ACKNOWLEDGEMENTS

The Committee discussed extensively with various stake holders and experts on its Terms of Reference along with intensive internal deliberations. The Committee would like to thank them all for their cooperation and support.

The Committee had interacted with the Minister, Secretary and the Additional Secretary of the Ministry of Petroleum and Natural Gas and is extremely grateful to them.

The Committee would like to take this opportunity to convey their appreciation for the support rendered by the Convener of the Committee, Shri S. Vijayaraghavan and his team consisting of Shri Ram Singh, Shri Rajiv Bakshi and Shri K. Rajeswara Rao of PPAC for their tireless efforts, unstinted and continuous support and splendid cooperation. The Committee places on record the valuable suggestions and cooperation of the Secretary of the Committee, Ms Aditi S. Ray.

Chapter 1

EXECUTIVE SUMMARY

1.1 The Advisory Committee on Synergy in Energy was entrusted with .the task of examining the core competence of the Public sector Undertakings (PSUs) in the petroleum and natural gas sector, analyzing the various options of leveraging their strengths for fulfilling the spelt out national objectives, viz energy security, accelerated growth rate and sustained economic development, while emerging strong and effective in a competitive environment, and identifying the appropriate structure for securing such ends. For this, the Committee could look at management solutions and structural changes required.

1.2 The Committee examined the core competence of the oil PSUs and made observations on the areas of concern.

1.31 The Committee considered available examples of restructuring, including the option of mergers and acquisitions (M&A In the context of 'international oil industry, the decision to merge individual companies was driven by the desire to achieve synergies in operations by bringing down costs by drastic reduction in employment, assets and infrastructure and increasing profitability of the acquiring firm. Available examples of M&A suggest that just 29% of all M&A globally had succeeded in increasing returns for shareholders and that lack of attention to the human side was a major cause of failed mergers. Further, in many such cases, post merger, a situation of oil monopolies was 'created and cartels were formed. There are also equal numbers of international examples of specialist firms in each segment of the value chain who have performed better as they are more focused, have lower overheads and have greater operational flexibility.

1.4 Internationally, most of the companies which had merged were vertically integrated companies. In India, despite recent diversifications, the PSUs by and large function in distinct areas of operation across the hydrocarbon value chain, which by and large also are their areas of core competence. Any merger in the Indian context which would result in reduction of manpower and shall not be feasible. For enabling competition and in recognition of vulnerability of the economy towards energy supply, presence of any mega entity dominating the energy market has ambiguous implications and it is the considered opinion of the Committee that merger of oil PSUs may not be an advisable option at present.

1.5 The Committee also considered the holding company concept, and possibility of a coordinating body [similar to the Oil Coordination Committee (OCC)] for possible models of restructuring the oil PSUs, and did not find these models suitable for meeting the objectives. The

holding company concept for meeting the national and social goals can work well in a centrally controlled single party political system (like China), but may not be feasible in a democratic society which requires a consensus based approach. The top down approach of holding company as in the coal sector in India has been seen to have hindered entrepreneurship/response time in subsidiaries, as such a company is just another layer in the structure. On the coordinating body concept, the Committee felt that going back to an acc model for coordination would be perceived as a movement back to regulation with consequential implications and would be similar to the holding company model along with attendant problems.

1.6 After careful analysis of various options of appropriate structure for the public sector, the Committee finds that as a first step, the present structure of PSUs in the oil and the gas sector should be strengthened, through policy changes and management/structural improvements.

1. 7 The existing framework of supervision and overview by various agencies should be revamped to empower managements to face competition. The Government may consider setting up a pre investigation board to examine the impugned decisions of the company and classify them for being dealt with by the managements/boards of the companies, and for reference to CBI.

1.8 The Committee noted the areas for improvement such as merger of existing stand alone subsidiaries with parent companies, encouraging competition, technology upgradation, improving energy security, formulating integrated energy policy, creation of a Cabinet Committee on energy, setting up of a down stream regulatory body, strengthening the institution of DGH.

1.9 The Committee considered the concept of National Shareholding Trust (NST) for the blue chip companies in the public sector having a large and important presence in the economy and it may not be desirable to let them pass into the hands of private owners. To begin with, Navaratna and Miniratna oil PSUs may participate in NST.

1.10 The Board of the NST will comprise eminent personalities from the Government, Public sector and Private sector. The trust will promote best practices which are performance oriented. The 'trust would ensure enhanced returns to all stakeholders. Similar models already exist in Singapore (Temasek) and Malaysia (Khazanah).

Recommendations

1.11 Domestic exploration and production needs to be intensified by applying the latest technology particularly in the frontier basins and deepwater areas. ONGC and OIL can form separate joint ventures (JV) for different areas of exploration and oil field services.

1.12 The upstream companies need to segregate the non-core activities and form then into separate entities. This would enable them to upgrade technology and offer services globally, while the upstream companies would focus on exploration and production (E&P) activities.

1.13 Overseas E&P should be pursued aggressively by targeting at least 15% of crude oil imports through the equity oil route within next 2-3 years. If the stiff target is to be met, initiatives by multiple organizations would be necessary.

1.14 The Committee notes that OVL, with joint ventures in 13 countries, has created a brand name and image and there is a need for retaining the. goodwill of OVL. It could be worth while to have another entity for overseas negotiations, clearly demarcating the areas of operation of OVL and the other entity, and OIL may take the lead in forming this new entity, 'which may be called Oil India Videsh Limited (OIVL), including a consortium approach with any other oil PSUs for different ventures for drawing upon the core competence of such PSUs.

1.15 The Committee would recommend that OVL should concentrate on large properties, e.g. oil and gas fields estimated to produce more than 2 million tonnes of oil equivalent per annum. The equity oil of OVL and OIVL will be shared by the oil PSUs on negotiated terms.

1.16 The present limit of Rs. 300 crore for investment by OVL may be raised to Rs. 2,000 crore. Similarly, for OIVL, the level of delegation could be Rs 1000 crore. In addition, for E&P activities, in case of successful overseas bidding, there may be no ceiling on investments for incorporating a company as subsidiary company or a joint venture company, according to requirement of the host country.

1.17 E&P is basically a knowledge industry, and the R&D institutes of ONGC should be suitably strengthened, and continue to be with ONGC rather than be hived off to any other R&D organisation/regulating authority.

1.18 The Committee recommends setting up of a pre investigation board to facilitate more autonomy to the managements.

1.19 The Committee is aware of the Report and recommendations of the Adhoc Group of Experts on Central Public Sector Enterprises, and is of the view that some of the recommendations of this Group such as limiting the number of reviews by the Ministry in a year, limiting the number of Government Directors in the Board, enhancement of limits for investments in joint venture companies/subsidiaries, appointment of Functional Directors in subsidiaries and JVs by the Board of Directors of the parent company, etc. are worth considering.

1.20 There is a need to undertake management restructuring in ONGC by making the Managing Director of OVL as the Vice Chairman of the Board and for domestic operations a separate Vice Chairman & Managing Director (VC&MD) post with board level representation should be created. Similar arrangement should be considered for IOC. The number of functional Directors in all oil PSUs may be reduced and the functional areas may be the responsibility of Executive Directors, who would be empowered suitably through delegation of powers.

1.21 The Government nominee Directors, which should be preferably two and not exceed three, on the Board of PSUs should play a proactive role by effectively reviewing the projects which could lead to duplication of infrastructure and facilities for synergising creation of infrastructure.

1.22 For improved standards of corporate governance, the minority share holders' representatives should be inducted on the Board of Management of the PSUs.

1.23 There is strong merit in ensuring continuance of the existing structure in the oil PSUs in their areas of core strength across the hydrocarbon value chain. For energy security of the country, it is important that the entire country is explored using the latest state of the art technology at the earliest and for this the focus of the upstream companies should be primarily on E&P, without distraction and dissipation of energy and resources in other activities, and therefore, diversification in other activities needs to be moderated.

1.24 For downstream units, since stand alone refineries and marketing entities are extremely vulnerable to cyclical downturns and volatile. prices, all the stand alone entities except NRL, which was set up as a result of Assam accord, should be merged with their respective parent companies. Therefore, CPCL, BRPL and IBP should be integrated within the IOC fold while KRL should be integrated with BPCL. NRL however should maintain its separate identity.

1.25 Government's intervention should be strategic in nature and the State should not be involved in micro management of PSUs. The performance review of the PSUs should be in the form of

informed overview like peer reviews, and the current system of parliamentary review may be" restricted to the discussions on the peer review report.

1.26 The oil PSUs should be allowed to devise attractive voluntary Retirement Scheme (VRS) packages, different from the standard VRS packages and the Government should encourage the human resource management initiatives of oil PSUs in this regard.

1.27 It is necessary to un-bundle the supply and transport services of GAIL. Unbundling of a gas monopoly in specific terms is required to facilitate competition and to reduce conflict among entities. Therefore, separate entities should be formed for inter state transmission of natural gas as an activity, and other activities like supply to fertilisers, power etc.

1.28 For regulating in the upstream sector, office of the Directorate General of Hydrocarbons (DGH) shall need to be strengthened. DGH should have its own modes of funding and recruiting personnel. It is also desirable that the regulator of the upstream sector should not be represented on the board of Directors of any company. For the downstream sector, the Committee recommends early setting up of the proposed Petroleum and Natural Gas Regulatory Board (PNGRB). When in position, PNGRB should carry out the regulatory functions including that of third party access to common carrier facilities. In the interim period, the activities may be monitored by a suitable agency authorised by the Government in this regard.

1.29 Price stabilisation fund needs to be introduced for oil companies for petrol and diesel.

1.30 Strategic reserve quantity should be at least 10 MMT. The Government may consider revising the reserve target.

1.31 The Government review current conditionalities for' grant of . marketing rights.

1.32 The PSUs could consider providing access to transportation and marketing infrastructure to all participants including the private sector on mutually complementary basis wherever surplus capacity exists.

1.33 It may be considered to declare ceiling guidance basic exstorage point prices for petrol and diesel so that the companies can compete and sell below the ceiling. price.

1.34 The Government may consider putting in place a comprehensive energy policy.

1.35 The Government may consider establishing a Cabinet Committee on Energy headed by the Prime Minister and comprising of Ministers of all the energy related departments to give policy decisions on all energy related issues.

1.36 In the long-term, for moving towards the objective of true synergy in energy, the Government may also examine the possibility of setting up a unified Energy Ministry.

1. 37 For demand-end support for energy security, measures for energy efficiency and energy conservation need to be taken. Such measures could include focus on energy audits, improving the quality of the road network, allowing trucks of large capacity, promoting movement of goods by rail through correct pricing of freight movement, improvements in mass rapid transport system for discouraging use of personal vehicles, and encouraging fiscal measures for R&D in new areas.

1.38 Encouraging coal in order to reduce dependence on oil could be the answer to. energy security particularly in view of the abundance of coal and lignite reserves in India. Investment in

coal gasification and tapping of coal bed methane needs to be encouraged and intensified. Also emphasis may be continued to be given to natural gas.

1.39 Use of nuclear energy should be promoted. Exploitation of hydro-electric power needs to be geared up through bilateral initiatives. Access to solar energy, wind power and alternative fuels like ethanol, bio-diesel and .hydrogen need to pursued.

1.40 The Government may consider implementing the NST concept for the oil companies without diluting the PSU character with enhanced autonomy.

Chapter 2

ADVISORY COMMITTEE ON SYNERGY IN ENERGY TERMS OF REFERENCE & DELIBERATIONS

2.1 The public sector oil companies are facing increasing competition with the domestic oil economy being thrown open to private and multinational entrants. Public sector oil companies also have to undertake significant investments both in India and overseas to meet the energy needs of the country.

2.2 Thus the Public Sector oil companies have to playa key role not only in facing competitive challenges, both domestically and internationally but also to leverage their strengths in their respective areas of core competence to optimally fulfill the key role envisaged for them in promoting national objectives of energy security, accelerated growth, sustained economic development and better service to the customer. There is also a need to strengthen the successful profit making public sector oil companies and make them more effective while operating in a competitive environment.

2.3 In order to examine the various options to achieve the above objectives of strengthening and making the public sector oil companies more efficient domestically and internationally, the Central Government in the Ministry of Petroleum & Natural Gas had on 17th January 2005 constituted the Advisory Committee on Synergy In Energy comprising the following:

Dr. V. Krishnamurthy - Chairman

Shri G.V. Ramakrishna - Member

Shri G.K. Arora - Member

Dr. Vijay L Kelkar - Member

Shri B.C. Bora - Member

Shri U. Sundararajan - Member

ShriS.Vijayaraghavan, Director, Petroleum Planning & Analysis Cell. - Convener

Mrs. Aditi S Ray, Joint Adviser, Ministry of Petroleum & Natural Gas - Secretary

2.4 Terms of Reference

The Terms of Reference of the Advisory Committee are

i) Examine the core competence of the public sector undertakings in the petroleum and natural gas sector of India to assess their competitiveness in the evolving domestic and international scenario;

ii) Analyse the various options of leveraging the strengths of public sector undertakings in the petroleum and 'natural gas sector to optimally fulfill their required contribution to the national objectives of:

a. Energy security,
b. Accelerated growth,
c. Sustained development, and
d. Social objectives of Government policy.

iii) Identify the most appropriate structure of the oil PSUs to secure these ends.

2.5 Time frame for finalizing the Report

The Government initially desired the Advisory Committee to finalise the Report within two months from the date of its constitution. But since the process of consulting various stakeholders and experts involved more time, the Government extended the time for finalizing the Report by 15.7.2005.

Deliberations and Consultations of the Committee

2.6 At the outset, the Advisory Committee on Synergy in Energy took note of the mandate that in suggesting any restructuring, the PSU character should not be abridged in any manner nor shall there be any retrenchment of manpower or closure of surplus facilities. The Committee held 11 meetings spread over 22 days. During these meetings, the Committee deliberated internally and held consultations with various stakeholders and experts on its Terms of Reference.

2.7 The stakeholders consulted by the Advisory Committee include Hon'ble Minister for Petroleum & Natural Gas, Secretary & Additional Secretary-MOP&NG, Managements of Public Sector Oil Companies, Directors(HR), Officers Association and Trade Unions/Workers Federations.

2.8 The experts consulted by the Advisory Committee include Member & Advisor (Energy) - Planning Commission, Director General Hydrocarbons, former Secretaries-MOP&NG, Energy Think Tank comprising former Chief Executive Officers of oil PSUs, former Chairman-IOC, Chairman-Shell India Pvt. Limited, MD (India)McKinsey & Co. and Country Head-BP. India Services Limited. The Committee had the benefit of a number of earlier reports published in India and abroad which gave an insight of the views of the consultants and the press.

2.9 The stakeholders and experts who responded by participating in the discussions with the Advisory .Committee are listed in the Annexure - 1 at the end of this Report.

Chapter -3

PRESENT DOMESTIC SCENARIO

3.1 The Oil and Gas industry in India can broadly be divided into three sub-sectors:

1. Exploration and Production of oil and gas

2. Refining and Marketing of oil
3. Transportation and Marketing of gas

3.2 Exploration and Production of oil and gas

3.2.1 Oil and Natural Gas Corporation Limited (ONGC) and Oil India Limited (all), the two National Oil Companies (NOCs), have so far been the mainstay in India's exploration and production (E&P) activities. In addition, private and joint venture companies (JV Cos.) like Reliance Industries Limited (RIL), Cairn Energy, British Gas (BG), HOEC, GSPCL, Videocon, Prize Petroleum (HPC has a 50% stake in Prize Petroleum), etc are engaged in the exploration and production (E&P) of oil and gas in the country. all's activities are generally confined to the North East with a marginal presence in natural gas production in western Rajasthan. IOC, GAIL and BPCL have also joined these efforts in Joint Venture with ONGC/OIL as well as with private companies. NTPC is a new entrant in these efforts in NELP-V.

3.2.2 ONGC Videsh Limited (OVl), which is a wholly owned subsidiary company of ONGC, undertakes overseas projects for exploration and production and for equity oil. OVL has so far acquired exploration blocks in 13 countries - Russia, Sudan, Vietnam, Iran, Libya, Syria, Myanmar Iraq, Australia, Cote d' Ivoire, Qatar, Nigeria and Egypt. OVL has been able to get 5 MMT per annum of equity oil overseas. Other oil PSUs such as IOC, GAIL and OIL have also stakes along with OVL in some of these countries. IOC & OIL have recently acquired an exploration block in Libya, and are on the look out for more overseas blocks. Private sector companies such as RIL, Essar and Videocon, besides NTPC have also forayed into E&P activities abroad.

3.2.3 ONGC and OIL, have played a pioneering role in making some important domestic discoveries of crude oil and gas. They are the primary producers of oil in the country. The production of crude oil and gas in the country however has been stagnant at 34 million metric tonnes per annum and 87 million standard cubic meters per day in the recent years.

New Exploration & Licencing Policy (NELP)

3.2.4 Oil production in the country could be increased significantly only through major discoveries. In order to give impetus to exploration in the country and discovery of more oil and gas for reducing the import dependency which is now 76% in case of crude oil, various measures such as exploration through NELP, increased oil recoveries from existing major producing fields and acquisition of equity oil and gas abroad have been formulated by the Government, Investments under the NELP have been made by private/joint venture companies/NOCs. The committed investment in 90 Production Sharing Contracts (PSCs) under NELP is about US $ 4 billion (Rs. 18,000 crore) and an amount of Rs. 4,275 crore is already invested under four rounds of NELP. Twenty exploration blocks have been offered under the fifth round of NELP for which bids closed on 31st May, 2005. However, a large part of the sedimentary area of the country is yet to be explored. These are mostly in their frontier basins, where private companies have not shown much interest to enter. It will thus be necessary that ONGC & all take a lead to explore these basins to achieve a break through.

3.2.5 The details of crude oil production and natural gas production during the last 3 years are given in the table below:

Crude oil Production

		Million Metric Tonnes(MMT)	
Company	**2002-03**	**2003-04**	**2004-05**

ONGC	26.01	26.06	26.49
OIL	2.95	3.00	3.20
Pvt. JV	4.09	4.31	4.30
Total	**33.05**	**33.37**	**33.99**

Natural Gas Production

Million Standard Cubic Meters per Day(MMSCMD)			
Company	**2002-03**	**2003-04**	**2004-05**
ONGC	66.42	64.61	62.94
OIL	4.78	5.17	5.49
Pvt./JV	14.81	17.78	18.55
Total	**86.01**	**87.56**	**86.98**

Achievements of Upstream PSUs

3.2.6 ONGC's contribution in terms of discovery of oil and gas has been significant during the 70s. Despite constraints of aging fields, larger manpower and problems of operational autonomy , ONGC has' been successful in contributing to the energy security both by maintaining the domestic production level and aggressive overseas acquisition of acreages. On the technology front, certain measures undertaken for upgradation of equipment and reorienting R&D activities might yield good results. Segregation of services, cutting down manpower costs, concentration on E&P activities, are receiving attention of ONGC. ONGC has also contributed, along-with the downstream marketing companies, to the social objectives of the Government.

3.2.7 OIL has been operating in a difficult environment in the North East; yet both in oil and gas production has shown appreciable growth. Even though OIL has its origin in the North East, it is expanding its operation in other areas of the country and overseas.

Core competence, areas of concern and opportunities for the PSUs in the E,&P sector

3.2.8 The core competence of the PSUs in the E&P sector, areas of concern and opportunities in the evolving domestic and international scenario are discussed in the following paras.

Core competence

3.2.9 ONGC is having a track record of finding new oil/gas in 7 basins of India (6 of these were opened by ONGC). It possesses a huge data base for almost all the basins of India including a large part of deep-waters. ONGC has in-house service capability in terms of experienced manpower, large fleet of equipment, in-house R&D set up, including technology centers like geo-chemical labs, data processing centers, pipeline infrastructure for supporting crude oil etc. In recent times, ONGC has had a strong balance sheet with large PAT. ONGC has also made substantial overseas investments through its subsidiary, ONGC Videsh Limited. Similarly, OIL is the oldest domestic E&P company with considerable experience in North East (NE) India, has large data base on E&P in NE and Myanmar and has in-place pipeline infrastructure for transporting Assam crude to local refineries.

Areas of concern and opportunities

3.2.10 Some of the major areas of concerns for E&P companies are the present reserves replacement ratio within the country which is less than unity, low recovery factor from most of the fields, large inventory of equipment and associated manpower in non-core activity, sub-optimal performance of non-core assets. Protracted purchase procedures, out flow of quality/manpower,

excessive vertical integration of activities resulting in insular approach and technological rigidity are also major impediments for the upstream PSUs. The upstream PSUs have to share the losses on account of distribution of PDS kerosene and domestic LPG eroding the surplus available for investment. Some of the opportunities relate to the availability of large area of the country for exploration after 'open acreage' system comes into being, huge oilfield services market globally, potential for Coal Bed Methane (CBM), coal gasification, coal liquefaction, geothermal etc. The upstream PSUs with their knowledge base and experience are now poised to take up the E&P opportunities in other countries including those with excellent bilateral relations with India.

3.2.11 Considering the demand for petroleum products, efforts to increase the domestic production of crude oil and also the equity oil abroad would have to be given further momentum.

3.3 Refining of oil

3.3.1 At present, there are 18 refineries operating in the country (17 in Public Sector and 1 in Private Sector). Mangalore Refinery and Petrochemicals Limited (MRPL) which was a Joint Sector Company became a PSU subsequent upon acquisition of its majority shares by ONGC. Out of the 17 Public Sector refineries, 7 are owned by Indian Oil Corporation Limited, two each by Chennai Petroleum Corporation Ltd. (a subsidiary of IOCL) and Hindustan Petroleum Corporation Ltd., 1 each by ONGC, Bharat Petroleum Corporation ltd, Kochi Refineries ltd. (a subsidiary of BPCL), Numaligarh Refinery Limited (a subsidiary of Bharat Petroleum Corporation), MRPL (a subsidiary of ONGC) and Bongaigaon Refineries and Petrochemicals (a subsidiary of IOCL). The private sector refinery belongs to Reliance Industries Limited (RIL). The details of the present installed capacity of refineries are given in the table below:

No.	Refinery	Capacity
IOC Group		
1.	Guwahati	1,000
2.	Barauni	6,000
3.	Koyali	13,700
4.	Haldia	6,000
5.	Mathura	8,000
6.	Digboi	650
7.	Panipat	6,000
8.	CPCL-Chennai	9,500
9.	CPCL-Narimanam	1,000
10.	Bongaigoan	2,350
BPC Group		
11.	BPC-Mumbai	6,900
12.	KRL-Kochi	7,500
13.	NRL-Numaligarh	3,000
HPC Group		
14.	HPC-Mumbai	5,500
15.	HPC-Visakh	7,500
ONGC Group		
16.	MRPL-Mangalore	9,690
17.	ONGC- Tatipaka	78
Total PSU		**94,368**
18.	RIL-Jamnagar	33,000
Grand Total		**127,368**

Capacity in Thousand Metric Tonnes Per Annum (TMTPA)

3.3.2 Some of the PSU refineries suffer from uneconomic size, vintage technology and high manp6wer cost.

Private sector refineries

3.3.3 The RIL refinery at Jamnagar in Gujarat is a modern and single largest refinery capable of handling variety of crudes and designed for producing qualitative products meeting. the domestic and international standards with a view to maximize the gross margin. It is understood that RIL is also planning to expand the refining capacity to 60 MMT per annum. The share of private refining as a percentage of total refining capacity is significant and stands at about 26%. Certain other factors listed below provide a competitive edge to the refinery when compared with other PSU refineries:

a. Huge economies of scale due to its size and low manpower
b. State of the art refinery capable of processing a large variety of crudes
c. Port advantages in terms of higher draft and handling large quantities resulting in substantial freight economies
d. Substantial sales tax incentives from the State Government of Gujarat

3.3.4 Two more refineries under private sector, one at Jamnagar in Gujarat by M/s Essar Oil Limited (EOL) and the other at Cuddalore in Tamil Nadu by M/s Nagarjuna group are being set up.

Refining capacity

3.3.5 The domestic refining has been able to cater to the PSU demand for all products except for liquefied petroleum gas. In fact, the availability of products like petrol, diesel, naphtha and aviation turbine fuel is in excess of the domestic requirements and such products are being exported. The current excess refining capacity is likely to continue upto the end of the XI plan period i.e. March 2012. The oil companies are also planning new refineries and expansion of the existing ones. The details of imports and exports during 2004-05 are given below:

					Million Metric Tonnes (MMT)
	Crude Oil Import	**Products Import**	**Gross Imports**	**Product Exports**	**Net Imports**
2004-05 (Total)	95.861	8.872	104.733	17.523	87.210
Public Sector	64.508	3.877	68.385	7.282	61.103
Private Sector	31.353	4,995	36,348	10.241	26.107

					(Rs./Crore)
	Crude Oil Import	**Product Import**	**Gross Import Bill**	**Product Export**	**Net Import Bill**
2004-05 (Total)	117,032	14,950	131,982	28,385	103,597
Public Sector	81,893	7,239	89,132.#	10,822	78,310
Private Sector	35 139	7711	42,850	17,563	25.287

3.3.6 The refinery sector is facing challenges on account of substantial investments for meeting new environmental norms, technology upgradation and high import dependency of about 76% on crude oil.

3.4 Marketing of oil

3.4.1 At present, there are four PSUs namely, IOCL, HPCL, BPCL and IBP (subsidiary of IOCL, which is in the process of merging with IOC) marketing oil products in the country. In addition, certain private players like RIL, Essar and Shell have also been granted marketing rights for transportation fuels. Their 'presence today, however, is not significant and is limited to about 787 outlets out of total retail outlet strength of about 27,325 as on 1.4.2005. Some additional players like ONGC, MRPL, NRL and OIL have also been granted marketing rights for transportation fuels. The details of number of Retail Outlets (RGs) for marketing of petrol and diesel as on 1.4.2005 belonging to various oil companies in the country are as under:

Company	No. of ROs	Company	No. of ROs
IOC	9862	NRL	10
HPC	6626	ONGC	1
BPC	6416	PSU Total	26538
IBP	3272	Private	787
AOD	351	PSU+Pvt Total	27325

3.4.2 The company-wise market share in total sales of all products is given in the table below:

Company	Sales (2004-05)	
	TMT	%
IOC/AOD	48124	43.1
IBP	4595	4.1
IOC Group	52719	47.2
BPC	20728	18.6
HPC	19158	17.1
Other PSUs	2145	1.9
PSUs Total	94750	84.8
Private	16960	15.2
Grand Total	**111710**	**100.0**

3.4.3 The estimates of demand growth for the X plan period (2002-07) and XI plan period (2007-12) show that the current trend of 3.7% annual growth is likely to continue. This would only increase the import dependency for crude oil. Therefore, there is a need for focus on energy efficiency, conservation and emphasis on alternate fuels as a part of the strategy for energy security. The share of natural gas in the overall primary energy consumption in the coming decade will have to be enhanced. The volatility of international crude and product prices, and the growing subsidy requirement would require appropriate, and transparent policies.

Achievements of downstream PSUs

3.4.4 IOC's contribution in creating the necessary infrastructure both in refining, marketing and pipelines has been instrumental in ensuring availability of products across the country including the remote and far flung areas. In the process, this has saddled IOC with some uneconomic refineries. Being a major PSU since inception, IOC is also bearing a larger portion of cost for meeting the social objectives of Government policy.

3.4.5 HPC and BPC are the PSUs created through nationalization of the MNCs in the mid 70s. Their forte is refining and marketing. With IOC, they are also ensuring availability of petroleum products across the country while also bearing the costs of discharging social objectives of Government: policy. Their presence has also added to competition in the downstream industry.

Core competence, areas of concern and opportunities for the PSUs in the refining & marketing sector

3.4.6 The core competence of the PSUs in the refining and marketing sector, areas of concern and opportunities in the evolving domestic and international scenario are discussed in the following paras.

Core competence

3.4.7 The PSUs in the refining and marketing sector have a dominant presence in terms of refining capacity, product pipelines and marketing infrastructure, which are largely depreciated. The distribution network and retail outlets of the PSUs are well spread out throughout .the country. IOC P9ssessesa strong R&D setup and a strong balance sheet. IOC has been a major contributor to supply security particularly in the remote and far flung areas of the country and has also ventured into downstream overseas markets like Sri Lanka, Mauritius etc.

Areas of concern and opportunities

3.4.8 Some of the areas of concern relating to the PSUs in the refining and marketing sector pertain to sub economic size of some refineries in NE/Eastern India, constraints on pricing of sensitive petroleum products impacting profitability, tax incentives enjoyed by the private refinery, under utilization of facilities and entry of private sector into downstream activities which is likely to erode the market shares of the PSUs in the coming years. As these companies are not fully integrated, they are extremely vulnerable during times of volatile international prices. Some of the opportunities available to the downstream PSUs could be entering new lines of business like gas/CNG, additional revenue generation through hiring out their handling & storage' facilities, upgrading existing refineries, leveraging foreign investment in oil refining & marketing, and alternative sources of energy like bio fuels.

3.4.9 The domestic requirement of petroleum products is likely to grow at nearly 3.7% per annum. Therefore, the situation of surplus refining capacity is likely to continue even upto the end of XI Plan period Le, March 2012. With the entry of private companies like RIL, Essar, Shell etc. in marketing and the introduction of Bharat Stage II and Euro III norms for transportation fuels, there is likely to be competition leading to better service to consumers. The availability of petroleum products across the country has been ensured mainly due to the infrastructure created by the oil PSUs.

3.5 Transportation and Marketing of gas

3.5.1 GAIL (India) Limited is primarily a Natural Gas company, focused on all aspects of the Gas value chain including exploration, production, transmission, extraction, processing, distribution and marketing of Natural Gas and its related processes, products and services. GAIL has LPG pipeline capacity to serve over 20% of LPG consumed in the country. More than one-fifth of the polymers consumed in India are produced and marketed by GAIL. GAIL's Optical Fibre Cable network also serves the fast growing telecom market in India. In E&P, GAIL is in consortium with other E&P companies in 12 exploration blocks out of which 11 are in India and one in Myanmar. Some of the major joint Ventures Companies of GAIL are Mahanagar Gas Limited (supplying piped gas to domestic consumers, small commercial/industrial consumers and supplying CNG to vehicles in Mumbai), Indraprastha Gas Limited (supplying piped gas to domestic consumers, small/large commercial consumers and CNG to vehicles in Delhi). GAIL. has also been foraying into overseas natural gas distribution ventures.

Achievements of GAIL

3.5.2 Even though created out of ONGC in the mid 80s, GAIL has established a strong pipeline infrastructure, fractionation facilities and petrochemical units. Creation of a large pool of gas professionals and overseas ventures in gas, are worth mentioning as major achievements of GAIL. Alongwith ONGC and OIL, GAIL also is sharing the under recoveries on petroleum products.

Core competence, areas of concern and opportunities for the PSU in the gas sector

3.5.3 The core competence of the PSU in the gas sector, areas of concern and opportunities in the evolving domestic and international scenario are discussed in the following paras.

Core competence

3.5.4 GAIL is the owner of largest gas transportation network in India and the second largest owner of Gas based LPG and Petrochem Plants in India. GAIL has experience of gas marketing in respect of gas produced by ONGC as well as private players, experience in city gas distribution and CNG through its subsidiaries, MGL and IGL. GAIL is also the pioneer in LPG pipeline transportation and has the capacity to meet the increasing demand of LNG.

Areas of concern and opportunities

3.5.5 Some of the areas of concern relating to GAIL pertain to possibilities of reduction" in transportation tariff, unbundling of operations and competition from oil marketing companies for sourcing and marketing of natural gas. There exist sufficient. opportunities in terms of rising natural gas demand in view of the discoveries in east coast deep waters, natural gas transportation, possibility of ownership of gas reserves in India through participation in NELP rounds and outside India through E&P acquisition, likely pipeline imports of gas from West and East of the country and forming JVs overseas for gas transmission, gas marketing including CNG and expansion of the petrochemical business. However, with the growing importance and share of natural gas, there is a need for putting in place a regulatory system and also for restructuring GAIL by unbundling the transportation activities into a separate entity.

3.6 Regulatory institutions

At present, the institution of Directorate General of Hydrocarbons (DGH) is expected to monitor and regulate the upstream sector. DGH is also expected to offer independent technical advice on exploration policy and related issues to the Government. However, the lack of adequate technically competent and independent cadre with necessary budgetary support appears to have been hampering the effective functioning of DGH. The process of establishing the downstream regulator (Petroleum and Natural Gas Regulatory BoardPNGRB) is presently under way.

3.7 Comparison with international oil companies

3.7.1 Though three of the Indian Oil PSUs (IOCL, BPCL and HPCL) also figure in the Fortune Global 500, they are much smaller compared to international oil majors.

3.7.2 A comparative analysis of some parameters between international oil companies and domestic oil companies as per Fortune Global 500 (2003) listings is given in the table below. National Oil companies in the list are CNPC and Sinopec (both from China), Statoil (Norway), Petrobras (Brazil), Petronas (Malaysia) and IOC, BPC & HPC (all the three from India).

Name	Rank	Revenue ($/billion)	Profit ($/billion)	Assets ($/billion)
BP	2	232.6	10.3	177.6

Exxon Mobil	3	222.9	21.5	174.3
Royal Dutch / Shell Group	4	201.7	12.5	168.1
Total	10	118.4	8.0	100.9
Chevron Texaco	12	112.9	7.2	81.5
Conoco Phillips	14	99.5	4.7	82.5
ENI	43	59.3	6.3	84.9
China National Petroleum	52	56.4	4.3	97.7
Sinopec	53	55.0	1.0	67.6
Respol YPF	91	42.0	2.3	48.0
Statoil	112	35.2	2.3	33.3
Petrobas	144	30.8	6.6	53.6
Nippon Oil	157	28.6	(1.2)	31.4
Petronas	186	25.7	6.2	53.5
Indian Oil	189	25.3	1.6	14.0
Bharat Petroleum	450	12.1	0.4	5.4
Hindustan Petroleum	462	11.8	0.4	4.5

3.8 Observations

The examination of the core competence of the oil PSUs, the areas of concern, opportunities available, the Committee's observations and action points are listed below:

a. The oil PSUs are competent to meet the domestic demand for petroleum products.
b. Oil PSUs need to focus on their respective core competencies.
c. The import dependency for crude will continue to rise requiring accelerated E&P activities both within and outside the country for meeting the crude demand.
d. Non-core activities in the upstream sector need to be farmed into separate companies/subsidiaries.
e. Continuous technology up-gradation for frontier basin exploration/deep sea operations/improving recoveries from the existing fields should be ensured.
f. The institution of Directorate General of Hydrocarbons should be further developed and strengthened in terms of adequate staff support based on an independent cadre of highly qualified technical officers and enhanced budgetary support. DGH should also have independent sources of revenue.
g. Overall, PSU refineries are in a disadvantageous position vis-avis private sector refinery in technology and size. Therefore they need to undertake measures for upgradation of technology, size and benchmark their operations with international norms to meet the challenges of future competition.
h. Competition should be encouraged among companies in the oil sector by allowing market determined prices in the interest of the consumer. Similarly, a larger number of entities may have to be encouraged.
i. Subsidies on PDS Kerosene and domestic LPG should be met by the exchequer in a transparent manner instead of oil companies being asked to share the losses.
j. Greater emphasis on greener energy resources like natural gas, CBM, coal gasification and encouragement of use of other alternate renewable energy sources is required.
k. Better coordination mechanism amongst oil PSUs for both E&P and downstream activities such as hospitality and sharing of infrastructure is necessary.
l. Planned and coordinated approach for creation and better utilization of infrastructure is necessary to avoid infructuous investments.
m. There is a need for expediting the process of setting up of regulatory mechanism for downstream activities.

n. Improved Voluntary Retirement Scheme is necessary for rationalization of manpower in oil PSUs.

Chapter - 4

RESTRUCTURING OF OIL PSUs

4.1 The Terms of Reference of the Committee draw attention to the fact that oil Public Sector Undertakings having to play a key role in facing' competitive challenges both domestically and internationally have to leverage their strengths in the respective areas of core competence in promoting the national objectives of energy security, accelerated growth and sustained economic development. Therefore, it is necessary to view the Energy Sector as" a whole rather than limiting the exercise to the sector relating to oil and gas only.

4.2 The Terms of Reference of the Committee also refer to the range of options for effectively achieving the objectives. The Committee took into consideration .the existing industry structure and had the benefit of views of the stake holders, experts and international experience. The Committee deliberated in detail on the suitable management structure for overseas E&P activities and the structural changes required for domestic operation keeping in view the key elements of over all national interest, promotion of a competitive environment and safeguarding consumer interests. The Committee also deliberated on the scope of synergy expected in the energy sector, especially among the oil PSUs and felt that any option that may be recommended would have to ultimately bring about improved performance level for fulfilling the national objectives. In this, the synergy envisaged would have .to be clearly defined.

4.3 The word "synergy" would mean a cooperative interaction from groups/firms in order to create an enhanced combined effect. Therefore, synergy should

a. Encompass the entire energy sector.
b. Improve the competitiveness of the industries in the various sub-sectors of energy.
c. Enhance the security of supply to promote sustainable development, energy efficiency, conservation and renewable energy.

4.4 Since market based prices of oil products at the current and anticipated levels of crude prices would adversely affect the large segments of the population, the role of the public sector undertakings in the energy sector in implementing the social objectives of the Government policy would continue to be important.

4.5 Therefore, any restructuring for synergy should lead to improved performance and at the same time it should facilitate quick response to any market situations. Also, addressing the social and environmental concerns and ensuring competitive prices for consumer with improvements in quality should continue to be the goals. Highly efficient oil PSUs would not only increase the domestic availability but also ensure demand management contributing to energy security for the country. Emphasis on R&D and upgradation of technology would be the natural consequences in a competitive environment.

4.6 The committee's attention was also drawn to the tendency on the part of oil PSUs to vertically integrate their operations, to diversify into petrochemicals, power sector and compete among themselves for overseas ventures etc. Concerns were also expressed on the need for, curbing wasteful expenditure on duplication of marketing infrastructure by oil PSUs. It was also suggested that the consumers' interest on the price and quality is to be focal point for any restructuring, along with the issue of energy security. To address the concerns relating to

domestic requirements and overseas ventures, the need for a unified, financially strong entity was emphasized,

4.7 Internationally as well as domestically, restructuring has been done adopting a variety of methods like mergers, holding company structure, co-ordination among various entities etc. After considering the international experience and domestic experience of other sectors of the economy, the Committee deliberated on these models of restructuring for synergizing operations. The Committee's observations are detailed below.

4.8 Merger

4.8.1 The Merger & Acquisition (M&A) activity of the oil industry can be viewed as a response to price instability and for increasing the profitability. Oil firms sought to invest in new technologies to reduce costs. Previous restructuring efforts and improvements in technologies had lowered costs to $16 to $18 per barrel. Oil prices declined to $9 per barrel in late 1998, Thus, the overriding objective for the mergers beginning in 1998 was to further increase efficiencies to lower breakeven levels toward the $11 to $12 per barrel range. Most of the operating synergies came from eliminating duplicate facilities, excess capacity and redundant manpower. It was also expected that the combined general and administrative costs would also be reduced. Additional synergy benefits would come from applying each company's best business practices across their worldwide operations. None of these gains would come automatically, of course. Crucial are the combining of the corporate cultures, ironing out the requisite organizational and personnel realignments and the implementation of all aspects of effectively combining the two operations.

Research studies on M&As

4.8.2 Various studies of mergers across the world indicate that mere mergers will not improve competitiveness but on the other hand will generate problems for inter-culture management and loss of key management personnel. As per Tetenbaum in the Organizational Dynamics (Autumn 1999), "Despite the volume of activity, research unequivocally indicates that 60 to 80 percent of all mergers are financial failures when measured by their ability to outperform the stock market or deliver profit increases." Mark Strower, a professor at Stern School at New York University and author of the Synergy Trap found that two thirds of the 168 deals that occurred between 1979 and 1990, which he analyzed, destroyed value for shareholders. A.T. Kearney Inc., the Chicago based management consultancy arm of Electronic Data Systems Corp. in a study report released in November 2002, has pointed out that just 29% of all mergers and acquisitions globally have succeeded in increasing returns for shareholders. The success of M&As in South-East Asia is even lower at 24%. The main reasons for the poor success rate of mergers lay in the absence of a solid communications strategy and unclear expectations of the merging firms. McKinsey & Co. has also pointed out that mergers may create value only if the right deal is struck and integration is tailored to the situation and managed well. "The people problems in mergers i.e. lack of attention to the human side are a major cause of failed mergers."

4.8.3 The oil mergers in the US raised concerns that they have placed control of the market in too few hands leading to uncompetitive markets. Large oil companies can more easily control domestic prices by exploiting their ever-greater market share, keeping prices artificially high.. The U.S. Federal Trade Commission (FTC) concluded in March 2001 that oil companies had intentionally withheld supplies of gasoline from the market as a tactic to drive up prices - all as a "profit-maximizing strategy." According to a March 2001 U.S. Federal Trade Commission report:

"The completed [FTC] investigation uncovered no evidence of collusion or any other antitrust violation. In fact, the varying responses of industry participants to the [gasoline] price spike suggests that the firms were engaged in individual, not coordinated, conduct. Prices rose both because of factors beyond the industry's immediate control and because of conscious (but

independent) choices by industry participants...each industry participant acted unilaterally and followed individual profit maximization strategies...It is not the purpose of this report with the benefit of hindsight - to criticize the choices made by the industry participants. Nonetheless, a significant part of the supply reduction was caused by the investment decisions of three firms...One firm increased its summer-grade RFG [reformulated gasoline] production substantially and, as a result, had excess supplies of RFG' available and had additional capacity to produce more. RFG at the time of the price spike. This firm did sell off some inventoried RFG, but it limited its response because selling extra supply would have pushed down prices and thereby reduced the profitability of its existing RFG sales. An executive of this company made clear that he would rather sell less gasoline and earn a higher margin on each gallon sold than sell more gasoline and earn a lower margin. Another employee of this firm raised concerns, about oversupplying the market and thereby reducing the high market prices. A decision to limit supply does not violate the antitrust laws, absent some agreement among firms. Firms that withheld or delayed shipping additional supply in the face of a price spike did not violate the antitrust laws. In each instance, the firms chose strategies they thought would maximize their profits."

Therefore, despite the existence of a strong regulatory and anti-trust framework, even in US, there are concerns about the post merger scenario on the ability of the oil majors to reap in huge profits by controlling the market and stifling competition.

4.8.4 While mergers. in the international context have been driven by synergies in operations primarily derived out of reduction in duplication of assets and separation of redundant manpower, the Indian Oil industry which is dominated by PSU would find it difficult to achieve these objectives unless a clear political consensus is evolved. By observing the international scenario, a feature most commonly presented in favour of mergers is the size, financial strength and ability to withstand volatility of the merged entity. However, this needs to be seen in the background of Indian conditions and some other factors such as

a. The international oil market has' a number of smaller independent E&P companies like Devon Energy, Occidental Petroleum, Anadarko Petroleum, Apache Corporation, Cairn Energy etc., who have made significant oil discoveries. The profitability and efficiency of operations of these small independent companies are far superior to the oil majors.
b. Under the Indian conditions, the presence of a mega entity dominating the domestic market has ambiguous implications in areas such as pricing and supply.
c. As long as the Government continues to hold majority shareholding in the Oil PSUs, there would be doubts persisting on the level of operational autonomy. Merger of enterprises operating in this environment may require larger Government involvement and erode autonomy substantially from the levels prevalent today.
d. Mergers in the international context allow the global companies to ruthlessly employ measures for integration. Substantial reduction in manpower is a natural corollary of any successful merger. In India, problem of cultural adjustment and work ethos of the various PSU entities will stand in the way of successful integration which may take years for the benefits to accrue, reduction in manpower may not be feasible under the current socio economic conditions.
e. Advantage of size which is the hallmark of a merged entity, and a key requisite for overseas bidding, can also be successfully achieved by following a consortium approach packaging upstream and downstream companies together. The consortium would be backed up with the size and financial strength of the participating companies.
f. Reduction in the number of players would rob consumers of choice and could be anti-competitive when viewed from a future perspective. Any restructuring should not lead to formation of regional oligopolies from National monopolies. Promotion of competition and not market dominance should be the outcome of any restructuring exercise.

Conclusion

4.8.5 The mergers referred to in previous paras were driven by competition and global oil crisis but such mergers led to market reorganization and reduced the competition. The mergers were basically for concentrating the capital so that profitability could be increased. Mergers have led to significant cost savings. Most of the operating synergies came from eliminating duplicate facilities, excess capacity and redundant manpower. It was also expected that the combined general and administrative costs would also be reduced. Additional synergy benefits would come from applying each company's best business practices across their worldwide operations.

4.8.6 The real problems relate to encrusted inefficiencies in the functioning of the PSUs. These will not be removed simply by enlarging the size of the entities. The justifications and rationalizations based on the experience of international mergers and acquisitions will not hold in a totally different historical and institutional context.

4.8.7 The significance of the developmental role of the State in the altered conditions of the world economy should not be lost sight of in creating a more efficient public sector. This requires, above all, a major policy thrust for a more dynamic and competitive public sector as the prime national instrument for effective and optimal use of natural and human resources.

4.8.8 The analysis of the experience on international mergers when translated in terms of the Indian situation would appear to show that Government's and the public interest are likely to be adversely affected by mergers that are not backed up by hard decisions on downsizing and shedding of non-optimal assets and duplicate facilities.

4.8.9 Mergers and acquisitions are part and parcel of market dynamics and take place in a variety of circumstances. However the overriding objective of such activity is almost always to reduce competition in the market place with a view to increasing the profitability of the acquiring or the merging firms. This is what has happened over the last two decades- as the world economy entered a phase of turbulence caused by falling levels of profitability and the emergence of surplus capacity in several areas of industry. The current conjuncture of international economy, characterized by sluggish output and persisting levels of high unemployment in some major industrial country economies, has witnessed significant merger and acquisition activity, driven by an incessant search for profitability. The oil industry has not remained immune to these trends. As in other industries, so in oil, mergers have resulted in massive downsizing of workforce since the whole idea was to increase the return to capital at the expense of labour.

4.8.10 In India, we face different problems. Faced as we are with rising unemployment in organized industry, any sizeable reduction in the labour force is inconceivable. The need is to make the labour force more productive and efficient. Therefore, the Committee concluded that merger of oil PSUs may not be an advisable option at present.

4.8.11 The oil PSUs can take care of the country's need for energy security without any restructuring through merger, as they are strong and viable. What is needed is significantly improved performance that is capable of being achieved on the basis of enhanced autonomy for the public sector enterprises. There is thus a strong need to distance the functioning of the oil PSUs from the Government. In this context, the Committee considered two alternatives, namely, creation ,of a holding company or a coordination body. The basic solution lies in adoption of improved management practices by the companies and grant of autonomy to them through the concept of holding company or a coordination body.

4.9 Holding Company

4.9.1 The holding company concept in the oil industry has been successfully implemented by the Chinese during restructuring of the Oil industry from the period starting 1998. Some of the. salient features of the current structure are as follows:

a. The holding company is fully state owned (CNPC and China Petrochemical Corporation)
b. The holding company confines itself to keeping uneconomic assets and discharging social functions. In some cases, overseas E&P is almost exclusively handled by the holding company namely CNPC.
c. Subsidiaries are limited liability companies which are listed in Global stock market as a result of public offerings. All core functions and assets across the Hydrocarbon value chain like E&P, refining, marketing vest with the subsidiary companies. However, majority shareholding rests with the holding company.
d. A two company model prevails for integrated companies namely Petrochina and Sinopec Corporation for domestic operations. 'They operate in distinct geographical areas, presumably to avoid inter-se competition, though some minor overlaps do exist. However, offshore E&P has been accorded special focus by keeping operations and assets in a separate company namely CNOOC Ltd.
e. All participants in the oil industry are actively being encouraged to go for overseas E&P. This is, purportedly, to diversify ownership of overseas assets and provide incentive to all companies to integrate operations.

4.9.2 The holding company concept has worked well in a centrally controlled, single party political system like China, where the Government is able to achieve national and social goals through directions completely unhindered by the requirements of a democratic society which require a more consensus based approach. The creation of subsidiaries with global listings also required strong implementation for reduction in manpower in these companies to ensure profitable operations and other policy changes to facilitate foreign participation.

4.9.3 The extent of reduction in manpower can be ascertained from extracts of Form 20-F filing by Sinopec Corporation before the US SEC for the year 2003:

"We plan to reduce the number of employees by 100, 000 persons by means of retirement, voluntary resignation and/or redundancy within the period of 5 years from 2001 to 2005, so as to enhance efficiency and operating profit. As of the end of 2003, the net aggregate reduction in the past 3 years amounted to 108,000 persons. In 2003, we recorded employee reduction expenses of RMB1.014 billion for about 21,000 employees who voluntarily resigned".

4.9.4 Starting with Steel Authority of India Limited (SAIL) experiment and the example of Coal India Ltd, which is the umbrella holding company under which seven subsidiary companies function, the experience of the holding company concept in India has not been encouraging. In the absence of operational autonomy and inability to insulate the subsidiary companies from the existing forms of overview, SAIL could not establish itself as the best example of a holding company.

4.9.5 The Expenditure Reforms Commission (ERC) while reviewing the operations of the Coal Ministry in September 2000 observed the following:

"Almost all major decision making powers - be it in major purchases, marketing, cadre management at senior level, investment decisions, management of surplus funds etc - are centralized in Coal. India Limited, . making the subsidiaries function more as divisions of the Coal India Limited, though each of these subsidiaries has a board of ifs own. The fact that these, companies also constantly look to the ministry for guidance, given the latter's accountability to Parliament, complicates matters further. If the seven public sector coal companies are to function efficiently and successfully in the emerging competitive scenario, they need to be fully board managed companies reporting to the owner, which is the Ministry of Coal, as parliamentary accountability cannot be wished away."

4.9.6 In conclusion, the ERC recommended the following: "With the Ministry of Coal at the apex controlling and guiding the coal sector, and given the urgent need for making the seven public coal producing companies independent, fully board managed companies so that these can function efficiently and successfully in the emerging competitive scenario, the Coal India Limited becomes a fifth wheel in the coach and needs to be wound up."

4.9.7 If the holding company concept implemented in the Coal Industry is replicated in the Petroleum industry, the holding company would only form another layer in the structure while other issues like autonomy to companies to function as Board managed entities with focus on efficiency and competition, reduction in Government involvement, concerns on impact of mega entity on economy, remain unattended. The top down approach of holding company may hinder entrepreneurship/ response time in subsidiaries (as experienced in the case of Coal India Ltd).

4.9.8 Keeping in view the experience of Coal India Limited and SAIL, the Committee is of the view that the desired level of synergy and autonomy to oil PSUs intended to be brought about by holding company may not be achievable under the current Indian conditions.

4.10 Co-ordination Body

4.10.1 Prior to dismantling of Administered Pricing Mechanism in the Petroleum Sector, Oil Co-ordination Committee (OCC) functioned under the aegis of the Ministry of Petroleum and Natural Gas. It was constituted in 1975 as an industry committee with a separate secretariat, endowed with adequate informal non-statutory powers giving required degree of flexibility, professionalism and quick decision-making, unshackled from bureaucratic and procedural delays and sufficient autonomy in the matter of employment of expert staff. Some of the main functions assigned to OCC by the Government were:

a. Deciding on allocation of crude oil and production pattern of refineries based on oil imports and exports and national and regional demands, logistics of transportation and, other allied matters.
b. Administering the prices of petroleum products and oil pool accounts.
c. Coordinating transportation of crude oil imports and coastal movements.

4.10.2 Subsequent to dismantling of APM effective 1.4.2002, the acc was wound up and the Petroleum Planning and Analysis Cell (PPAC) was created to take care of subsidy administration among other things, to assist the Ministry of Petroleum and Natural Gas.

4.10.3 The Committee took note of some of the major functions of the acc given above and their relevance in the context of central planning to achieve national objectives of energy security, avoidance of wastages and elimination of duplication of investments and improvement in logistic pattern. While main functions of OCC could be successfully implemented under an informal arrangement when the entire hydrocarbon chain was regulated and marked by absence of private players, the effectiveness of such a body in the present context would depend upon the extent of empowerment extended to it. Such empowerment would need to be formalized through legal or financial means.

4.10.4 However, the prospect of adopting this route will be extremely time consuming and the presence of such a body in the deregulated scenario would e perceived as a retrograde step as it would be a movement back to regulation with consequential implications.

4.11 Strengthening the Present Structure

4.11.1 In view of the drawbacks of the above models and the need for addressing the concerns expressed earlier, the Committee considered the option of strengthening the existing structure of the oil PSUs through policy changes, and management/structural improvements.

4.11.2 Since mergers would only reduce the number of players and may not be in the consumers' interest, the model prevalent today is perhaps better for competition, innovation and growth. However, it is equally important to identify areas for improving the performance to achieve the national objectives of energy security, accelerated growth, sustained development and social objectives of Government policy.

Pre Investigation Board

4.11.3 In order to improve efficiency and competitiveness for the benefit of retail consumers. and to face competition from private parties, it is essential that the company managements are given necessary autonomy in various areas of management. At present these companies are being overseen in detail by several agencies including Ministries, Committees of Parliament, CAG, CVC, PESB and CBI. The existing framework of supervision and overview by various agencies should be revamped to empower managements to face competition.

4.11.4 In fact, mere grant of autonomy by the Ministry will not achieve the purpose as managements will be reluctant to use new powers, as they will continue to be under the surveillance of the other agencies mentioned above. Government may consider setting up a Pre Investigation Board with former public sector chiefs, government representatives and private sector representatives. This Board can examine the impugned decisions of the company and classify them as normal commercial decisions, rash commercial decisions and decisions taken with corrupt motives. While the first two categories can be dealt with by the management/boards of the companies, only the third category of decisions should be referred to the CBI. This will help in encouraging the managements to use, the autonomy given by the government for the benefit of the company. The real solution can be found only by eliminating or minimizing the role of other agencies.

4.11.5 In addition to the observation relating to the pre investigation board above, the other areas for improvements could relate to the following:

a. Merger of existing stand-alone subsidiaries with parent companies so as to ensure their long-term survival.
b. Measures for encouraging competition
c. Measures for strengthening pricing practices on petroleum products with transparent subsidy provisions and guidelines, streamlining pricing of transportation fuels like petrol and diesel for better achieving social objectives of the Government
d. Measures for improvements in energy security of the country by granting freedom to E&P for access to new technology in domestic E&P, coordinated approach for overseas oil, increasing emphasis on alternative sources of energy.
e. Measures to intensify technologies like gas to liquid, clean coal mining, coal gasification projects, etc.
f. Upgradation of the technology base of the industry and energy conservation measures
g. Formulation of an integrated energy policy
h. Creation of a Cabinet Committee on energy and a committee of secretaries of all energy related departments. In the long term, formation of an integrated Ministry of Energy to improve focused development of energy in India, needs to be considered.
i. Appropriate structural changes in the Boards of the companies for ensuring better corporate governance and measures for ensuring greater accountability of top

management, taking into account the recommendations of the Committees headed by Dr Arjun Sengupta and Dr J.J. Irani respectively.

j. Changes in the role of various surveillance agencies so as to enable better performance by the managements
k. Setting up of a downstream regulatory body
l. Strengthening the institution of DGH

4.12 National Shareholding Trust

4.12.1 One of the suggestions for improved performance which the Committee considered related to the issue of distancing the PSUs for day to day operations from the Government while maintaining synergy of operations. In this context, the concept of the National Shareholding Trust (NST) was deliberated.

4.12.2 This is a suggestion incorporating the concepts of greater autonomy, accountability, incentives and disincentives. The concept of the NST is intended only for blue chip companies in the PSU fold having a large and important presence in the economy and it may not be desirable to let them pass into the hands of private owners, Indian or foreign. To begin with, oil PSUs that are in the 'Navaratna' and 'Mini-Ratna' category could be considered in the NST.

4.12.3 The entire Government shareholding in these companies could be transferred to the NST under a trust agreement. The trust could function as a non profit entity which can be set up under the Societies Registration Act or as Statutory body or as a company under the Companies Act. The Government holding held through the NST in the participating companies should be retained at a level so the PSU character is not altered. After building the required political consensus, there is a need to review the flexibility to adjust the Government holding in such a manner that sufficient autonomy is given to the companies and they are taken out of the purview of various supervisory agencies.

4.12.4 The Board of the trust will comprise eminent personalities from Government, Public Sector and Private Sector. They will evaluate the performance of the top managements of the companies who will be taken on a three year contract with adequate remuneration. Inadequate performance will result in termination of contract. By this arrangement, the companies can grow, and also add to shareholder value. Under such an arrangement, share prices will appreciate benefiting the Government and other shareholders.

4.12.5 The trust can provide the impetus for long term growth of the participating companies by ensuring that the companies address their strategic objectives by proactively identifying business opportunities both domestic and overseas. The trust would induce the participating companies to achieve sustainable growth by ensuring that they have good quality boards and management teams to lead such companies. The trust will promote best practices, which are performance oriented. By these measures, the returns on the investments in the participating companies will be enhanced for all the stakeholders.

4.12.6 In Singapore and Malaysia they have a similar arrangement for several years through organizations called Temasek and Khazanah, which holds the Government shares and ensures professional 'management of these companies. The Board of these organizations comprises eminent personalities from Government, Public Sector and Private Sector. Brief notes on these organizations are attached at Annexures - 2 and 3 at the end of this Report.

4.12.7 Thus, the NST concept should be seen as rebirth of professionalism of PSUs and enhancement of share value.

Chapter - 5

RECOMMENDATIONS

5.1 The Terms of Reference of the Committee specifically required examination of the core competence of the oil PSUs and suggestions for appropriate structure to leverage the strength of oil PSUs for contribution to the national objectives of energy security, accelerated growth, sustained development and social objectives of the Government policy. For this, the Committee could look at management solutions and structural changes required and recommendations have been made at appropriate paras in this chapter.

5.2 During the extensive discussions held by the Advisory Committee, it emerged that the performance of the oil PSUs has been commendable, but there are areas such as E&P where more focused efforts and performance to meet the country's strategic objectives would be required. For the reasons elaborated in chapter 4 for restructuring through mergers or holding company or creation. of a coordination body, the Committee is of the view that as a first step, performance improvement of the existing companies needs to be taken up.

5.3 The present mandate set forth for the Committee require that while suggesting any restructuring, the PSU character of the oil companies should not be abridged in any manner. Also, the restructuring should not result in reduction in employment. The Committee kept these guidelines in view while deliberating the subject. Within this framework, the Committee was asked to suggest management solutions for leveraging the strengths of PSUs for domestic operations and structural changes for overseas ventures.

5.4 Having ruled out the restructuring through merger or creation of a holding company or a coordination body, in order to leverage the strength of the oil PSUs for fulfilling their contribution to the national objectives of energy security, accelerated growth, sustained development and social objectives of Government policy, the Committee is of the view that while recommending retaining of the present structure, certain structural, policy changes and management solutions require to be carried out. These are enumerated in the subsequent paras.

Domestic E&P

5.5 The growth in demand of petroleum products during the remaining period of the X plan i.e. 2005-07, is estimated to be around 3.7%. According to US Energy Information and Administration (EIA) estimates, the growth for the period upto 2025 would be 2.4% for India. In view of this huge demand, every effort has to be made for increasing the domestic production of crude oil to reduce import dependence. The current recovery rates are very low as compared to the world average. Experts believe that new technology will be required including deep sea drilling.

5.6 Domestic exploration and production needs to be intensified by applying the latest technology particularly in the frontier basins and deep water areas. ONGC and all can form separate joint ventures for different areas of exploration and oil field services. These JVs can then get the latest technology from the best foreign companies either by giving them a share of the equity or by paying technology transfer fees for five to ten years. These JVs can then offer services to ONGC, all, OVL and other E&P companies in India and also in other countries. This kind of mutual co-operation between all and ONGC through separate joint ventures will help in upgrading the technical competence of both these companies and help in promoting the core competence of these two companies.

5.7 The upstream companies need to segregate the non-core activities and farm them into separate entities. This would enable them to upgrade their technology, offer their services

globally. The upstream companies would then be better placed to focus on E&P activities and take a larger share of E&P business including oil field services market.

Overseas equity oil and acquisition of acreage

5.8 While more emphasis may be laid on domestic E&P, given the limited availability of resources, India should step up the acquisition of oil equity abroad. There are two ways of acquiring equity oil abroad i) buying proven assets, ii) buying acreage for E&P. A judicious mix will be required taking into account risk, rewards, price expectations, operator ship sharing possibilities etc. In this regard help of independent experts can be taken in assessing the potential of these assets. China encourages all participants in the petroleum sector to aggressively participate in overseas E&P. This enables all participants to obtain a stake and also diversify ownership of overseas E&P assets. As per the International Energy Agency (IEA), presently, equity oil accounts for about 15% of the imports of crude oil by China.

5.9 External oil diplomacy will playa larger part in promoting the energy security. The Committee took note of the recent laudable initiatives in the field of oil diplomacy taken by the Ministry of Petroleum & Natural Gas. However, India needs to aggressively continue participating in overseas E&P so as to target at least 15% of crude oil imports through the equity oil route within the next 2-3 years. ONGC has its wholly owned subsidiary OVL for overseas operations, which has already acquired equity in ventures spread in about 13 countries. Apart from OVL, HPC and ICICI promoted JV, Prize Petroleum, is also in the E&P activities, both domestic and international, but it is still in a nascent stage.

5.10 Ensuring security of supply of crude, being one of the major concerns of the downstream companies, has led to individual initiatives for overseas ventures. This has contributed to the possibilities of unseemly competition in acquisition of oil equity abroad. But, for both E&P activities and acquisition of oil equity, larger financial strength for the competing national organization is necessary. If aggressive initiatives are to be taken, from energy security point of view, it would be necessary to have more than one organization under the PSU umbrella for overseas ventures.

5.11 OVL at present is having15 overseas properties in 13 countries. Nearly 5 million tonnes of oil and gas per annum are available to OVL from these ventures. The Committee was also informed that there have been no financial, technical or legal hurdles for OVL to bid competitively overseas.. However, given likely increase in demand for petroleum products and the limitations of domestic production of oil and gas, and in view of the suggested target for equity oil in para 5.9, the initiatives by multiple organizations would be necessary to meet the stiff target. The overseas initiatives may encompass series of measures and package of deals involving the downstream and gas sector companies. Therefore, there is a need for one more new entity for acquisition of equity oil abroad. Considering the long experience and expertise, Oil India Limited can form this new entity to be christened as 'Oil India Videsh Limited (OIVL). OIVL should form different consortia with any of the other oil PSUs for each of the ventures abroad as it deems fit. In this, the core competence of the respective oil PSUs such as exploration, refining and transportation may add to the strength of OIVL.

5.12 In order to ensure that there is no inter-se competition between OVL and OIVL, an arrangement based on production level of the field may be put in place. OVL should bid only for oil and gas fields estimated to produce more than 2 million tonnes of oil equivalent (MTOE) per annum. This arrangement would not only eliminate the possibilities of oil PSUs competing with each other for overseas ventures but also the benefits of equity oil and gas can be shared among them as per the respective core competence. The equity oil of OVL and OIVL will be shared by the oil PSUs on negotiated terms.

5.13 At present, OVL has been empowered to take decisions on investments upto a limit of Rs.300 crore beyond which it has to go through the channel of the Empowered Committee of Secretaries (ECS) and finally the Cabinet. Since quick decisions are essential for overseas acquisitions, alongwith the structural changes proposed, it would be necessary to simplify the existing procedures and empower OVL far investment decisions, if aggressive acquisition abroad as per target indicated in para 5.9 is to be realized. This will require enhancing the present limit of Rs.300 crore for any single investment to a level of at least Rs.2,000 crore. Similarly, apart from prescribing similar procedure of sanction, the delegation level for OIVL may be fixed at Rs.l,000 crore.

5.14 In addition to this, far E&P activities, OVL and OIVL would require flexibility in bidding competitively and, in case of successful bidding, for incorporating a company as subsidiary or joint venture, as per the requirement in the countries concerned, without any ceiling on the investments.

R&D Institutes of ONGC

5.15 The Committee examined whether the R&D Institutes of ONGC be tagged to DGH for enhancing the knowledge base of DGH. The Committee observed that the R&D Institutes are the technological core and back bane of ONGC. These institutes have been providing valuable support and guidance to ONGC in their ventures. The Committee has suggested elsewhere strengthening of the DGH with the power to appoint consultants/experts. Therefore, DGH can also utilize the knowledge base of the upstream companies in the country, whenever required and the Committee feels that the institutes should remain with ONGC only.

Autonomy to managements

5.16 In order to improve efficiency and competitiveness for the benefit of retail consumers and to face competition from private parties, it is essential that the company managements are given necessary autonomy in various areas of management. The Committee has already made the observation in chapter 4 regarding changes in the role of surveillance agencies including Ministries, Committees of Parliament, CAG, CVC, PESB and CBI. The Committee recommends that a Pre Investigation Board be set up to facilitate more autonomy to the managements.

Board level appointments

5.17 Directors & CEOs should be persons of eminence and competence in their field with proven track record. Selection process should be made broad based with compensation reflecting at least to some extent the market trend. Compensation package should provide for incentive for achievement of targets/results and penalty for inefficient performance.

5.18 The Committee is aware of the Report and recommendations of the Adhoc Group of Experts on Central Public Sector Enterprises. The Committee is of the view that some of the recommendations of the above Group such as limiting the number of reviews by the Ministry in a year, limiting the number of Government Directors in the Board, enhancement of limits for investments in joint venture companies/subsidiaries, appointment of Functional Directors in subsidiaries and JVs by the Board of Directors of the parent company, etc. are worth considering.

Management restructuring of ONGC & IOC

5.19 At present, C&MD of ONGC has to look after policy issues, performance of the company, day-to-day functioning of both domestic and overseas operations apart from taking care of the statutory and parliamentary requirements. The Committee is of the opinion that in order to make the company more efficient, focused and responsible, there is a need to undertake management

restructuring by making the Managing Director of OVL as the Vice Chairman of the Board of ONGC and for domestic operations a separate Vice Chairman & Managing Director (VC&MD) post with board level representation need to be created. Under the new structure, these incumbents should be accountable for the day-to-day operations in their respective spheres while Chairman should concentrate on the policy matters and look after the statutory and parliamentary requirements. Similar arrangement should be considered for IOC.

Functional Directors

5.20 Apart from the creation of separate posts as mentioned above, there is a need to reduce the number of functional directors in oil PSUs who have Board level responsibilities. The staff for each of the functional areas should report to the concerned Executive Director who should be delegated with authority for decision making and implementation. This would enable the Directors in the Board to pay attention to all the policy issues instead of limiting themselves to their respective functional area only as at present.

Role of Government Directors

5.21 The Committee felt that the number of Government directors in the Board of oil PSUs should preferably be two and in no case exceed three. It needs to be emphasized that the Government directors could play a pro-active role by effectively reviewing infrastructure projects so as to synergise creation of infrastructure and avoid infructuous investments..

Minority shareholder interests

5.22 One notable feature that the Committee observed is the total absence of any representation on the Board of the oil PSUs for the minority share holders who hold from 10% to 49% of the shares. Petrobras, the Brazilian State Oil Giant, has two Directors representing minority shareholders interests out of a total Board size of nine. Similarly, the Chinese oil companies have a concept of Supervisory Committee overseeing the Board of Directors. Out of a total of twelve supervisors, eight are shareholder representatives and they are entitled to attend the meeting of the Board.

5.23 In order to set improved standards of Corporate Governance, minority shareholder representative needs to inducted on the Boards of the PSUs.

Area of operations - Core competence

5.24 There is a merit in ensuring the continuance of the existing structure in the PSU oil industry where companies operate in their areas of core strengths across the Hydrocarbon Chain. Diversification in the domestic market into other activities by the upstream companies for integrating across the hydrocarbon chain needs to be moderated keeping in view the primary task and objectives.

5.25 Stand-alone refineries and marketing entities are extremely vulnerable in the oil industry where cyclical downturns and volatile prices are normal. In order to remove the multiplicity of entities operating on a standalone basis and to ensure their long term survival, action should be taken to merge these entities with their respective parent companies. Therefore, CPCL, BRPL and IBP should be integrated within the IOC fold while KRL be brought within the BPCL fold. As far as NRL is concerned, since it was set up as a result of the Assam accord, it would be advisable to continue its separate identity.

Review of Performance

5.26 The State's intervention should be more strategic in nature than for micro management. The review of performance may be in the form of informed oversight like 'peer' reviews. The current system of parliamentary review may be restricted to the discussion on the peer review report. It would be necessary to take political initiative to bring about the policy consensus to move in the direction of a changed review system.

Voluntary Retirement Scheme

5.27 Another area of improvement in performance and productivity would be effective utilization of manpower. For this, oil PSUs need to devise attractive Voluntary Retirement Scheme (VRS), which will be different from the existing DPE approved scheme. Government will have to encourage the HR initiatives of the oil PSUs by way of autonomy in administrative decisions such as introduction of suitable VR Schemes.

Unbundling of GAIL

5.28 In order to allow setting up of competitive gas markets and allow working at their most efficient levels, it is necessary to unbundle the supply and transport services of GAIL. Two separate entities, one for Inter-state transmission of natural gas and the other, for activities like E&P, supply of gas to fertilizer, power and other industries, operation of petrochemical units and fractionators, would need to be set up. Unbundling of a gas monopoly in specific terms is required to facilitate competition and to reduce conflict among entities.

Regulatory Mechanism - Directorate General of Hydrocarbons (DGH)

5.29 To achieve the objectives of energy security namely, increased domestic exploration, optimal production and for regulatory purposes, the institution of DGH needs to be strengthened. The, institution of DGH will have to be an autonomous body with built in source of funds and with a separate cadre of Experts for examining the proposals and for monitoring the investment and progress. DGH will have to be vested with powers of recruitment of Experts/consultants, for creation of knowledge base and for effective regulatory function. Director General Hydrocarbon, being a regulator in function, should not be nominated to the Board of any company in the petroleum sector.

Petroleum & Natural Gas Regulatory Board (PNGRB)

5.30 For the downstream sector, the recommendations relating to access to infrastructure and natural gas transportation can be implemented and monitored better if the PNGRB is put into place as soon as possible. In the interim, all the activities may be monitored by a suitable agency authorized by Government in this regard.

Rationalization of tax structure on petroleum products

5.31 The customs and excise duty rates levied on the petroleum sector represent a very large portion of Government revenues. While a portion of the customs and excise duty are ad-valorem, such high level of taxation on petroleum products distorts pricing and adds to high cost of the economy. Therefore, instead of ad-valorem, specific duty should be levied for petrol and diesel at reasonable level. For the NE refineries in. view of their uneconomic size and special problems of the region,. the present excise duty benefit of 50% needs to be continued.

Subsidy Management

5.32 One of the policy issues on pricing concerns the subsidy management of PDS Kerosene and Domestic LPG. Government should ensure transparency in subsidy provision by providing adequately through budget and not make oil companies bear the burden indirectly. This is to ensure adequate resources for future growth of the sector.

5.33 The pricing system of products like petrol and diesel as it exists today is due for complete overhaul. The present system has led to huge under recoveries for the oil marketing companies and correction would be needed sooner than later to avoid these companies slipping into the red. It is therefore imperative to provide autonomy for price fixation to the oil companies. However in case the same is not possible, keeping in view the impact that the price correction would have on various sections of the society, it is preferable to create a strong institutional framework which recognizes that the impact of the volatile international prices can never be fully reflected in the consumer prices for obvious social reasons. Some of the salient features of the new arrangements could be as follows:

a. "Price Stabilization Fund" needs to be introduced for oil marketing companies including private sector in times of excessive volatilities in international prices covering the products like petrol and diesel. This will ensure transparent accountal of losses.
b. Contribution for the above fund can be from the cess levied on indigenous crude oil. Government will also have to institute a mechanism' for transfer of the cess collected to the "Price Stabilization Fund". Any fears of private sector participation being misused, should be allayed by framing water-tight rules and regulations for operating the Fund. As private sector does participate in fertilizer subsidy, Ministry of Fertilizers may be consulted while framing the rules and regulations in this regard.
c. Institutional framework for checking volatilities in. oil prices is commonly used in many Asian countries. Thailand uses a Stabilization fund (which includes private sector), while Malaysia and Korea use mechanisms to calibrate excise and customs duties on oil to check the impact on consumer prices.

5.34 Thus, pricing strategy should be so devised as to encourage competition that would ultimately lead to market determined prices for petroleum products. Market determined price would also facilitate the demand management and promote conservation. Coupled with this, promotion of renewable energy sources and alternate fuels would contribute to the energy security. Any distortion in pricing leads to large price differential between the products, such as diesel and kerosene, leading to adulteration. Since on account of policy objectives, it may not be possible for the present to bring down the price differential in the 'case of subsidized kerosene and other transportation fuels, alternative measures for checking adulteration would have to be put in place. Effective grievance redressal mechanism coupled with quality control measures at the company level, strong regulatory measures at the Government level and promotion of consumer awareness, may keep the menace of 'adulteration in check. The companies should be responsible for ensuring supply of quality products to consumers. The companies should also intensify their efforts to minimize adulteration. Modern independent testing centers may be set in Mumbai, Chennai and Kolkata, to begin with, (National Capital Region of Delhi has already got such a testing laboratory) and the cost should be borne by the oil companies in proportion to their market share.

Strategic reserve

5.35 India does not currently maintain a strategic storage reserve. However, oil companies do have tankage' capacity for storage of approximately 15 days crude requirement and 45 days petroleum products. The Government has decided to maintain strategic crude oil reserve of 5 MMT, which is equivalent to around 19 days of the projected imports in 2006-07. Even though strategic reserve creation and maintenance is costly, need for having strategic reserves in India is critical considering our dependency on the Middle East for our supplies and the possibility of

disruption due to geo-political factors. However, considering the requirement, the strategic reserve quantity should be at least 10 MMT. Government may consider revising the reserve target.

Relaxation of entry barriers

5.36 In order to be eligible for marketing of transportation fuels, an entity is required to make a commitment of Rs 2,000 crore in the Hydrocarbon sector or production of 3 million tones of crude oil domestically. While this condition was imposed to ensure commitment by participants to value addition in the Indian economy, this effectively serves as an entry barrier. With the surplus refining capacity and under utilization of pipelines, tankages and other infrastructure facilities, any additional investment in these areas may not be essential for some time to come. In view of the Committee, there is a need to encourage competition by allowing a larger number of players. The Government may review the current conditional ties for grant of marketing rights.

Strengthening arrangements for access to Infrastructure

5.37 In India, while permission for marketing of transportation fuels was granted to private parties like Reliance and Essar in May 2002,. there has been soft-pedaling on their part while setting up the required infrastructure. Installation of marketing infrastructure is a time consuming process from procurement of land to grant of the permissions by several government agencies and the time required for construction. This also results in duplication of infrastructure at various locations in the country. Though duplication of infrastructure by PSUs at some 'places in the country (a matter of concern today) is a part of historical legacy, largely, the PSUs have tried to avoid duplication of assets by relying on "hospitality arrangements" amongst themselves for sharing of transportation and storage infrastructure at a nominal fee. Perhaps today, Oil PSUs could consider providing access to transportation and marketing infrastructure such as port facilities, product pipelines and. attached terminals under "hospitality arrangements" to all participants (including private sector) on a mutually complementary basis wherever surplus capacity exists. This measure would provide a boost to competition in such markets by avoiding duplication of assets and would be in the overall public interest. However, it is doubtful if this could be implemented by executive instructions. Recourse would have to be taken by entrusting effective implementation to the Petroleum and Natural Gas Regulatory Board. Ensuring third party access to common carrier facilities would be one of the main functions of the regulatory system to be established.

Pricing of petrol and diesel

5.38 One of the essential pre requisites for growth is dynamic management. A good management can be judged with reference to its ability to compete in the market for higher share and by its ability to contribute to share holder value. In regard to competition, it has to be recognized that there is at present no inter se price competition among the refineries and among the marketing companies. The basic ex storage selling prices of petrol and diesel are uniform at all marketing locations throughout the country. This precludes any competition in terms of efficiency in refining, fuel and loss and product patterns. The other costs are also levied and borne uniformly except for the sales and other taxes levied by different states. In marketing also, there is no inter se competition with all the PSUs selling petrol and diesel in the same locations in a State at the same price. This mitigates against economizing on marketing costs. They are therefore left to compete only in terms of quality and availability. They also compete with opaque discounts on bulk sale price for the larger consumers. The lack of competition is against the interests of the retail consumer at the retail outlets.

5.39 The Government could consider declaring ceiling guidance basic ex storage point prices for petrol and diesel so that companies can compete and sell below the ceiling prices.

National Energy Policy

5.40 An analysis of India's primary energy mix is given below:

Fuel Type	2002 (MTOE)	2002 (%)	2025 (MTOE)	2025 (%)
Coal	180.8	55.6%	736.0	50%
Oil	97.7	30.0%	368.0	25%
Natural Gas	25.4	7.8%	294.4	20%
Hydro Electricity	16.9	5.2%	29.4	2%
Nuclear	4.4	1.4%	44.2	3%
Total	**325.2**	**100%**	**1472.0**	**100%**

Source: BP Statistical Review & Hydrocarbon Vision 2025 Report

5.41 An analysis of India's energy mix reveals the continuing high level of dependence on oil and gas to meet India's growing energy requirements while the share of nuclear and hydro electricity will continue to stagnate. The import dependency on oil is expected to reach a level of 90% in the coming years. Hence, there is an urgent need to increase the share of coal, natural gas and other renewable sources in the country's energy mix while reducing the share of oil.

Development of Energy Policy

5.42 The anticipated growth in the Indian economy will imply significant growth in the energy demand. Energy security will be critical if the country has to achieve the ambitious growth targets. The Government may consider putting in place a comprehensive energy policy to achieve the following objectives:

a. Promote the growth in GDP to sustain and improve the quality of life of the growing population in the country. To achieve this, the. energy requirements needs to be satisfied on a consistent basis
b. Reduce the dependency on oil in the primary energy mix of the country and thereby achieve a significant reduction in the country's import dependency
c. Encourage the use of the country's abundant coal reserves while addressing the associated environmental concerns
d. Promote the enhanced usage of alternate sources of energy including' hydrogen, nuclear energy, renewable sources like bio- fuel, wind power, solar energy etc
e. Diversify the country's sources of energy supply with a view to reduce the dependency on specific regions of the world
f. Achieve higher standards of energy efficiency by promoting the use of new and improved technologies in the industrial and transport sectors
g. Restructure the energy sector with a view to provide an integrated approach to deal with the energy issues

Structural changes

5.43 The Indian energy scene is characterised by the presence of multiple agencies across the entire energy spectrum. There is a need to co-ordinate the activities of the different Ministries to achieve cohesive action on the energy front. Towards this end, a Cabinet Committee on Energy headed by the Prime Minister and comprising of Ministers of all the energy related departments, can be established to give policy decisions on all energy related issues. To implement the policy decisions, a Committee of Secretaries headed by the Cabinet Secretary and comprising of all the Secretaries of the energy related Ministries needs to be formed.

5.44 In the long-term, for moving towards the objective of true synergy in energy, the Government may also examine the possibility of "setting up a unified Energy Ministry.

Energy efficiency and conservation

5.45 The use of energy in India is highly inefficient due to which energy consumption for producing one unit of GDP in India is significantly higher than the world average. Improvement in energy efficiency has led to significant gains for countries like Japan whose "Top runner programme' is worthy of emulation. Substantial investment should be made to improve the quality of the huge road network in the country which can reduce congestion and lead to improved fuel efficiency. Besides necessary changes should be made in the country's laws to allow for trucks of large capacity (45 Tonnes) to ply on the roads which can reduce the fuel consumption per tonne of goods transported. The falling share of railways in the country's goods movement needs to be reversed as rail movement is far more energy efficient as compared to road movement. This can be achieved by making changes in the current approach where passenger fares are cross subsidized by the freight tariff. Mass rapid transport systems need to be promoted in all major cities to discourage the use of personal vehicles. Fiscal measures need to be introduced to promote research and development in new technologies in the transport sector, which are energy efficient. Tax, fiscal and legislative measures need to be implemented to promote energy efficient vehicles as done, by China. By implementation of vehicle standards in terms of weight and fuel efficiency, China expects a reduction in oil consumption of a magnitude of 20 to 70 Million Metric Tonnes per annum (MMTPA) by 2030, depending on the stringency of implementation. Since energy conservation is an important aspect of energy security, appropriate measures should be taken to enforce energy conservation in various energy consuming" sectors like activating energy audit, mandatory reference in the annual report, etc.

Enhancing share of Coal and Lignite

5.46 Nearly three quarters of India's electricity and two thirds of its commercial energy comes from coal. India has rich reserves of low sulphur high ash coal and the enhanced usage of coal in power generation can lead to lowering of India's rising import dependency for meeting its energy requirements. The Coal sector in India requires investments and renewed focus on clean coal mining technologies. Encouraging coal in order to reduce dependence on oil could be the answer to energy security particularly in view of the abundance of coal and lignite reserves in India. Investments would also need to be encouraged in technologies like Coal gasification on lines similar to the Chinese players like Sinopec Corporation who have invested in a JV with Shell for coal gasification. Along with investments in Overseas Oil and Gas, E&P companies who have huge funds at their disposal, could invest in coal technologies within the country. ONGC has identified "Underground Coal Gasification" as a priority project. Efforts in this direction need to be intensified.

Encourage other forms of energy including renewables

5.47 The share of natural gas in the energy mix needs to be increased significantly. Converting the natural gas into CNG and using the same extensively in the transport sector needs to be encouraged with a view to reduce dependency on oil. Besides, the clear road map for pricing of gas needs to be put in place. Enhanced use of gas has to be accompanied by securing the availability of the same. Towards this end, it is necessary to undertake accelerated exploration of the country's sedimentary basins, take up shares in overseas reserves and finalize bilateral arrangements with countries like Qatar, Myanmar and Iran for imports. Infrastructure is another area requiring attention and the setting up of trans-national and national pipeline grids should be encouraged. The geo political issues need quick resolution and the common carrier principle needs to be adopted to provide for access to all the players. Finally the gas market needs to be nurtured and developed for which a market regulator should be appointed.

5.48 Countries like Japan and France which are dependent on imports for meeting a major portion of their energy requirements, have promoted the use of nuclear energy in their energy mix. India should look at increasing the share of nuclear energy in its energy basket and leverage the thorium reserves in the country. Increased Government funding is required to bring about significant additions to the nuclear generating infrastructure and improving safety. Incentives can be provided to bring down the capital cost of nuclear plants with a view to make nuclear energy an abundant and cost effective source of power.

5.49 It is necessary to encourage the exploitation of India's immense potential of hydroelectric power in its twenty river basins. The hydro electric potential is estimated to be as much as 150,000 MW and projects for tapping this potential needs to be implemented speedily. It is also necessary to take up bilaterally with countries like Nepal for exploiting their potential for mutual benefit. Similarly fiscal incentives and subsidies need to be provided for other sources like solar energy and wind power. The Government also needs to aggressively promote use of alternate energy sources like ethanol blended petrol, bio-diesel, and develop new fuels like Hydrogen.

National Shareholding Trust

5.50 The Committee has already given its observations in Chapter 4 relating to the NST concept. Without diluting the PSU character, the concept of NST can be implemented successfully provided the following are also taken care of:

a. Compensation package for Board members of participating companies in the NST should be made market related with built in incentives/disincentives.
b. Compensation package for employees of participating companies in the NST should have fixed and variable elements linked to performance of the respective participating company.
c. The Government should consider setting up of a pre investigation board for ensuring operational autonomy and for modifying the existing system of review by various agencies.
d. NST should submit a detailed report, once a year, to Parliament on performance of the participating companies along with peer review report.
e. NST should carry out independent reviews and suggest to Boards of participating companies on the areas where better synergies can. be achieved through rationalization of assets, elimination of duplicate facilities etc.

5.51 The Government may consider implementing the NST concept for the oil companies without diluting the PSU character with a clear road map in the manner outlined above by setting up a working group to draw out the details of modalities of implementation.

ANNEXURE - 1

Details of those Stakeholders and Experts who responded by participating in the discussions with the Advisory Committee on Synergy in Energy (Refer para 2.9 of Chapter 2)

STAKEHOLDERS

MOP&NG

1. Shri Manishankar Aiyar, Hon'ble Minister
2. Shri S.c. Tripathi, Secretary

3. Shri M.s. Srinivasan, Additional Secretary

Managements of Public Sector Oil Companies

1. Oil and Natural Gas Corporation Limited (ONGC), led by Shri Subir Raha, C&MD
2. Oil India Limited (OIL), led by Shri R.K. Dutta, C&MD
3. Indian Oil Corporation Limited (IOCL); led by Shri S. Behuria, Chairman
4. Hindustan Petroleum Corporation Limited (HPCL), led by Shri M.B. Lal, C&MD
5. Bharat Petroleum Corporation Limited (BPCL), led by Shri S. Behuria, C&MD
6. GAIL (India) Limited, led by Shri P. Banerjee, C&MD

Human Resources Directors/ Officers Association / Trade Unions/Workers Federations

1. Shri S.A. Narayan, Director (HR), Bharat Petroleum Corporation Limited
2. Shri A.K. Balyan, Director (HR), Oil & Natural Gas Corporation Limited
3. Oil Sector Officers Association, led by Shri Ahok Singh, Convener
4. Petroleum Employees Union, led by Shri R.C. Shetty, Secretary General
5. ONGC Employees Mazdoor 5abha, led by Shri Sanat Mehta, President
6. Centre of Indian Trade Union, led by Shri Dipankar Mukherjee, Secretary and Member of Parliament
7. All India Trade Union Congress, led by Shri G.L. Dhar, Secretary

EXPERTS

1. Dr. Kirit Parikh, Member, Planning Commission
2. Shri Surya Sethi, Adviser (Energy), Planning Commission
3. Shri V.K. Sibal, Director General Hydrocarbons (DGH)
4. Shri T.N.R. Rao, Former Secretary, Ministry of Petroleum & Natural Gas
5. Shri Prabir Sengupta, Former Secretary, Ministry of Petroleum & Natural Gas
6. Shri T.S. Vijayaraghavan, Former Secretary, Ministry of Petroleum & Natural Gas
7. Energy Think Tank, led by Shri T.N.R. Rao, IAS(Retd.)
8. Shri M.S. Ramachandran, Former Chairman, Indian Oil Corporation Limited
9. Shri Vikram Mehta, Chairman, Shell India Private Limited
10. Shri Ranjit Pandit, MD-India, McKinsey & Company
11. Shri Leo Puri, Director, McKensey & Company
12. Shri Vipul Tuli, Principal, McKensey & Company
13. Dr. Ashok K. Jhawar, Country Head, BP India Services Limited
14. Shri Shashi K. Mukundan, Vice President and Country Manager, India, Gas Power "and Renewables, BP India Services Limited
15. Shri S.K. Joshi, ED(Fin), Bharat Petroleum Corporation Limited

ANNEXURE - 2

TEMASEK HOLDINGS (SINGAPORE) (Refer para 4.12.6 of Chapter 4)

Temasek Holdings is an Asia investment company headquartered in Singapore committed to maximizing long-term shareholder value as an active investor and shareholder of successful enterprises.

Established in 1974, it manages a diversified global portfolio of S$90 billion, spanning Singapore, Asia and the OECD economies. Investments are in a range of industries: telecommunications and media, financial services, property, transportation and logistics, energy and resources, infrastructure, engineering and technology, as well as pharmaceuticals and biosciences.

Singapore-based Temasek-linked companies (TLCs) include well known Singapore listed blue-chip brand names such as Singapore Airlines, SingTel, DBS Bank, SMRT Corporation and Neptune Orient Lines. Industrial stalwarts include Singapore Technologies, PSA International, Singapore Power, Keppel Corporation and SembCorp Industries. Technology companies such as Chartered Semiconductor Manufacturing and STATS Chippac are dual-listed in Singapore and the US. Wildlife Reserves Singapore operates the world-renowned Singapore Zoo, Night Safari and the Jurong Bird Park. Investments overseas include ICICI Bank, Matrix Laboratories and the Apollo Hospitals group in India, Bank Danamon and Bank International Indonesia in Indonesia, Quintiles Transnational Corp in the US, as well as Telekom Malaysia.

Temasek has delivered a Total Shareholder's Return of 18% compounded annually over the last 30 years, including an average annual dividend yield of 7% to the shareholder, the Minister of Finance, Inc. As Asia develops, there is scope to reshape the portfolio as an active investor in, leading or emerging companies in Asia, and manage for value as an active shareholder. Over the next 8-10 years, it is expected to see a portfolio with approximately one-third of operating asset exposure in Singapore, one-third in the rest of Asia and the remaining third in the OECD economies.

Temasek Holdings' shareholder is the Singapore Ministry of Finance (MOF). MOF appoints Temasek's Board of Directors (consisting of eminent personalities from the Public and Private Sector), and is represented on Temasek's Board. The Board of Directors provides strategic direction to Temasek's management. As with any other commercial companies, Temasek submits annual performance reviews, audited financial statements, and pays dividends to the shareholder. However, as an exempt private company, Temasek is not required to publish or publicly disclose its financial statements. Temasek operates under the purview of the Singapore Companies Act, and all other laws and regulations that apply to companies incorporated in Singapore.

In accordance with the Companies Act, Temasek linked Companies (TLCs) are run by their respective management teams and supervised by their boards of directors. It does not involve itself in their commercial or operational decisions, except to exercise shareholder rights where shareholder approval is required. Temasek management staff constitute only 7% of all directors on the boards of major TLCs. It works actively with companies to identify suitable independent board candidates from a wide variety of backgrounds and nationalities to complement and expand board capability and quality.

ANNEXURE - 3

KHAZANAH NASIONAL (MALAYSIA) (Refer para 4.12.6 of Chapter 4)

Khazanah Nasional is the investment holding arm of the Government entrusted to manage the commercial assets held by the Government and to undertake strategic investments. Khazanah Nasional was incorporated under the Companies Act 1965 on 3 September 1993 as a public limited company and commenced operations a year later.

Save for one share owned by Pesuruhjaya Tanah Persekutuan (the Federal Land Commissioner), all the share capital of Khazanah Nasional is owned by the Minister of Finance, a corporate body incorporated pursuant to the Minister of Finance (Incorporation) Act, 1957.

The primary objectives of Khazanah Nasional are:

- To hold and manage the investments entrusted to it by the Government of Malaysia; and
- To undertake new investments in strategic, high technology sectors and projects in the national interest.

As at 15 February 2005, Khazanah Nasional has 11 principal subsidiaries and 16 principal associate companies. These companies are involved in various sectors such as banking, semiconductor, steel production, airport management, automobile and motorcycle manufacture, power, broadcasting, infrastructure, investment holding, port development and management, shipping, property, electronics, telecommunications, research technology and venture capital

Khazanah Nasional has an eight-member Board comprising representatives from the public and private sectors. Dato' Seri Abdullah bin Haji Ahmad Badawi, the Right Honourable Prime Minister of Malaysia, is the Chairman of the Board. The Board of Directors is assisted in the discharge of its duties by an Executive Committee and an Audit Committee established by the Board. The Management team is headed by the Managing Director, Dato Azman b. Hj Mokhtar.

Khazanah Nasional is a driving force in shaping selected strategic industries in Malaysia, nurturing their development and doing so with the objective of pursuing the nation's long-term economic interests.

Khazanah Nasional is entrusted to explore strategic investment opportunities in new sectors and new geographies. The aim is to manage investment portfolio to realise their long-term potential, and at the same time investing in what is believed would be future winners. The current investments are distributed among various industries, mainly; finance, telecommunications, utilities, communication services, information technology and transportation. It is also venturing into other promising sectors with the vision to lead and develop strategic industries.