three different grades of LOBS to meet the captive and domestic market demands. The approved cost of the project is Rs.371 crore. The project has been mechanically completed in February,

2006. OIIB disbursed an amount of Rs.50 crore to the company during the year 2005-06 for the said project.

**(iii) Extension of Mumbai Manglia (Indore) Pipeline to Piyala with a feeder pipeline to Bijwasan (Delhi) – Rs.150 crore**

BPCL's Board had approved the proposal for extending the Mumbai Manglia pipeline to Piyala with a feeder pipeline to Bijwasan (Delhi). The project envisages extending the Mumbai Manglia pipeline to Piyala for economic transportation of MS/HSD and SKO to Northern region. The designed capacity of the pipeline is 3.5 MTPA and the approved cost of the project is Rs.807.46 crores. BPCL availed a loan assistance of Rs.150 crore from OIIB during the current financial year towards the above project.

**8.3 Numaligarh Refinery Limited- Loan of Rs. 60 crore**

Numaligarh Refinery Limited (NRL) was established in April, 1993. Numaligarh Refinery, popularly known as "Assam Accord Refinery" has been set up as a grass root refinery at Numaligarh in the District of Golaghat (Assam) in fulfillment of the commitment made by Government of India in the historic "Assam Accord" for providing the required thrust towards industrial and economic development of Assam. Both the refinery and the marketing terminal projects were completed at the approved project cost of Rs.2724 crore and commercial production commenced from 1<sup>st</sup> October 2000.

OIIB has extended a loan assistance to this developmental project to the tune of Rs.1334 crore during the period from 1993-94 to 1999-2000 and also participated in the equity to the extent of 10% amounting to Rs.90.80 crores in the year 1999-2000. In order to achieve consolidation and growth, the refinery has undertaken a number of projects for implementation during 10<sup>th</sup> Five Year Plan. One such project is Motor Spirit (MS) Project at an anticipated cost of Rupees 296 crore. The project is currently under commissioning. During the year 2004-05 & 2005-06, OIIB provided the loans of Rs.63.83 crore and Rs.60 crore respectively for funding the cost of the project.

**9. Grant in aid for R&D Activities**

Section 6 of Oil Industry (Development) Act, 1974, inter-alia, provides that the Board may render assistance for scientific, technological, economic research that could be directly or indirectly useful to oil industry. Hydrocarbon Vision 2025 also mentions that sufficient resources may be made available for appraising the unexplored/partly explored acreages through Oil Industry Development Board cess and other innovative resources mobilization approaches.

### a) Regular Grantee Institutions

The OIBD has been providing grant in aid to five organizations namely Directorate General of Hydrocarbons (DGH), Petroleum Conservation Research Association (PCRA), Centre for High Technology (CHT), Oil Industry Safety Directorate (OISD) and Petroleum Planning and Analysis Cell (PPAC) on continuous basis as per the resolutions/directions of the Central Government for carrying out their activities.

#### Statement showing headwise expenditure incurred by regular grantee institutions of OIBD during 2005-06.

Name of the Regular Grantee Institutions	Amount (Rs. In Crore)			
	Revenue expenditure	Capital expenditure	Expenditure on R&D / E&P Activities	Total expenditure
DGH				
PCRA				
CHT				
OISD				
PPAC				

### (b) Grants for R&D activities

#### Upstream Sector

In respect of OIBD grant in aid related to upstream sector, a Sub-Committee comprising of Joint Secretary (Exploration), Secretary, OIBD and representatives from DGH, ONGC, OIL was constituted by OIBD Board in the year 2001 to examine these proposals in the first instance and give its recommendations. The recommendations of the Sub-Committee are submitted before the OIBD Board for taking a suitable decision. The projects that are approved by OIBD Board with an outlay of more than Rs.25 lakh are sent to Central Government for conveying its approval before release of grant in terms of Rule 24 of OIBD Rules. Since 1998, the OIBD Board/Central Government has approved more than 50 projects at an estimated cost of more than Rs.160crore. Out of this, 38 projects have been completed. Further, 4 projects have been dropped on technical grounds on the recommendations of OIBD's Sub-Committee after review of progress of R&D projects. Remaining projects were under implementation as on 31.03.2006.

#### Review Committee

The OIBD Board has constituted a Sub-Committee comprising of JS (E), Ministry of Petroleum & Natural Gas, DG, DGH and Secretary, OIBD to review the

progress of the OIIB funded projects in the upstream sector. This Committee meets from time to time and reviews the progress of the projects in the upstream sector. The recommendations of the Sub-Committee given in its various meetings are presented before OIIB Board for consideration and appropriate directions for implementation of the projects in a more efficient manner wherever necessary.

### **Downstream Sector**

The projects related to downstream sector are considered and recommended by Scientific Advisory Committee (SAC) on Hydrocarbons set up by the Ministry. These projects are primarily funded through CHT. Dr. R.A.Mashelkar who is also the head of Council of Scientific & Industrial Research (CSIR) heads the Scientific Advisory Committee. The members representing SAC are eminent persons of various fields of Oil Industry including Secretary, OIIB who have great insight into the programmes/activities that come up before them for examination and recommendations. The tenure of this Committee is two years after which Ministry of Petroleum & Natural Gas reconstitutes it. Scientific Advisory Committee on Hydrocarbons also reviews progress of R&D projects in the downstream sector in its meetings. The expenditure of the non-official members attending the meeting of SAC is borne by OIIB.

### **National Gas Hydrate Programmes(NGHP)**

National Gas Hydrate Programme is of national importance considering India's phenomenal and growing energy demand. The programme was initiated in 1997 with a Steering Committee and a Technical Committee of NGHP for implementing the programme. Based on the review of seismic data by the Technical Committee, two areas in Indian waters, one along East Coast and other on West Coast have been identified as "Model Laboratory Areas" for further R&D work. DGH is the coordinator of the programme. Review of various projects under this programme is done by a Steering Committee set up by the Ministry of Petroleum & Natural Gas. OIIB has, up to 31.03.2006, given grant to the tune of Rs.26.40 crore against a sanctioned amount of Rs.188 crore approximately for various activities under NGHP.

### **Hydrogen Corpus Fund**

The Ministry of Petroleum & Natural Gas has set up a Hydrogen Corpus Fund in the wake of interest across the world on the use of hydrogen as an auto fuel. The Government of India is of the view that the Indian Oil Industry should also work synergistically and in continuous coordination with reputed technological institutions to make headway in this frontier area. With this object

in mind, the Ministry has set up a hydrogen corpus fund of Rs.100 crore with contribution from Oil PSUs/OIDB as follows:

1. OIIB Rs.40 crore
2. ONGC, IOC, GAIL Rs.16 crore each
3. HPCL, BPCL Rs. 6 crore each.

Indian Oil Corporation Limited(IOCL) is nominated as the coordinator of the programme whereas the OIIB is directed to maintain the Bank Account of the fund. OIIB has so far contributed an amount of Rs.10 crore to the corpus.

### **Commercialization of R&D activities**

While according priorities for R&D activities for the development of oil industry, OIIB is making efforts to ensure that the successful projects are commercialized/patented so that the entire oil industry may be benefited and also the OIIB may get back its investments. The R&D institutes are requested to forward a status report in respect of commercialization/patenting of successful projects funded by OIIB.

### **c) Assistance to Technical Institutes/CSIR Laboratories**

OIIB has been providing assistance to educational institutes as well, for creating infrastructure for training and research such as IIT Delhi, CIPET, Chennai, RRL Jorhat, NGRI, Hyderabad, IIP, Dehradun etc.

## **10. Grants released during the current financial year**

The OIIB released following grants during the year 2005-06: -

<b>SL.No.</b>	<b>Grantee Institutions</b>	<b>Rs in crore</b>
1.	D.G.H.	33.87
2.	P.C.R.A	19.85
3.	CHT	5.04
4.	OISD	4.20
5.	PPAC	7.47
6.	ONGC Ltd. (i) R&D	3.51
7.	Government of Rajasthan, Deptt. Of Petroleum	0.25
8.	N.G.R.I.	1.15
9.	IIP, Dehradun	1.00
10.	TERI	0.10
11.	IIT, Delhi	0.25
12.	National Gas Hydrate Programme	12.82
<b>Total</b>		<b>89.51</b>



Graph

### **10.1 Directorate General of Hydrocarbons (DGH) - Grant of Rs. 33.87 crores**

Directorate General of Hydrocarbons (DGH) was set up by a Government Resolution in 1993 with the objective to promote sound management of the Indian petroleum and natural gas resources having a balanced regard for environment, safety, and technological and economic aspects. In consonance with this objective, DGH is engaged in opening up of new/unexplored or poorly explored areas for future exploration, identification of blocks for offer under NELP and CBM rounds, preparation of all data packages and basin docket for blocks, review of reservoir performance of major fields, contract management of various exploration blocks and discovered fields awarded to NOCs and private and JV Companies under the production sharing contracts (currently 165 contracts) and review of exploration and exploitation activities of all the companies operating in the country in the upstream sector, preparation of National Archive of E&P database, upstream sector Safety and Environmental audits of exploration blocks and discovered fields under PSCs. DGH is fully funded by OIIB. During the year 2005-06, OIIB released a grant of Rs.33.87 crore to DGH for following activities:

- I. Promotion of New Exploration Licensing Policy-V (NELP) activities in India and abroad.
- II. Aeromagnetic survey in southern part of Himalayas.
- III. Analysis of Aerial Images Remote Sensing.
- IV. Geo-chemical surveys in West Coast of India.
- V. Marine Seismic, Magnetic-telluric in Kutch Basin.
- VI. Onland 2D Seismic Survey in Kutch Basin.
- VII. Magnetic-telluric Survey in Narmada Tapti
- VIII. DGH's administrative expenditure.

During the year 2005-2006, DGH made significant progress in the following areas:

### **Opening up of new areas for future exploration**

- ❖ About 805 GLK of 2D seismic data was acquired, processed and interpreted in the unexplored area of Chambal Valley falling in the Western part of Madhya Pradesh and adjoining Rajasthan. A block has been found in this unexplored area for the first time for offer under NELP-V round.
- ❖ DGH has initiated High Resolution Aero magnetic Survey for the first time in India in the areas of Punjab, Himachal Pradesh, Uttranchal, Uttar Pradesh through National Remote Sensing Agency, Hyderabad. An area of about 200,000 sq.km. is planned to be covered over 3 years period. So far an area of about 24723 sq.km. has been completed.

### **Implementation of New Exploration Licensing Policy (NELP)**

#### **NELP-V**

DGH identified 20 exploration blocks (onland-12, shallow water- and deepwater-6) and the same were offered by the Govt. of India under the fifth round of New Exploration Licensing Policy (NELP-V). Total 69 bids were received. About 49 companies (including 26 foreign companies) participated in the bidding process. Contracts for all the 20 awarded blocks have been signed. PEL has been awarded in 12 blocks and exploration work has been initiated.

#### **NELP-VI**

A total of 55 blocks have been identified for NELP-VI round. DGH has prepared information Dockets for 17 basins and 30 Data Packages for the offered blocks. NELP-VI round was launched on 24<sup>th</sup> February 2006 followed by Road Shows at Delhi, London, Huston, Perth and Dubai till 24<sup>th</sup> April 2006. A total of 64 companies have seen the data in various data rooms. The bid closing date for NELP-VI round bids is 15<sup>th</sup> September 2006.

### **Reservoir and Production Monitoring and Field Development Studies**

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

DGH also reviewed developmental plan of Gauri oil, Hazira oil, Bakrol, Indrora and Lohar fields and also Mangala, Aishwariya, Rageshwari and Saraswati, Amguri field. Progress of development project of Dhirubhai-I& III fields was continuously monitored.

### **Redevelopment plans of Mumbai High North and South and monitoring of IOR/EOR project of ONGC**

The Redevelopment plans of Mumbai High North and South are under implementation by ONGC. DGH is continuously monitoring the field performance based on Redevelopment Plans, progress of EOR pilot projects, G&G and other studies on regular basis. To analyze the field performance of Mumbai High, the well data for oil, gas and water production and water injection are being monitored in DGH. Performance Plots for Mumbai High North, South and Neelam fields have been prepared.

### **Coal Bed Methane (CBM):**

#### **A. (CBM – I&II)**

Government of India has awarded 16 CBM blocks for exploration and production of Coal Bed Methane in different coalfields of India. Contracts of 16 awarded CBM blocks is continuously monitored at DGH. The commercial production of CBM from some of these awarded blocks likely to start by 2007. These blocks may yield a peak production of 23 MMSCMD of CBM in the country.

#### **B. (CBM – III)**

DGH identified 10 CBM blocks in different coal/lignite fields of the country to offer under 3<sup>rd</sup> round of CBM bidding for exploration and production of CBM. Information Dockets and Data Package for Promotional materials i.e. Model Contract for CBM, Bid Evaluation Criteria (BEC) Bid Format (BE) etc. has been prepared.

Pre road show meetings were held at London (U.K.), Houston (USA) and Calgary (Canada), CBM-III bidding round was launched by GOI on 24-2-06 for inviting bids for 10 CBM blocks with bid closing data of 30<sup>th</sup> June, 2006.

### **National Gas Hydrate Programme (NGHP):**

Gas Hydrates are naturally occurring solids comprised of water molecules that form a rigid lattice of cages around the methane gas molecules of low molecular weight. The gas hydrates occur below the seabed in deep oceans as well as in the permafrost regions of the world. National Gas Hydrate Programme is of

national importance considering India's phenomenal and growing energy demand. The programme was initiated in 1997 with a Steering Committee and a Technical Committee of NGHP for implementing the programme. Based on the review of seismic data by the Technical Committee, two areas in Indian waters, one along East Coast and other on West Coast have been identified as "Model Laboratory Areas" for further R&D work. DGH is the coordinator of the programme.

Till date, since its inception, a larger number of seismic data covering entire offshore areas of the country has been studied including special processing of larger data for identification of gas hydrates signatures.

### **Essentiality Certificates**

DGH issued Essentiality Certificates, which enabled the contractors to import goods at zero custom duty, required for petroleum operations. During 2005-06, DGH has issued 8976 Essentiality certificates worth Rs. 7122 crores.

### **10.2 Petroleum Conservation Research Association (PCRA) -Grant of Rs. 19.85 crore**

Petroleum Conservation Research Association (PCRA) is a society under Ministry of Petroleum and Natural Gas with the primary objective of promoting conservation of petroleum products in the major sectors of transport, industry, agriculture and households. In pursuance of this objective, PCRA is engaged in creating and sustaining mass awareness about the importance of petroleum conservation throughout the country and assisting and encouraging organizations and individuals to reduce consumption through efficient utilization of the petroleum products. Responding to the changing energy and environment scenario, PCRA has diversified its activities to cover gas, bio-fuels, renewable energy sources and environment protection. Action has also been taken to establish close linkages with organizations engaged in energy conservation efforts in the country to achieve synergy at the national level.

During the year 2005-2006, OI&D released a grant of Rs. 19.85 crore to PCRA for various Field Activities, Education Campaigns, R&D Activities, computerization etc including administrative expenditure. With the assistance, PCRA undertook various oil conservation schemes in major sectors of the economy i.e. transport sector, industrial sector, agriculture sector and domestic sector, glimpse of these activities is given below:

#### **Field Activities (Expenditure Rs. 358.84 lacs)**

During the year 2005-06, a large number of sector-wise activities were undertaken by PCRA engineers at the premises/establishments of consumers. These include 281 energy audits, 118 fuel oil diagnostic studies, 160 SSI, 533

follow-ups, 215 institutional training programmes and 269 workshops and clinics for the industrial sector. In addition to this consumers meets and 51 seminars were conducted. Similarly, for the transport sector 1042 driver training programmes, covering 15725 drivers and 198 model depot projects were conducted.

As part of its diesel conservation efforts in the Agriculture sector, PCRA organized 99 Bio-diesel workshops & 100 Foot Valves replacements to practically show the farmers the energy efficiency difference between standard ISI marked LIPs and non-spec pumps. To increase awareness, PCRA also organized 29 'kisan melas' and 50 exhibitions. Field activities undertaken in the domestic sector covered 653 workshops and clinics, 1561 youth programmes, 237 van publicity campaigns and 2 Action Group Meetings.

### **Education Campaign (Expenditure Rs. 942.92 lacs)**

During 2005-06, education campaign activities focused on the variety of awareness campaigns through the use of electronic, print and the outdoor media.

PCRA continued to make use of TV and Radio to reach the masses with vital information on importance, need, benefits and the ways of achieving energy efficiency in different sectors of the economy. Different modes successfully adopted to make the information reach people were, the innovative success stories, creative performances by children on energy and the environment related issues, celebrity messages, quizzes, issue based programmes, messages from subject experts etc.

A few of the subjects dealt with in these programmes included coal bed methane, bio-gas from jatropha, energy from waste through bio-methanation, energy efficient roasting, efficient use of solar energy, integrated bio-diesel plant, bio-diesel purchase policy and its agro practices, energy conservation in textile, glass & zinc industries etc.

The outdoor media such as Bus panels, Bus queue shelters, hoardings, pole kiosks etc. were also used to carry the messages on conservation and environment protection in vernacular languages for the benefit of masses especially in the semi urban and the rural sectors.

### **Research & Development (Expenditure Rs. 139.78 lacs)**

PCRA is striving towards Research & Development leading to Energy Efficiency improvement and energy conservation by formulating strategies and promoting measures for accelerating conservation of petroleum products focused at

environment protection, energy security and sustainable development of India. It promotes research, development and deployment efforts by supporting and facilitating adoption and dissemination of fuel-efficient technologies. PCRA works for substitution of petroleum products with alternate fuels. Its R&D activities are also aiming at establishing synergistic institutional linkages at the national level so that indigenous technologies find market for their commercialization. Two of the successfully completed R&D projects have been commercialized and licensed. In addition PCRA has filed 3 patents jointly with the concerned research institute on whom the project was sponsored.

As on 31<sup>st</sup> March 2006 a total of 15 R&D projects amounting to Rs. 129.59 lakh have been sponsored to reputed research institution.

The following R&D projects were executed during 2005-06 :

1. **Design and development of energy efficient tunnel kiln for white ware industry:** The project was sponsored on RDCIS, SAIL, Ranchi at a cost of Rs. 42.66 lakh. A saving of 15% fuel, reduction in GHG emission, better quality of product, increase in productivity has been envisaged in the project report.
2. **Applications of LPG & Natural Gas in Food Industry :** The project was sponsored on CFTRI, Mysore at a cost of Rs. 17.98 lakh. A saving of fuel 10- 20% , reduction in emission & better quality of food is expected on adoption of this technology.
3. **Design and development of an energy efficient control system for humidification plants in textile mills :** The project was sponsored on SITRA, Coimbatore, Tamil Nadu at a cost of Rs.19.15 lakh. On adoption of this technology, a 20% saving of energy in humidification plant in Textile mills is estimated in the report.
4. **Design / development of optimised Energy saving control systems for Overhead cleaners used in Textile Industry :** The project was sponsored on SITRA, Coimbatore, Tamil Nadu at a cost of Rs.19.90 lakh. On adoption of this technology, a 20% saving of energy in overhead cleaners in Textile mills is estimated in the report.
5. **Evaluation of 4 nos. of LPG saving devices"SONA-ESD" on commercial burners :** The project was sponsored on IIP,Dehradun at a cost of Rs. 7.89 lakh. As indicated in the report, there will be a 20% saving of LPG. This device can be used in kitchen of large / commercial establishments.
6. **Development of petrol - alcohol - water micro emulsion fuel as substitute for petrol & ethanol - blended petrol :** The project was sponsored on IIT, Delhi at a cost of Rs.17.61 lakh. The report indicates that Usage of 90% ethanol directly for mixing with petrol will save energy and reduce emission.

7. **Studies on passenger cars for fuel efficiency at different speeds** : The project was sponsored on IIP, Dehradun at a cost of Rs.4.5 lakh. The project would help to work out the optimum speeds for better fuel efficiency.
8. **Estimation of fuel loss at New Delhi Railway station on Paharganj side** : The project was sponsored on CRRI, Delhi at a cost of Rs.2.916 lakh. This survey would give an insight into traffic management. City planners would be benefited in decongesting traffic flow resulting in fuel saving & pollution reduction.
9. **Estimation of fuel loss during idling of vehicles at selected intersections of Delhi** : The project was sponsored on CRRI, Delhi at a cost of Rs. 10.076 lakh. The estimation of fuel-loss at select intersections will provide an important input for better traffic management and fuel saving results.

### **National Bio-Fuel Centre (NBC)**

M/s PCRA has set up a National Bio-Fuel Centre. The activities that are proposed to be carried out through NBC are as under :

- (i) To organize multi-media awareness campaigns with assistance from Doordarshan, All India Radio and the Print Media.
- (ii) To establish know how centers, cooperative societies and develop Nurseries.
- (iii) To provide all information related to biofuels available to common man at one designed point by various means such as in person, on telephone, e-mails, website, by post, and other means of communication.
- (iv) To collect & disseminate information about biofuel at National & International levels.
- (v) To provide details of equipments & machinery required for production of biofuel.
- (vi) To provide details on the plantation of jatropha and other plants.
- (vii) To develop an entire chain from suppliers of seed, cultivators, purchasers, extractors, refiners, end-users.
- (viii) To mobilize a large number of stakeholders including individuals, communities, entrepreneurs, oil companies, business, industry, banks, Government, its related institutions and establish linkages.

### **10.3 Centre for High Technology (CHT) –Grant of Rs.4.95 crore**

Centre for High Technology (CHT) was established by Ministry of Petroleum & Natural Gas (MOP&NG) in 1987 as a specialized agency of the oil industry to assess futuristic requirements, develop and adopt technologies in the

field of refinery processes, petroleum products, additives, storage and handling of crude oil, products and gas. OI DB is funding the activities of CHT since its inception. During the year 2005-06, CHT received a grant of Rs. 4.95 Crores, which includes an amount of Rs. 1.78 crores against R&D projects and special studies.

**Major activities of CHT during the year 2005-06 are as under.**

**1.0 Performance Evaluation & Benchmarking study of PSU Refineries through M/s Shell Global Solution International (SGSI), Netherlands:**

The objectives of the study was to assess the performance of 15 PSU Indian Refineries vis-à-vis International/pacesetter refineries and to identify the gaps so that necessary measures could be taken to match the international standards. The study covered all major areas of refinery operations, which have a bearing on profitability margin.

The unique aspect of the study was that apart from overall refinery level, performance of major individual process units was also benchmarked against the pool of refineries across the world. Areas identified for improvements were Energy and Loss, Asset Integrity and Reliability, aligning of skills and competencies at all levels of the organization, development of the overall refinery and distribution network and the product qualities to fully optimize and integrate the refinery infrastructure.

The job was started in October 2004 and the final report was submitted by SGSI in August, 2005. The report gives ranking of all the 15 Refineries in respect of various key performance areas among Peer Group, Regional & Global level, gaps and potential areas for improvement.

Similar study in respect of 15 PSU refineries for the year 2004-05 was also undertaken through SGSI. The study has been completed and the report submitted in February, 2006.

An amount of Rs. 127.09 Lakh has been released by CHT/OI DB against the benchmarking studies till 31-3-2006.

**2.0 Energy Audit of CPCL Refinery in association with EIL:**

In-depth Energy Audit of Manali Refinery of CPCL was started in August, 2004 and Part-I and Part-II of the final reports under Phase-I was submitted in December, 2005 and March, 2006 respectively. The areas identified by the study group for energy improvement are heater efficiency, steam consumption, crude

preheat train, furnace efficiency, cooler inlet temperature reduction, hybrid vacuum ejector system, supplementary firing in HRSG, improved condensate recovery optimum operation of GTG & STG and optimization of internal power and steam consumption, minimization of PRDS operation etc.

### **3.0 R&D Projects completed during 2005-06:**

#### **3.1.1 Catalyst Development for Isomerisation of Light Naptha (IIP/ IOCL- R&D):**

The objective of the project is to develop a catalyst for C<sub>5</sub>/C<sub>6</sub> Isomerisation and to study its performance for octane gain and benzene reduction to achieve targeted yield by using the specified feedstock. The project has been completed during 2005-06.

Project cost is Rs. 55.44 Lakh, which comprises contribution of Rs., 41.58 Lakh by CHT/OIDB and Rs. 13.86 Lakh by IOCL-R&D Centre. The total amount of Rs. 37.42 Lakh has been released by CHT/OIDB till 31-3-2006 for this project.

#### **3.1.2 Studies on the Effect of Gasoline Composition (Benzene, Aromatics and Olefins) on Exhaust Emission from Two Wheelers (IIP/ IOCL- R&D)**

The objective of the project is to study the effect of gasoline composition i.e. Benzene, Aromatics & Olefins on exhaust emissions of THC, CO, NO<sub>x</sub> and Benzene from 2-stroke/ 4-stroke engine powered two-wheelers and also to study the effect of these properties on intake system. The project has been completed in December, 2005.

The estimated project cost is Rs. 153.00 lakh. The total amount of Rs. 77.34 Lakh has been released by CHT/OIDB till 31-3-2006 for the project.

#### **3.1.3. Development of Regenerative Process for SO<sub>2</sub> Removal from Lean Gas Streams (IIP/EIL):**

The objective of the project is to develop a regenerative process for SO<sub>2</sub> removal from lean gases and recovery using polar organic compounds that are weak bases allowing SO<sub>2</sub> absorption, as well as solvent regeneration with low heat duties. The project has been completed in January, 2006.

The estimated project cost is Rs. 97.36 Lakh. The total amount of Rs. 41.52 Lakh has been released by CHT/OIDB till 31-3-2006 for the project.

## **3.2 On-going R&D Projects during 2005-06:**

### **3.2.1 Development of Bio-catalytic Process for Desulfurisation of Diesel (IIP/ IOCL –R&D/ IIT, Delhi):**

The objective of the project is to develop bio-desulfurisation process for treatment of hydro-treated diesel and cracked distillates for reduction of sulfur level from 2500 ppm to 100 ppm in the finished product. Experiments to check the effectiveness of the biocatalyst in laboratory conditions is going on at IIP.

The estimated project cost is R. 122.59 Lakh, which comprises contribution of Rs. 89.59 Lakh by CHT/OIDB and Rs. 33.00 Lakh by IOCL-R&D Centre. The total amount of Rs. 80.25 Lakh has been released by CHT/OIDB till 31-3-2006 for this project.

### **3.2.2 Development of Technologies for Synthetic Aviation Lubricants from Renewable feed stocks to provide strategic, commercial and self-reliance advantages to India (IICT/IOCL-R&D/NAL/HAL/GTRE/ CEMILAC):**

The objective of the project is to develop Synthetic Aviation Lubricants (SALs) Technology for lubricants of aircraft engines and ancillary systems including turbo prop and turbo jet air crafts.

Samples from the 5 kg Bench scale facilities have been sent to IOCL-R&D for further testing and formulation. Pilot plant facilities for 100 kg batch size base stock is expected to be commissioned in October, 2006.

The estimated project cost is Rs. 1732.28 Lakh, which comprises contribution of Rs. 844.90 Lakh by CHT/OIDB and Rs. 188.40 Lakh by DRDO, Rs. 150.00 Lakh by CSIR and Rs. 548.98 Lakh by Research Institutes. The total amount of Rs. 339.90 Lakh has been released by CHT/OIDB till 31-3-2006 for this project.

### **3.2.3 Development of Feed Nozzle System and Study of its Effect on Performance of FCC Riser Reactor (EIL):**

The objective of the project is to develop and test a feed nozzle system for FCC riser and also to develop a CFD based model for FCC riser reactor with capability of predicting effect of feed nozzle system on FCC conversions and yield pattern. CFD model for predicting the performance of riser has been developed. Procurement, erection and commissioning of facilities are expected by end 2006.

The estimated project cost is Rs. 92.00 Lakh. The total amount of Rs.16.56 Lakh has been released by CHT/OIDB till 31-3-2006 for this project.

### **3.2.4 Development of Know-How for Supercritical Solvent Recovery in PDA Technology (IIP/ EIL/ HPCL):**

The objective of the project is to develop operating parameters and to acquire process design capabilities for separation of propane solvent from DAO phase under super critical conditions.

EIL is studying the option of generating the data on main PDA unit of HPCL under super critical conditions instead of pilot plant. As per prima facie study done by HPCL, the data under super critical conditions can be generated in the existing PDA plant after some simulation study by EIL.

The estimated project cost is Rs. 93.00 Lakh, which comprises contribution of Rs. 63.00 Lakh by CHT/OIDB and Rs. 30.00 Lakh by HPCL. The total amount of Rs. 22.50 Lakh has been released by CHT/OIDB till 31-3-2006 for this project.

### **3.2.5 Development of Catalyst for Ultra Deep Desulphurisation of Gas Oil (IIP):**

The objective of the project is to develop a catalyst for Producing Ultra Low Sulfur (50 ppm) Diesel from 2500 ppm Sulfur Gas Oil. Efforts will be made to achieve 25-30 ppm Sulfur level. Catalyst has been developed to achieve the targeted level of sulfur but at higher temperature of 350-360° C.

The estimated project cost is Rs. 53.20 Lakh. The total amount of Rs. 43.29 Lakh has been released by CHT/OIDB till 31-3-2006 for this project.

### **3.2.6. Development of Polymer Modified Bituminous Binder (IIP/IOCL-R&D CPCL):**

The objective of the project is to develop improved quality Bitumen through incorporation of polymeric materials like SBS, EVA and used rubber tires using feedstock available at CPCL, Chennai. The developed product will aim at making the polymer modified bitumen corresponding to conventional 60/70 paving grade to meet specifications as per IRC (SP-53, 1999) and also International Specifications –SHRP (USA).

Physico-chemical characteristics of different combinations of PD Asphaltic, BN extracts and short residue along with polymers like SBS, EVA and crumb rubber were generated and found to be encouraging. A 1 km test tract is to be laid after clearance from PWD for testing the bitumen.

The estimated project cost is Rs. 39.33 Lakh, which comprises contribution of Rs. 29.33 Lakh by CHT/OIDB and Rs. 10.00 Lakh by IOCL-R&D Centre. The total amount of Rs. 16.65 Lakh has been released by CHT/OIDB till 31-3-2006 for this project.

**3.2.7. Add-on facilities for development of Trickle Bed Reactor Technology: Large Scale hydrodynamic studies for distributor and re-distributor/ quench system (EIL/ IOCL-R&D/ IIT, Delhi)**

The objective of the project is to carryout research work in large diameter column on add-on facilities for development of Trickle bed technology for addressing various aspects of hardware. This included development of Vapour/ liquid distributor and re-distributor/quench system for high-pressure system. Data generation in 12" column has been completed. Design, fabrication of internals for 1.2 m column is in progress.

The estimated project cost is Rs. 135.48 Lakh. The total amount of Rs. 22.65 Lakh has been released by CHT/OIDB till 31-3-2006 for this project.

**3.2.8 Development of process for Oxidative Desulfurisation of Diesel (IIP):**

The objective of the project is to develop laboratory scale process and know-how for oxidative desulphurisation of diesel having 500-ppm sulfur to less than 50 ppm using stable oxidant and catalyst. Various catalysts were prepared for studying the oxidation of model sulfur compounds present in HDS diesel using hydrogen peroxide as oxidant.

The estimated project cost is Rs. 68.20 lakh. An amount of Rs. 26.82 Lakh has been released by CHT/OIDB till 31-3-2006 for this project.

**3.2.9 Assessing the Impact of Regulations on Ambient Air and on Health in Delhi under Phase – 1 (TERI):**

The objective of the project is to analyse the air quality in conjunction with weather parameters to measure the air quality improvements, estimate the emissions of critical air pollutants in Delhi, to assess the health risk and benefits of emission reduction based on secondary information and to assess the available baseline studies and morbidity data to design a suitable epidemiological study on health impacts of air pollution to be carried out in the next phase in the city of Delhi. Literature survey, Data collection and analysis is in progress.

The estimated project cost is Rs. 18.03 Lakh. An amount of Rs. 8.66 lakh has been released by CHT/OIDB till 31-3-2006 for this project.

#### **10.4 Oil Industry Safety Directorate –Grant of Rs.4.20 crore**

Oil Industry Safety Directorate (OISD) was set up in 1986 with the aim of formulation of standards and reviewing its implementation through safety audits to enhance safety level and reduce risk inherent with petroleum industry. OISD regularly conducts External Safety Audits of Exploration and Production installations refineries, gas processing plants, LPG Plants, POL Depots/terminals, and cross country pipelines to check compliance and to further improve safety systems. OISD also organizes safety workshops/training programmes for all oil/Gas installations across the country to share experiences, latest developments etc and to disseminate safety related information to industry personnel. OISD also evaluates the safety performance of Oil Industry Safety award instituted by Ministry of Petroleum & Natural Gas. During the year under report, OISD provided an amount of Rs. 4.20 crore to OISD to carry out work related to standardization and their review, safety audits, accident investigations, training programmes/workshops etc.

During the year, complete review of 2 existing standards of OISD were approved by the Safety Council, carried out External Safety Audit of the 40 Exploration & Production Installations, 5 Refineries, 4 Gas Processing Plant, 8 LPG Bottling plants/4 POL Depot/ Terminal and 1746 kms of Cross Country Pipelines, Surprise Safety Audits in 7 Refineries, 2 gas processing plants, 3 LPG Bottling Plants and 7 POL Depot/terminals, Pre-Commissioning inspections of 5 projects in Refineries, 5 LPG Bottling plants/ 3 POL Depot/Terminals and 757 km of cross country pipelines. OISD also organized safety workshops.

#### **International Co-operation/ Mutual Tie ups**

Initiatives have been taken to identify the areas for co-operation/ mutual tie ups with international bodies like NPD/PSA of Norway, MMS of US, HSE, UK, Shell Global etc. The Memorandum of Understanding (MOU) was signed with NPD & DGH for co-operation in HSE areas between PSA and OISD for upstream hydrocarbon activities.

#### **10.5 Petroleum Planning and Analysis Cell (PPAC) –Grant of Rs.4.32 crores**

Subsequent to the dismantling of the Administered Pricing Mechanism (APM) in the petroleum sector with effect from 1st April, 2002 Oil Coordination Committee was abolished and a new cell, Petroleum Planning & Analysis Cell (PPAC) was created w.e.f. 1st April, 2002 under the Ministry of Petroleum and Natural Gas.

As per Government's directives, the expenses of the cell are borne by OIIB by way of grant.

During the year under report, Oil Industry Development Board released a grant of Rs.4.32 crore for meeting the expenditure of PPAC.

The functions of the PPAC are, administration of subsidy on PDS Kerosene and domestic LPG, administration of freight subsidy for far flung areas, maintenance of Information data bank and communication system to deal with emergencies and unforeseen circumstances, analyzing the trends in the international oil Market and domestic prices, forecasting and evaluation of petroleum import and export trends, operationalising the sector specific surcharge schemes, if any.

PPAC has organized following studies at the request of Ministry of Petroleum and Natural Gas. These are:

i) **Study to assess genuine demand and requirement of Kerosene**

As desired by the Ministry, a comprehensive study on genuine requirement of kerosene was commissioned in December, 2004 through NCAER and NCAER has submitted report to the Hon'ble Minister of Petroleum & Natural Gas in October, 2005.

ii) **Jan Kerosene Pariyojna**

Similarly, as decided by MoP&NG, diagnostic and impact studies on implementation of 'Jan Kerosene Pariyojna' are being conducted by NCAER. MoP&NG advised PPAC to bear the expenditure on these studies.

In addition to above studies, an exercise is underway to further improve collection of imports/exports data with the help of Ministry of Petroleum & Natural Gas. In this connection, discussions are on with Directorate General of Commercial Intelligence and Statistics (DGCIS) and Department of Revenue, Ministry of Finance. Significant progress has been achieved in this respect.

## **10.6 Oil and Natural Gas Corporation (ONGC) – Grant of Rs. 2.52 crore**

ONGC, a premier oil company of India in public sector, is actively engaged in exploration and exploitation of hydrocarbons. In the emerging global scenario, the competition is becoming fierce and the success will have to be earned by being efficient, innovative and by being a reliable supplier of quality products and services to consumers. With a view to keep pace with the global advancement in exploration, seven R&D institutes of ONGC are continuously researching for development of new ideas and concepts of exploitation and

exploration. Various R&D institutes of ONGC are carrying out R&D activities in the upstream areas of exploration, drilling, reservoir management, production, engineering and safety etc. OIBD has helped these R&D institutes in its activities by providing grant to a number of projects. Brief highlights of some of these projects are given below:

**i) Institute of Oil and Gas Production Technology (IOGPT)**

**a) Technology Development & Preparedness for Exploitation of Oil & Gas from Deepwater/Ultra Deepwater Prospects.**

The objective of the project is to bridge the technology gaps through the following:

- Identification of technology issues related to Ultra deepwater production technology with special reference to ONGC Ultra Deepwater fields.
- Address/apply these technologies through Concept Study Report (CSR) preparation and Front End Engineering Design Document for ICB with help of an experienced Consultant.
- Preparation of roadmap for acquisition/assimilation of these technologies, which involves capital investment.
- Absorption/Adaptation of know-how part to these technologies.

The project has been approved by OIB Board at an estimated cost of Rs.2.90 crore.

The contract for consultancy was awarded to INTEC Asia Pacific, Kuala Lumpur through ICB. Phase I was completed in September, 2005. Deliverables for Phase II & III have been delivered by the consultant. Phase IV is scheduled for completion by 30.06.2006. So far an amount of Rs.19 lakh has been released by OIBD.

**b) Design and Development of fracture stimulation technology for enhancement of hydrocarbon production from Indian reservoir.**

OIBD grant in aid of Rs.243 lakh for project titled having following scope of work :

- Procurement of software/hardware and lab equipments/chemicals.

The objective of the project is to enhance hydrocarbon production from Mumbai High and Wasna field of ONGC and technology transfer through acquisition of technology, hiring consultancy services and work association. The proposed pilot application of the technology in Mumbai High and Wasna

field would result in oil gain @ 200 bbls/day/well respectively. The project has been approved at a cost of Rs.2.43 crore.

Identification and correspondence with probable bidders had been completed for hiring of consultancy services. The case for hiring of consultant and technology transfer/work association was initiated in July, 2004. Tendering process is in progress. Procurement of software (FIELDPRO) completed. Reimbursement of Rs.26,43,325 for the same has been made by OIDB. Procurement of lab equipment (Rheometer) is under re-tendering process.

**c) Development of Improved Gas Lift Valve Technology.**

The objective of this project is to design and develop a modified, bellows operated Gas Lift Valve with a new convergent-divergent seat profile for better flow efficiency and pilot field application in two wells of ONGC. The project has been approved at a cost of Rs.1.65 crore.

The efficiency of a gas lift system depends mainly on the performance of gas lift valves installed in a well. The flow efficiency and flow regime of the valves at different injection pressures and tubing pressures is a critical factor which affects the gas throughput and consequently total liquid production from any gas lift well. Ideally, injection gas passage through a gas lift valve should be a critical flow to ensure stable gas lift operation. However, in the field, this criterion is difficult to fulfill because of large pressure differential requirement for maintaining critical flow with the conventional square edged port. It results in injection at shallower depth and consequent loss in production.

With this background, IOGPT has taken up an innovative R&D project with the help of OIDB funding, to improve the flow geometry through gas lift valve so that critical flow can be achieved even with small pressure differential across the Gas lift valve port.

Modified gas lift valves have been installed in two wells of Ankleshwar Asset (Ank-293 & G-310) for validation of expected benefits from this technology. Results are encouraging and a stable flow in the tubing with gas lift can be seen from the pressure chart.

Application for patent has been filed for the modified profile seats developed in this project. The total funds released till date amounted to Rs.58 lakh of which Rs.6 lakh were released during the year under report.

## **ii) Geo-data Process & Interpretation Centre (GEOPIC)**

### **Rock Physics Characterization of Bombay High Reservoir Fractured Basement: Mumbai High**

The project was approved by OID Board at an estimated cost of Rs.80 lakh. This collaborative project was taken with the objective to explore the feasibility of detecting and mapping fractures in crystalline basement of the Bombay High using core, well log and 3 D seismic data. This project was carried out in three phases. In phase-I, different data sets were collected and quality checked by plotting of log data, rock physics based cross-plots, visualization of velocities and ascertaining the accuracy of well locations. In phase-II, well and core data was used to explore the rock properties of fractured and un-fractured rocks. Various synthetic seismic signatures of these rocks were generated for understanding the impact of fractures and their intensity. Phase-III study has focused on generation of various seismic attributes and their integration with core, and logs using rock physics techniques for quantitative analysis of Basement fractures. It has been concluded from this study that fractures may generate measurable anomalies in seismic amplitude, frequency content and inverted acoustic and elastic impedances. However, their predictability will depend on the reliability of amplitudes, signal to noise ratio, the seismic resolution and the availability of far offset seismic data. An amount of Rs.75 lakh has been released by OIDB for the project of which Rs.59 lakh were disbursed during 2005-06.

## **iii) Institute of Engineering & Ocean Technology (IEOT)**

### **a) Non-Linear Dynamic Analysis of Deep water structures.**

This OIDB funded project of IEOT aimed at acquisition of state-of-art technology for the design and analysis of the deepwater structures. This project consisted of two areas :

- i) Conceptual design analysis of Deepwater floating structures and sub-sea modules.
- ii) Advanced riser & mooring analysis and design of deepwater pipeline.

M/s MARINTEK, Trondheim, Norway, member of world renowned SINTEF Group, was awarded the work of technology transfer of this project. This technology transfer project has been phased in three parts.

Sample project have been taken up in each of these areas for the location GD-NW field, East coast of India. In the area of conceptual design analysis of deepwater floating structures and sub-sea modules, three floating

structures having different hydrodynamic characteristics, were analyzed. Non-linear dynamic analysis, using time domain approach, was performed on ship shaped floating production, storage and offloading (FPSO) unit, semi-submersible floating production unit (FPU), and Tension leg platform (TLP). These floating structures were simulated under various storm conditions to study their behavior. In the area of "advanced riser and mooring analysis and design of deepwater pipeline", steel catenary riser (SCR) and flexible catenary riser were analysed using non-linear, time domain approach. Both coupled and uncoupled analysis were carried out for risers using response amplitude operators (RAOS) of typical floating production unit. Mooring analysis was carried out separately and its characteristics were used as input in the coupled analysis of the riser. Environmental Data of GD-NW field, East coast of India, was used in the analysis of floating structures and risers. Water depth of locations 850 M Deepwater pipeline were studied using different water depths, diameter, line pipe material, characteristics of the internal fluids and pressures.

Total funds released upto to 31.03.2006 were Rs.80 lakh. The funds released during 2005-06 amounted to Rs.27 lakh. The project has been completed successfully.

#### **b) Jack up Pugmark Interaction**

The objective of the project is to acquire expertise in tackling the problem of deploying jack up rig in the existing footprint. IEOT engineers are expected to get the much needed expertise and confidence through training, state of the art analysis techniques, experience in real/sample projects and acquisition of software and hardware to solve the problem of rig deployment for work over job of ONGC.

Based on the requirement of technology upgradation in the above mentioned area, the broad area of technology transfer are identified as under :

- Acquire and collate past experience of cases where spudcan-footprint interaction has been an issue.
- Investigate methods of Spudcan footprint Interaction mitigation using theoretical analysis and laboratory modeling.
- Production of a best practice guideline document to enable safe Jack-UP emplacement at locations where Spudcan-Footprint Interaction may be an issue.

One time full payment of Rs.26.70 lakhs has been made to the agency M/s Global Maritime, UK, London before joining the project. The revised schedule date of completion is 31.07.2006.

**c) Studies on advanced Composite Materials (ACM) for Hydrocarbon E&P application in Indian Offshore.**

With the advent of venturing into the exploration and exploitation in deeper waters in Indian offshore, it is essential to carryout studies in the critical areas of offshore engineering which affect the life cycle cost. At present conventional materials such as carbon steel and other low alloy steels are used for offshore producing and drilling systems but in global scenario, there are much advancements in the development of non metallic materials for application in petroleum industry with low cost. The application of these materials also leads to reduced repair/replacement and maintenance cost which affect the life cycle cost of the project.

This project of study on advanced composite materials for application in Indian offshore hydrocarbon industry will enable to formulate policies for adoption of state-of-the –art techno-economically feasible materials which in turn save substantial cost in field development. The training of human resources will lead to self-reliance in technology. In addition to ONGC needs, IEOT can take up projects related to application of advanced composites in hydrocarbon E&P operations for other operators both in India and abroad on commercial basis.

The project is completed successfully and implementation is in progress in onshore & offshore assets of ONGC. So far an amount of Rs.13 lakh has been released by OIIB against the approved cost of Rs.94 lakh.

**d) Integrated Corrosion Management of Offshore Pipelines**

Objective of the project is technology acquisition and implementation of ICM system to mitigate internal corrosion in offshore pipelines to maintain pipeline integrity and reliability. The project has been approved at a cost of Rs.1.75 crore.

Training part under Phase-I has been completed. Identified software during Phase-I, could not be purchased under Phase-II due to CVC guidelines. Case is being prepared for termination of existing contract and for approval of competent authority.

The duration of the project is 15 months. An amount of Rs.40 lakh was released by OADB to IOGPT towards reimbursement of the expenditure incurred by the Institute.

### **10.7 Government of Rajasthan, Deptt. Of Petroleum – Grant of Rs. 0.25 crore**

Directorate of Petroleum, Government of Rajasthan, established in 1997 is primarily engaged in monitoring of oil, gas and CBM exploration and development projects in Rajasthan. The OADB Board in 2002-03 approved a grant of Rs.4.27 crore (later increased to Rs. 5.31 crore) to the Directorate for carrying out R&D activities for exploration and exploitation of CBM in Bikaner in Barmer area of Rajasthan. The Directorate initiated a high-resolution shallow seismic survey in Bikaner area under the above project w.e.f. July, 2003 for which task was entrusted to NGRI for undertaking 100 ± 20% LKM. A total of 116 LKM comprising Cross A-B, B-C, C-D, D-E, E-F, P-Q & R-S Lines has been completed as envisaged under Phase –1 activities.

During the year 2005-06 the data generated by HRSS survey was compiled, processed & interpreted and the draft report was submitted by NGRI to Directorate of Petroleum, Govt. of Rajasthan. During this year financial assistance of Rs. 25 lacs was released. A total of Rs. 4.29 Crores has been released against approved grant of Rs. 5.31 crores under phase –I.

The Directorate of Petroleum is evaluating the draft report in which line, A-B, B-C, C-D, D-E, E-F, P-Q & R-S have shown reflectors in the seismic sections.

During the 2<sup>nd</sup> phase of activity drilling of 5 coreholes, 30 Line Km seismic survey & CBM testing would be carried out. By drilling of the coreholes lignite seams occurring at varying depths shall be ascertained, and these seams shall be tested for CBM. After this blocks for Underground Coal Gasification & Coal Bed Methane for exploration & Development will be carved out. Directorate General of Hydrocarbon will put up blocks of CBM for international bidding. The data generated shall be used for preparing data packages of CBM blocks to be awarded under NELP activities.

### **10.8 National Geophysical Research Institute (NGRI)-grant of Rs. 1.00 crore**

National Geophysical Research Institute (NGRI), under the Council of Scientific & Industrial Research (CSIR) is engaged in research and development in the areas of Exploration of Hydrocarbons; Minerals Exploration and Engineering Geophysics; Exploration, Assessment and Management of Groundwater

Resources; Earthquake Hazard Assessment; Lithosphere, Earth's Interior and Palaeo-Environment and Geo-environmental studies etc.

The institute has taken up a project with OIDB funding titled "Augmentation of Techniques for Surface Geo-chemical prospecting of Hydrocarbons comprising of Microbial, fluorescence Finger Printing, Soil Salts and Bitumen Based Methods-under India Hydrocarbon Vision 2005" at an estimated cost of Rs. 2.95 crores. Under the project Microbial prospecting laboratory established during 2004-05 is fully functional for carrying out the isolation and enumeration of hydrocarbon utilizing bacteria in soils/sediments. The fieldwork was taken up in Jamnagar sub-basin, Gujarat and a total of 150 soil samples were collected from a depth of 1.5 to 3.5m and 1m at grid interval of 1km x1km for adsorbed soil gas and microbial analysis, respectively. About 100 soil samples analyzed for propane oxidizing bacteria have shown concentrations varying from 0 to  $6.86 \times 10^5$  CFU/gm. These anomalies correlate with earlier adsorbed soil gas ( $\Sigma C_2+$ ) data, proving the importance of microbial surveys in near surface prospecting of hydrocarbons. The analysis for butane and methane oxidizing bacteria and gas chromatographic analysis of adsorbed soil gases are in progress. The purchase orders for fluorescence Spectrophotometer and UV-Visible Spectrophotometer have been finalized and the necessary arrangements are being made for setting up the fluorescence finger printing facility. Tenders have been floated for purchase of Ion Chromatograph and Thermal Desorption Gas Chromatograph.

During 2005-06 an amount of Rs. 1.00 crore was released to NGRI for the purpose.

#### **10.9 Indian Institute of Petroleum (IIP), Dehradun- Grant of Rs. 1.00 cr.**

Indian Institute of Petroleum, Dehradun, under CSIR, is engaged into the following activities:-

- Undertake R&D work in petroleum refining, natural gas, petrochemicals and utilization of petroleum products for developing novel, state-of-the-art technologies and product.
- Conduct market demand surveys and techno-economic feasibility studies for related products.
- Provide technical services and assist the petroleum industry in absorption, adoption and selection of technologies.

The OIDB is funding a project titled "Setting up of Modernized Emission Measurement Facility at IIP, Dehradun at an estimated cost of Rs. 17.13 crores,

of which 75% will be borne by OIIB. The process of award of contract of Project Management Consultant (PMC) work to the firm has been finalized and the contract would be awarded shortly.

IIP identified three sites in IIP, Dehradun campus and after detailed internal discussion, the most appropriate site has been identified.

A technical committee including one member from IOC and BPCL each has been constituted to work out details related to procurement of equipment. A report containing this information and draft specifications of all equipment was circulated to members of technical committee. It was felt by the technical committee that visits to the installed and working facility of heavy-duty engine emission testing at various other laboratories like TELCO, ARAI, etc were necessary in order to understand the total requirements of equipment in a better way. Based on the discussions held during the visit revised technical specifications of the equipment have been finalized. Tendering process for mass emission equipment is being started. An amount of Rs. 1.00 crore was released by OIIB to IIP, Dehradun during the year under report.

#### **10.10 TERI: The Energy Research Institute -Rs.10 lakh.**

Energy security issues gained prominence in the early seventies when crude prices increased from the then prevailing price of less than US \$ 2 per barrel to US \$ 12 per barrel. Since then, there have been seven major oil supply disruptions when world crude supply fell short by more than 2 million barrels per day. The implications of these disruptions have been significant, especially for the developing countries.

Energy security strategies include various options such as equity oil, diversification of import portfolio, energy conservation and developing new domestic sources of energy.

Recognizing the need for such analytical tools, the Oil Industry Development Board/ Government of India commissioned TERI to identify energy security issues in India and delineate the scope of such an Energy Security Model that would facilitate the identification of appropriate strategies to address such concerns. The cost of study was Rs. 18.50 crores.

The scope and coverage of this project was the following:

- Identification and detailing of key concerns that would need to be addressed

to achieve energy security including the following:

- Energy demand scenario till 2025 based on estimates in existing literature and reports
  - Existing and potential conventional energy supply options
  - Realistic and reasonable potential of alternative domestic energy options such as renewable and nuclear energy
  - Role of technology and management options for energy demand management and improving energy supply efficiencies
  - Possibilities of meeting energy gap from energy imports: type of energy, form of participation, geographical spread.
- Based on the above review, identify the need, scope and structure of a dynamic analytical tool that would allow assessment of alternative energy demand management and supply options
  - Identify and detail data and information requirements to execute the model
    - Secondary data and data sources
    - Primary data
  - Detail appropriate project structure in terms of institutional collaborations and responsibilities to develop such an analytical tool. The study has been completed and Final report issued.

**10.11 Indian Institute of Technology (IIT), Delhi- "Fuel Saving & Emission Control Through Integrated Technology Development on Hybrid Bus" – Project cost Rs.4.96 crore.**

Indian Institute of Technology, Delhi established in 1961, is the premier Institute of the country for teaching and research activities, Oil Industry Development Board has been assisting in the research activities of the Institute by way of granting financial aid in the form of grant in aid. The OIADB sanctioned a project titled "Fuel Saving & Emission Control Through Integrated Technology Development on Hybrid Bus" sponsored by IIT, Delhi at an estimated cost of Rs.4.96 crore initially proposed to be jointly implemented by IIT, Delhi (Rs.3.77 crore) and Bhabha Atomic Research Centre (BARC)(Rs.1.96 crore). The objective of the project aimed to develop a technology for transportation that would save fuel and be pollution free. Due to some technical reasons, IIT, Delhi has been executing the project at its own at a cost of Rs.3.77 crore. The institute has successfully developed 50 passengers and 100 passengers Hybrid Electric Vehicles. These vehicles were put through rigorous road trials. A number of State Governments viz. West Bengal, Karnataka, BEST and Tamil Nadu have shown keen interest in adopting this indigenously developed technology and deploying pollution free vehicles in metros. The total amount released upto 31.03.2005 is Rs.3.17 crore of which Rs.25 lakh was released during 2005-06.

## **10.12 National Gas Hydrate Programme (NGHP) :Rs. 12.82 crore**

Gas Hydrates are naturally occurring solids comprised of water molecules that form a rigid lattice of cages around the methane gas molecules of low molecular weight. The gas hydrates occur below the seabed in deep oceans as well as in the permafrost regions of the world.

Till date, since its inception, a larger number of seismic data covering entire offshore areas of the country has been studied including special processing of larger data for identification of gas hydrate signatures.

Based on these studies, three areas in KG Basin, Andaman Sea and west coast were identified by DGH for further scientific investigations. A road map was also prepared for NGHP. As per the road map, detailed geo-scientific investigations were carried out in the KG basin and K.K. basin by NGHP through National Institute of Oceanography (NIO) with OIIB's assistance. Based on the results of seismic data studies and geoscientific investigations, ten sites in Mahanadi, KG & KK basins and Andaman Sea have been short listed for drilling/coring of gas hydrates in the deepwaters. The drilling/coring for gas hydrates is a very specialized activity and India is only third country in the world to do so, after USA and Japan. The services for such specialized activity are not available commercially in the world. With sustained efforts by DGH, with IODP & USA, the drillship along with all the scientific equipment and scientists onboard has come to Indian offshore in mid April, 2006, under an agreement between DGH and a "US consortium" of companies under the project titled "NGHP drilling & coring and logging operations and onboard studies of gas hydrates in Indian Offshore areas" to be funded by OIIB. For the programme, the OIIB released an amount of Rs.12.82 crore during 2005-06.

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

All these studies will lead to understand gas hydrate characterization in Indian offshore areas and also in carrying out resources estimates, as well as R&D in this field.

## **11. OTHER ACTIVITIES DURING THE YEAR**

### **(i) OIBD Drought Relief Trust (OIBD DRT)**

During the period April to June 2000 unprecedented drought had hit some States viz. Andhra Pradesh, Rajasthan and Gujarat. In response to appeal made by the then Hon'ble Prime Minister, the Ministry of Petroleum & Natural Gas, during May 2000 decided to reimburse the cost of diesel for transportation of drinking water to the drought affected villages in these states. For this purpose, with the approval of the then Hon'ble Minister of Petroleum & Natural Gas, a Trust named OIBD Drought Relief Trust was formed on 01.06.2000 as a Charitable Trust. The President of the Trust is Secretary (PNG) ex officio, Managing Trustee of the Trust is Additional Secretary (PNG) ex officio and Secretary (OIBD) is the Secretary of the Trust with other representatives from the Oil PSUs as other trustees. Oil PSUs had contributed the funds as directed by the Ministry to the tune of Rs.20.60 crore. Aims and Objectives of the trust inter-alia include:

- To reimburse the cost of diesel for transportation of drinking water to the drought affected areas in the country;
- To contribute for the welfare of the people affected by drought or any natural or other calamity or to the welfare of the public at large;
- To contribute to the Prime Minister National/ Drought Relief Fund;
- To contribute to the Chief Minister's Relief Fund;
- To establish contract, collaborate with and enter into arrangements with any other organizations, institutions Trust or societies having objectives similar to OIBD DRT, for all or any of the objects of this Trust.

Pursuant to the above objectives of the Trust, an amount of Rupees 11.76 crore had been disbursed by OIBD DRT to Governments of Gujarat (Rs.5.54 crore), Maharashtra (Rs.5 crore), Rajasthan (Rs.1.19 crore) and Andhra Pradesh (Rs.0.03crore) for transporting drinking water to the drought affected areas of these states upto 2004-05. Besides Rs.1 crore were also contributed to Prime Minister National Relief Fund in 2002-03.

During 2005-06 OIBD DRT contributed to the following welfare schemes:

- (i) Rupees 19.62 lakh for providing 75 numbers of drinking water storage tanks made of GAIL polymer and their installation in 75 villages of Ajmer District, Rajasthan. The scheme was implemented by Ajmer Citizen Council (ACC), a registered NGO, under the supervision of GAIL. ACC has always shown its concern for pollution protection in Ajmer and has carried out various projects towards protection of environment and pollution atmosphere in the area. There are 836

villages under Ajmer District which are suffering 6<sup>th</sup> consecutive drought. Out of this approximately 300 villages have been provided drinking water facilities. So far these villages were being catered their requirement with the water tankers. But villagers being poor don't have adequate storage facilities in their houses a lot of water was being wasted. After provisions of these storage facilities, villagers are having 24 hours availability of drinking water and without wastage on their walking distance.

(ii) Rupees 25 lakh for strengthening of water harvesting structures like construction of bunds, repairing of wells etc. in the villages around BPCL Refinery at Mumbai. The scheme was implemented by " The Bridge Public Charitable Trust", an NGO under the supervision of BPCL. The objectives of the project were :

- To make one large adivasi village-Kothala, Kasara-self reliant about drinking water.
- Repair one dam so that it starts retaining water in Charnawadi, Kasara.
- To demonstrate one roof top rain water harvesting and one line pond at Pinglaj, Karjat.

As per the plan, following work was completed in the villages:

**a) Kothala**

- Cordoning of springs at 31 places, three major bunds
- Repairs of 7 wells.
- Recharging of existing borewell.
- Plastering on existing bund wall.

**b) Charna Wadi**

- Repairs of extremely debilitated bund to a state where it holds water now.
- Drilling of one new Bore well near BPLC Pump House for a small hamlet Raichiwadi.

**c) Pinglaj**

- Demonstration of a roof top rainwater harvesting.
- Demonstration of a lined pond.

The project has been completed successfully and professionally by the Bridge Trust.

## **(ii) Review of overall working of OIBD**

The expenditure Reforms Committee's Report on autonomous bodies envisages that there has to be a system of "Outside/Peer" review of every autonomous organization once in three or five years, depending on its size and nature of the activity. These reviews should focus inter-alia on:

- The purposes for which the autonomous body was set up and whether these objectives have been or are being achieved.
- Whether the activities should be continued at all, either because they are no longer relevant or have been completed or if there has been a substantial failure in achievement of objectives.
- Whether the nature of the activities is such that these need to be performed only by an autonomous organization.
- Whether similar functions are also being undertaken by other organizations-be it in the Central Government or State Governments or the private sector-and if so whether there is scope for merging or winding up these organizations.
- Whether the total staff complement, particularly at the support level is kept at a minimum, whether the enormous strides in information technology and communication facilities as also facilities for outsourcing of work on a contract basis have been taken into account in determining staff strength; and whether scientific/technical personnel are being deployed on functions which could well be carried out by non-technical personnel; etc.
- Whether user charges, wherever the output or services are utilized by others, are levied at appropriate levels.
- The scope for maximizing internal resources generation in the organization so that the dependence upon government budgetary support could be kept at a minimum.

To a query from Ministry of Petroleum & Natural Gas, Department of Expenditure had clarified that as the funds are drawn from consolidated fund of India, OIBD would also come under the preview of ERC's recommendations.

As a follow up action, OIBD has appointed M/s A.F.Fergusons & Co. as a Consultant for Peer Review of OIBD as per the terms and reference indicated above and also with respect to the role of Oil Industry Development Board in the post APM scenario.

The consultant has completed the review and the report is likely to be submitted by them in near future.

### **(iii) Dividend from NRL**

OIDB has acquired equity to the tune of Rs.90.80 crore in the capital share of NRL. OIDB received Rs.15.44 crore approximately towards its share of profit in NRL's equity as compared to Rs. 7.99 Crore during the last year.

### **(iv) Implementation of Government's Official Language Policy**

Oil Industry Development Board has been making special endeavors to implement Official Language Policy of the Govt. in the office. During the year 2005-06 also, a number of steps were taken to maximize the use of Hindi such as:

- In order to undertake the Official Language implementation work effectively, an Official Language Implementation Committee is functioning in OIDB under the Chairmanship of Secretary (OIDB). The Committee reviews the overall progress of implementation of Official Language Policy in OIDB, as also the progress of implementation of the Annual Program circulated by Department of Official Language.
- The Deputy Director, Official Language, Ministry of Home Affairs visited OIDB in August, 2005 to review the position related to progressive use of Hindi.
- Various competitions were organized to encourage employees of the Board to do their work in Hindi. These included news writing, essay writing, competition related to knowledge of official language, debate, quiz competition, Hindi Typewriting competition etc. The employees of the Board participated in these competitions overwhelming. This has inculcated a spirit of enthusiasm in the employees towards progressive use of Hindi. Successful participants were rewarded with cash prizes.
- During the year under report, the OIDB published 5<sup>th</sup> edition of its annual in-house Hindi Magazine titled "Anubhuti". In addition, topics related to literature, poetry, religious issues, travel experiences were published. The magazine aims to yield interest towards Hindi besides writing in the official language.
- During the period under report, a "Hasya Kavi Sammalen" was organized. This aim to inspire the people to know the various aspects of Hindi and make them realize that Hindi is "Jan-Jan ki Bhasha". On the occasion, famous poets of Hindi literature presented the mirror of Indian Society through their poems. These were well appreciated by the audience. This

Kavi Sammalen will be remembered for long for its successful organization.

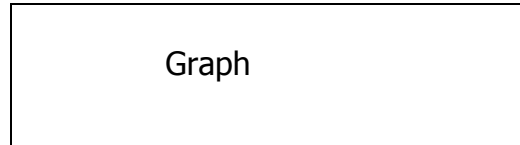
- Instructions have been issued to all officers/employees of OI​DB who are proficient in Hindi to submit their work in Hindi.
- The Stenographers and Clerks of the office were nominated for Hindi Stenography and Hindi Typing.
- Quarterly/Half-yearly and Annual Progress Reports on progressive use of Hindi are sent timely to Department of Official Language and Ministry of Petroleum & Natural Gas.
- During the year, a number of Hindi Workshops were organized in OI​DB to effectively propagate the use of Hindi that inter-alia included how to work on computer and construction of technical words organized by Scientific and Technical Terminology Commission.
- Substantial number of books, magazines and newspaper published in Hindi were purchased and are available in OI​DB Library. Help books such as technical terminology in Hindi/English dictionaries etc have been provided to the officers and staff. The books are procured keeping in view, the instructions issued by the Official Language Department for purchase of books.

#### **(v) Human Resource Development**

OI​DB has a major role to play in providing financial assistance to oil sector. During the year, a number of training programs/workshops were organized with a view to improve productivity and effectiveness in various disciplines to upgrade the skills of the officers/staff. These, inter-alia included training programme named "Organizational Effectiveness through Human Relation Skills", "Growth and Productivity through Effective Leadership and Team building". The Ministry of Petroleum & Natural Gas also nominated Secretary, OI​DB for participating in the workshop on stockpiling in APEC region conducted by US Department of Energy and APEC Energy Working Group. Officials of OI​DB were also deputed to Computer Society of India, Hyderabad for the national convention organized by the Society on the theme "ICT for National Development". All these programs have helped in developing competence and maximize performance of the OI​DB officials.

## **12. Accretions to the Fund from Internal Resources**

The OIDB generates internal resources by way of interest receipts on loans and short-term investments. During 2005-06 an amount of Rs. 348.36 crore, being the net profit accrued to the Fund as compared to Rs. 251.17 crore during 2004-05. The position regarding similar accretions to the Fund during the last twenty-eight years is shown in the graphic picture.



## **13. Annual Accounts and Audit**

The Board continued to maintain accounts of all financial transactions carried out by it during the year under report. The accounts appended to the report comprise Profit & Loss Account and Balance Sheet duly audited and reported upon by C&AG.

## ***Aims & Objectives***

*To administer Oil Industry Development Fund.*

*To render financial and other assistance conducive for development of oil industry.*

*To make grants and advance loans for activities such as:-*

- *Prospecting for and exploration of crude oil*
- *Projects providing pollution free environment*
- *Refining & marketing of petroleum and petroleum products*
- *Conservation for greater economy of hydrocarbons.*

*Funding of research and development programmes for sustainable development of oil industry.*

*To promote indigenisation of oil field equipment and Services in the country.*

**Section 6 of the Oil Industry (Development) Act, 1974 Functions of the Board**

6 (1) Subject to the provisions of this Act and the rules made thereunder, the Board shall render, in such manner, to such extent and on such terms and conditions as it may deem fit, financial and other assistance for the promotion of all such measures as are, in its opinion, conducive to the development of oil industry.

(2) Without prejudice to the generality of the provisions of sub-section (1), the Board may render assistance under that sub-section by :-

- (a) making grants or advancing loans to any oil industrial concern or other person who is engaged or is engage in any activity referred to in clause (k) of section 2;
- (b) guaranteeing on such terms and conditions as may be agreed upon loans raised by any oil industrial concern or other person which are repayable within a period not exceeding twenty-five years and are floated in the market or loan raised by an oil industrial concern or other person from any bank which is a scheduled bank, or a state co-operative bank, as defined in the Reserve Bank of India Act, 1934.
- (c) guaranteeing on such terms and conditions as may be agreed upon loan deferred payments due from any oil industrial concern or other person in connection with import of capital goods from outside India or in connection with purchase of capital goods within India by such concern or other person;
- (d) guaranteeing on such terms and conditions as may be agreed upon loans raised from or credit arrangements made with any bank or financial institution in any country outside India, by any oil industrial concern or other person in foreign currency; Provided that no such guarantee shall be given without the prior approval of the Central Government.
- (e) underwriting the issue of stock, shares, bonds or debentures by any oil industrial concern and retaining as part of its assets any stock, shares, bonds or debentures which it may have to take up in fulfillment's of its obligations thereto;
- (f) acting as agent for the Central Government or, with its approval for any overseas financial organisation of credit agency in the transaction of any business with any oil industrial concern in respect of loans or advances granted or debentures subscribed by the Central Government or such organisation or agency;

- (g) subscribing to the stock or shares of any oil industrial concern;
- (h) subscribing to the debentures of any oil industrial concern repayable within a period not exceeding twenty- five years from the date on which they are subscribed to;

Provided that nothing contained in this clause shall be deemed to preclude the Board from subscribing to the debentures of any oil industrial concern, the amounts outstanding thereon may be convertible at the option of the Board into stock or shares of that concern within the period the debentures are repayable.

**Explanations** In this clause, the expression "amounts outstanding thereon" used in relation to any loan or advance shall mean the principal, interest and other charges payable on such loan or advance as at the time when the amounts are sought to be converted in to stock or shares.

(3) without Prejudice to the generality of the provision of sub-section (1), the measures for the promotion of which the Board render assistance under that sub-section may include measures for or by way of :-

- (a) prospecting for and exploration of mineral oil within India (including the continental shelf thereof) or outside India;
- (b) the establishment of facilities for production, handling, storage and transport of crude oil;
- (c) refining and marketing of petroleum and petroleum products;
- (d) the manufacture and marketing of petrochemicals and for fertilizers;
- (e) scientific, technological and economic research which could be directly or indirectly, useful to oil industry;
- (f) experimental or pilot studies in any field of oil industry;
- (g) training of personnel, whether in India or outside, engaged or to be engaged in any field of oil industry, and such other measures as may be prescribed.

(4) The Board may charge such fees or receive such commissions as it may deem appropriate for any services rendered by it in the exercise of its functions.

(5) The Board may transfer for consideration any Instrument relating to loans or advances granted by it to any oil industrial concern or other person.

(6) The Board may do all such things as may be incidental to or consequential upon the discharge of its functions under this Act.

**Finance, Accounts and Audit**

**Section 15 of the Oil Industry (Development) Act, 1974 - Duties of Excise**

15(1) There shall be levied and collected, as a cess for the purposes of this Act, on every item specified in column 2 of the Schedule, which is produced in India (including the continental shelf thereof) and

(a) removed to a refinery or factory; or

(b) transferred by the person by whom such item is produced to another person, a duty of excise at such rate not exceeding the rate set forth in the corresponding entry in column 3 of the Schedule, as the Central Government may, by notification in the Official Gazette, specify;

Provided that until the Central Government specified by such notification the rate of the duty of excise in respect of crude oil (being an item specified in the Schedule) the duty of excise on crude oil under this sub-section shall be levied and collected at the rate of rupees sixty per tonne (Revised rate Rs.900/- per tonne w.e.f.1.2.1989).

- (2) Every duty of excise leviable under sub-section (1) on any item shall be payable by the person by whom such item is produced, and in the case of crude oil, the duty of excise shall be collected on the quantity received in refinery.
- (3) The duties of excise under sub-section (1) on the item specified in the Schedule shall be in addition to any cess or duty leviable on those items under any other law for the time being in force.
- (4) The provision of the Central Excises and Salt Act, 1944, and the rules made thereunder, including those relating to refunds and exemptions from duties shall, as far as may be, apply in relation to the levy and collection of duties of excise leviable under this section and for this purpose the provisions of that Act shall have effect as if that Act provided for the levy of duties of excise on all items specified in the Schedule.

### **Section 16 of the Oil Industry (Development) Act, 1974-Crediting of proceeds of duty to Consolidated Fund of India.**

The proceeds of the duties of excise levied under Section 15 shall first be credited to Consolidated Fund of India and the Central Government may, if Parliament by appropriation made by law in this behalf, so provides, pay to the Board from time to time, from out of such proceeds, after deducting the expenses of collection, such sums of money as it may think fit for being utilised exclusively for the purposes of this Act.

### **Section 17 of the Oil Industry (Development) Act, 1974. Grants and loans by the Central Government**

The Central Government may also, after due appropriation made by Parliament by law in this behalf, pay to the Board by way of grant or loans such sums of money as the Central Government may consider necessary.

### **Section 18 of the Oil Industry (Development) Act, 1974. Oil Industry Development Fund**

18(1) There shall be formed a Fund to be called the Oil Industry Development Fund and there shall be credited there to.

- (a) any sums of money paid under section 16 or section 17;
- (b) any grants that may be made by any person or institution for the purposes of this Act;
- (c) any borrowing by the Board;
- (d) the sums, if any, realised by the Board in carrying out its functions or in the administration of this Act.

(2) The Fund shall be applied :-

- (a) For meeting the salaries, allowances, honoraria and other remuneration of the officers and other employees of the Board and of the advisers, consultant or other agencies whose services are availed of by the Board.
- (b) for meeting the other administrative expenses of the Board ;
- (c) for rendering assistance under section 6;
- (d) for repayment of any loans taken by the Board or for meeting other liabilities under this Act.